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Is Prayer Good for Your Health? A Critique of the Scientific Research

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STUART M. BUTLER: What does the evidence show in terms of the connection between religious practice and other characteristics of our society: poverty, welfare, health? Also, what might be the implications of this research and analysis, if any, for public policy? These are the objectives of this Center, and we are very pleased it pulls together a lot of the work that we have been doing in various parts of the Foundation for some years and gives it a focus.

Our event today is to explore the relationship—again, I say if any—between religious practice and personal health and recovery from illness. Hence the provocative title: "Is Prayer Good for Your Health?"

Most people have fairly strong views about this one way or the other, and generally speaking, most people at some point in their lives or in their religious practice do at least call for some assistance for their recovery or the recovery of their friends. In our synagogue, we say the misheberach, which calls for physicians to be as skillful as they possibly can be in dealing with people who are ill, and calls for those who are ill to have the strength to deal with their illness.

This kind of calling for assistance from God is a very common feature of all religions, and for all of us, even if we're only mildly religious, generally speaking, there is a point in our lives where we call in that way. Also, there's a lot of anecdotal evidence in the medical profession and elsewhere about remarkable occurrences that people have seen in their medical practice or in their personal lives.

Talking Points

- Scientific research analyzing the potential connection between religious practice and prayer and health, undertaken at some of our most prestigious universities, is the basis of dozens, if not hundreds, of major scientific articles examining this connection.
- Religion provides a positive world view; provides meaning and purpose to life; helps people to psychologically integrate negative things; gives people hope; enhances their motivation; personally empowers them and gives them a sense of control.
- Religion is related to mental health, social support, and health behaviors. Better mental health, in turn, and better social support are related to better physical health.
- The practice of religious faith, in a broad sense, may be said to be therapeutic. It certainly is responsible medical practice to consider how religious convictions affect patient health.

This paper, in its entirety, can be found at:
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But what is not as generally understood is that there is considerable scientific research analyzing the potential connection between religious practice and prayer and health. This research has been undertaken at some of our most prestigious universities around the country and is the basis of dozens, if not hundreds, of major scientific articles examining this connection. This connection has also been the subject of a number of major media pieces and articles, including a piece on National Public Radio, which featured at least two of our speakers this morning, and an article in; *Parade* magazine, which you may have seen.

What we intend to do today is to give you an overview of this research and to ponder the validity of this research. One of our speakers in particular has been very critical of the methodology and assumed implications of this research. It's a very balanced approach to help us, as we are trying to do in our Center, to investigate, to examine what the research actually says, and to ponder its implications.

We have a panel of some of the most distinguished scholars in this field from around the country here with us this morning. In fact, two of them have debated each other from time to time on the radio; this is the first time they've actually met fact-to-face to discuss this issue.

Our first speaker is Dr. Harold G. Koenig, who is on the faculty at Duke University as a tenured associate professor of psychiatry and an associate professor of medicine. He is director and founder of the Center for the Study of Religion/Spirituality and Health at Duke University. He is the author of dozens of books and articles and chapters of books.

His research on religion, health, and ethical issues in medicine has been featured in over 35 national and international TV news programs, including all the major U.S. networks. He has presented his research before the United Nations. His latest books include *The Healing Power of Faith: Science Explores Medicine's Last Great Frontier.*

—Stuart M. Butler, Ph.D., is Vice President for Domestic and Economic Policy Studies at The Heritage Foundation.

HAROLD G. KOENIG: Care of the sick originated from religious teachings. The first hospitals were built and staffed by religious orders. Many hospitals even today are religiously affiliated. The first nurses and many early physicians were from religious orders.

Not until the mid-20th century did a true separation develop. This was partly a result of the teachings of Freud. Since the mid-20th century, however, religion is seen in medicine as irrelevant, neurotic, or bothersome and conflicting with care.

Spiritual needs of patients are ignored or ridiculed. The relationship is improving but remains controversial. There are difficult questions that remain, and there are clearly no easy answers.

When you look at the population of the U.S., the latest Gallup polls, belief in God, membership importance, and attendance, this is done by age; you can see the different categories. When you look at belief in God, it's straight across: about 95 percent of the population.

Membership changes, but among the over-65 population, between 75 and 80 percent are church members. With regard to the importance of religion, among the over-65 age group, about 75 percent indicate that religion is very important to them. Of course, as people become sick and ill and go into the hospital, it becomes even more important to them. It's amazing to me that in the over-65 population, we are looking at rates of 55 to 60 percent who are attending church weekly or more often.

Many people, especially those over 65, are religious and turn to religion for comfort, support, and hope when they become sick. The medical profession has largely ignored this.

With regard to mental health, prior to the year 2000, there are a number of studies looking at well-being, hope and optimism, purpose and meaning in life in the 20th century, and these are the studies that show a positive relationship between religion and these various things. (See Appendix Chart 1) You can see depression, anxiety and fear, marital satisfaction, social support: 19 of 20 studies on substance abuse. The strongest effects are found in stressed populations. It's important to remember that.

Since the year 2000, there's been a large, growing interest in this area. Entire issues of various secular journals have been devoted to this topic as well as a

growing amount of research and discussions. Between 1980 and 1982, there were 101 articles in the Psyc Lit data base; by 2000 to 2002, there were over 1,100 articles. It had gone up by almost ten-fold. These are not all research studies, but they involve discussions and at least are a reflection of the interest in the area. (See Chart 2)

There are reasons why religion can influence coping. These are logical, rational: It provides a positive, optimistic world view; provides meaning and purpose to life; helps people to psychologically integrate negative things; gives people hope; enhances their motivation; personally empowers them and gives them a sense of control.

By praying to God, they feel they can influence their outcome, so they are not as helpless. Religion also provides role models for suffering—Job, for example—as well as guidance for decision-making, which helps to reduce stress; answers to ultimate questions that science cannot answer; and social support, both human and divine. Most important, it is not lost with physical illness or disability.

Better mental health in turn is related to better physical health. In the last six months, there have been major studies in *JAMA*, *Proceedings of the National Academy of Sciences*, and the *Lancet* showing the connections between better mental health and better physical health—depression in particular, affecting health-related quality of life in coronary artery disease (CAD), affecting Interleukin-6 levels (an indicator of immune functioning) two to three years after the death of the patient. Depressed patients have nearly double the mortality in CAD, and there is experimental evidence that negative affect (or negative mood) influences immune function. (See Chart 3)

Therefore, we have a logical reason why religion might influence physical health through mental health, through enhancing social support, through influencing health behaviors, all affecting physical health outcomes.

Now let's look at how religion is related to physical health and medical outcomes. There are many studies out there: different populations, different samples, different investigators, different time periods, and different disorders. Many of these studies have methodological weaknesses, but not all of them. Almost all are epidemiological; there are very few clinical trials, except for in meditation. (See Chart 4)

This gives you a sense of the research that is out there. In three of three studies you find a connection between religious involvement and immune and endocrine function; in five of seven studies, the religious experience lower mortality from cancer; in 14 of 23, they have significantly lower blood pressure; in 11 of 14, they have lower mortality; and in 12 of 13, clergy mortality is lower. In addition, numerous new studies are now in review that are currently being evaluated by journals.

Let's look at the strength of this effect. (See Chart 5) Odds ratios are hard to understand, but binomial effect size helps to explain the magnitude of the impact in lay terms. When 50 percent of a population has died, the number of additional people alive per 100, or the number of people dead per 100, because of the activity equals the binomial effect size. The binomial effect size can be determined from odds ratios.

Here's an example. Exercise rehab following coronary artery disease—these effects are all the results of meta-analyses. The odds ratio is 1.35, which means a 35% greater chance of being alive in coronary artery disease patients who undergo exercise rehab. This also means 3.7 people are alive per hundred as a result of that behavior when 50 percent of the mixed population has died.

Now, considering that there are almost 13 million people with CAD, you divide that by 100, and multiply that times the binomial effect size of 3.7, and this results in almost 500,000 people with CAD who are alive because of exercise rehab. For psychosocial treatments following CAD, the binomial effect size is 6.6 people per hundred, with slightly more than 850,000 people with CAD alive as a result of psychosocial treatments in CAD.

For cholesterol-lowering drugs and CAD, again affecting almost 13 million, with an odds ratio of 1.35, this means that almost 500,000 people with CAD are alive because of drugs like Lipitor. For hazardous alcohol use, 1.24 is the odds ratio, translating into 2.6 extra deaths per hundred, resulting in—given the high prevalence of hazardous alcohol use—about 750,000 *fewer* people alive.

Let's look now at weekly religious attendance. Here is a single religious variable, looking at a sin-

gle outcome, mortality. The McCullough meta-analysis published in 2000 has the best odds ratio for the effect of religious attendance on mortality. It was 1.37, meaning a binomial effect size of 3.9. Given that there are 122,650,000 people attending religious services weekly or more often in the United States, this results in 4,783,380 fewer deaths as a result of religious attendance (if this relationship is causal).

The NIH Consensus Conference, whose results were published in 2003, with confounders only in the model (the best estimate of the true effect), resulted in an odds ratio of 1.43, which translates into a binominal effect size of 4.5, with even a greater potential number of people affected (5,519,284). Confounders mean age, sex, race, health status. The odds ratio for the full model (i.e., with explanatory variables such as social support, health behaviors, mental health, etc. in the model) is 1.33, with 4,415,428 more people alive. This means that even when you control for factors by which we think religion exerts its effects on health (social support, etc.), you still end up with an impact involving nearly 4.5 million people that cannot be explained.

The last four largest studies that controlled for all these variables got an average odds ratio of 1.37, again agreeing with the McCullough meta-analysis.

The Strawbridge study, looking at women, found in the full model this odds ratio (1.52), resulting in a binomial effect size of 5.2 per 100. Given that 69 million women attend religious services weekly, this means that over 3,582,000 additional women might possibly be alive as a result of weekly attendance. Compare this to the number of lives (2,252,900) that cigarette smoking takes among women who smoke.

In comparison to the number of lives potentially impacted by religious attendance (i.e., 5,519,284), the population of Washington, D.C., is 572,000, and the circulation of *Newsweek* magazine is almost 3.2 million.

Is the effect that religion has on health causal? There is limited evidence from clinical trials that it is. Religious interventions in religious patients with depression, anxiety, bereavement, and pain caused depressive symptoms, anxiety, and bereavement to become better more quickly. This is not only Christian interventions, but also Buddhist as well as Islamic interventions.

The are also clinical trials looking at meditation's effects on lowering blood pressure, reducing cortisol, cholesterol levels, and cardiac arrhythmias. These studies are not always perfect in terms of the methodology. I'm sure we'll find out later more about their weaknesses. But just because a study is weak doesn't mean it doesn't provide any useful information. In all, the information we have from clinical trials provides some evidence to support the huge amount of evidence from epidemiological research that this relationship may be causal. Epidemiological research by itself, however, can also contribute to causality.

In epidemiology, Hill's criteria for causation provide guidelines on determining whether a relationship is causal. What is the strength of the association? For religion and health, the strength is moderate. What is the consistency of the relationship? The relationship between religion and health is moderately consistent. What about specificity? Religious attendance particularly affects cardiovascular disease and stress-related diseases, as you would expect, and therefore is specific.

What about the temporality? In prospective studies, it appears that religious attendance predicts mortality in the future, providing evidence for temporality. What about a biological gradient? In both the Hummer study and the Musick study, as frequency of church attendance increased, the effect size on mortality also increased, providing evidence for a biological gradient.

What about plausibility? It is strong—highly plausible that religion influences physical health. We have a model of how religion might do this, acting through mental health, social support, and health behaviors. What about coherence? Yes, it is also coherent. The effects of religion are strongest in stress-related illness.

What about experiment? This is the only one of the Hill criteria in which the evidence is limited at present, given the relatively few clinical trials that have been done in this area. What about analogy? Yes, other psychosocial constructs, such as depression and stress, influence disease course, as we saw earlier.

What should physicians do about this? We can no longer justify that religion is usually irrelevant to health, neurotic, or health-damaging. But, while this is not sufficient to justify a physician's prescribing religious advice or recommendations, there are other reasons to justify limited physician involvement.

Religious beliefs impact medical decisions. (See Chart 6) This is an important reason for clinicians to address religious issues as part of routine clinical care. Studies show that 66 percent of medical patients indicate that religious beliefs would influence their medical decisions should they become seriously ill. Here, in making a decision about whether patients with end-stage lung cancer should receive chemotherapy, family and patients ranked "faith in God" as second in importance, even ahead of whether or not the chemotherapy would effectively treat the cancer. When 300 oncologists were asked this question, they ranked "faith in God" dead last among seven or eight other important influential factors.

So there's a difference here between what patients are saying affects their decisions on whether or not to receive chemotherapy and what physicians think affects patients' decisions in this regard. Physicians underestimated the importance of religion in influencing patients' medical decisions with regard to chemotherapy.

End-of-life decisions relate to religious beliefs and can cause serious conflict. You see here a study conducted in North Carolina, a random sample of women over age 40. If they discovered a breast lump, what would they do? Forty-four percent would trust more in God to cure their cancer than medical treatment, and 13 percent believed that only a religious miracle could cure cancer, not medical treatment.

With religious beliefs having such a profound influence on medical decisions, how can doctors practice good medicine without communicating about these issues with their patients?

So what do I recommend? Take a spiritual history. Because religion influences coping with illness and medical decision-making, doctors ought to take a spiritual history; respect, value, and support the beliefs and practices of the patient; and orchestrate the meeting of spiritual needs. Praying with patients is more controversial, although in certain circumstances, I feel it is appropriate.

In taking a spiritual history, what do you ask? First of all, you need to introduce the subject to the patient. Why is the doctor asking these questions? This needs to be explained so the patient won't be surprised or wonder why the doctor is asking questions about religion. The kind of information you want is as follows: Do religious beliefs or practices provide comfort, or do they cause stress? Don't imply that religion is either good or bad, only that it can provide comfort or can cause stress.

How might beliefs influence medical decision-making? Doctors need to know that. Are there beliefs that might interfere with or conflict with medical care? Is a person a member of a religious or spiritual community, and is it supportive? Are there any other spiritual needs that someone ought to address?

Not recommended: Do not prescribe religion to non-religious patients; force a spiritual history if the patient is not religious; coerce patients in any way to believe or practice; spiritually counsel patients; engage in any activity that is not patient-centered; or argue with patients over religious matters, even when they conflict with medical care or treatment. Even so, many complex situations can arise.

In summary, a religion–medical connection is not new or unnatural. Many patients are religious and use it to cope with illness. Religion is related to mental health, social support, and health behaviors. Better mental health, in turn, and better social support are related to better physical health.

Thus, religion should be related to physical health. And when you examine it, it is. The relationship is only moderate in strength, but it has a huge impact given the number of people who are religious. There is growing evidence that the relationship may be causal. Religion affects coping with illness and medical decisions. Thus, physicians should communicate with patients about these issues, but there are important boundaries and limitations.

DR. BUTLER: Thank you, Dr. Koenig, for a fascinating overview of the issue and of the research evidence. We now have three other speakers that will continue to look at this evidence and comment on it.

The first is Dr. Christina Puchalski, Associate Professor of Medicine and Health Care Sciences at the George Washington University Medical Center here in the District of Columbia. She is also founder and director of the George Washington Institute for Spirituality and Health and one of the first in the country to receive the John Templeton Award for Spirituality in Medicine, which is a very distinguished award.

Dr. Puchalski has pioneered the development of medical school courses in spirituality and health on a national level in an award program she directs for the John Templeton Foundation. Her work has been featured, like Dr. Koenig's, on a number of major television and other programs, including "Good Morning, America," "ABC World News Tonight," "NBC News," and the weekly series "Religion and Ethics News Weekly" on PBS.

CHRISTINA PUCHALSKI: What I would like to address in my comments has to do with work that I do in educating physicians on the role of spirituality and health. It's not just focused on religion. We really talk about spirituality much more broadly defined.

We have made many changes in medical education, and one of them is that we teach courses on spirituality and health. In 1992, there were three schools with courses, one of them being here at the George Washington University School of Medicine. Now well over 65 percent of the medical schools have courses or topics related to spirituality and health.

I draw that distinction because in medical education, many of our ethics and psychosocial courses are integrated into a larger curriculum, often entitled "doctor, patient, and society." Ethics, social issues, and spirituality are not specific courses but are integrated into other areas of the curriculum.

Clearly, there's been a huge interest in this. I'd like to talk briefly about why that is. One reason has to do with the general movement in medicine, probably in the last 15 to 20 years, to recognize more than just the physical aspects of care.

I think that's in response to the rise in technology in the last half century, from the 1940s on, where there has been a change from an art and science focus to more of a solely scientific focus and what many of us in medical education call a disease model of education. This is the model that physicians were educated on—and I was trained in that model—to focus not so much on the person, but on the disease. The next step after that is to be able to diagnose, treat, and hopefully cure that disease.

So much of the impetus in education and the way that our physicians were trained, myself included, is to want to cure and fix the problem. The public has responded negatively to that, with comments in the public press and elsewhere that doctors are "over-technologicalized," so to speak: that they focus too much on the disease and not enough on the person.

I read in an article in the early 1990s that people were going to complementary and alternative practitioners and paying large amounts of money to see those practitioners, and yet would complain about the $10 co-pay to see those of us that are M.D. physicians. There have been numerous writings and some surveys—not scientific surveys—indicating that the lay public wanted physicians, healers that would listen to their other concerns and relate to their spiritual concerns, not just their physical.

Some of the data came to the attention of the Association of American Medical Colleges, who then embarked on a project called the Medical School Objectives Project. This was a project that was started in direct response to the public outcry about the training of physicians and the fact that physicians were becoming too cold, too technical, and that people wanted warmer, closer relationships with physicians.

In the first Medical School Objectives Report, called Report One—and these are available on the Association of American Medical Colleges Web site, *www.aamc.org*—a group of medical educators achieved consensus on four attributes that they felt were critical in training physicians so that by the time the medical students graduated at the end of four years, the faculty could be confident that these students would exhibit these four attributes.

The third and fourth attributes had to do with being skillful and knowledgeable. Those get at the technical aspect, and clearly, we have to be very good at that.

But the first and second had to do with being altruistic and dutiful. So this group of educators that was interdisciplinary felt a very important aspect of medicine was our behavior with our patients. What

they stated is that we need to be compassionate with all of our patients, and we need to understand our patients and their illness and their health in the context of their stories: who they are, their beliefs, their culture, their family, and their values.

So as I was developing models of addressing spirituality in medical education, that dovetailed with the AAMC's objectives to try to create courses within the curriculum that would support this objective.

The second has to do with professionalism. There are many courses in the last 10 years that have developed in medical school having to do with professionalism: again, a concern on the part of medical educators that we were training physicians who were not in touch with their professional obligation to their patients. While those courses are very detailed, many of them include ethical behavior of physicians with their patients.

There's also a sense that we need to impart to our future generation of physicians a sense of pride and a sense of calling to that profession. What draws you to be a physician? Why are you here, and how can that be nurtured throughout your professional career? I use the word "calling." It is a buzzword, but many medical students, religious or not, use that sense of "I feel called to serve others." So, again, the aspects of professionalism are again bringing back to medicine the service aspect of our profession. We're not just here to fix and treat a problem, but we're here to serve people.

While many illnesses are curable, in the end, everybody will die. In the end, everybody will be facing chronic illness. There are statistics that the top three causes of death now versus 100 years ago are cancer, stroke, and heart disease. In all those three illnesses, people are living much longer with chronic illness.

A hundred years ago, people would die from those three causes. Now, because of treatments, people are living longer. But those are not curable illnesses, so they are dealing with chronic illness and the challenges that arise with chronic lifelong illnesses. How can we as physicians serve our patients in that context?

Before the 1960s, medicine was practiced largely in a paternalistic model; that is, physicians would dictate to patients what to do, and there was very little collaboration with patients about their preferences and their wishes. Largely, through the 1960s and '70s, that has changed and in a way has swung to the other side. I think we've gone a little bit too far and that now many physicians just abdicate responsibility completely and say, "What would you like to do, and we'll do that."

I think we're recognizing that we need to find a happy middle ground. Our courses try to address that. I think the happy middle ground is a partnership with our patients where we still act as experts in the area that we're experts in—and that's the medical side, the recommendations for treatment—but we act as partners and as equals when it comes to helping patients cope with their illness or helping patients find some decision that's good for them.

In terms of patient care, I think that Dr. Koenig addressed many of the research findings. Interestingly, our medical school courses are not so much based in the research as they are in ethical principles. But some of the research data do impact our courses, and that has to do with coping.

How is it that our patients come to cope with their illness? Illness, a loss, can cause people to question who they are at their very core, their meaning and purpose in life. People will argue, "Well, I can understand that your patients might deal with that. But why not just have the chaplain deal with it? Why not just have the clergy person deal with it?"

Because, oftentimes, those questions arise in the patient's lives for the very first time in the doctor's office. I'm an internist. I see patients. I have an active clinical practice. So I can tell you from my patient experiences that it is in those offices, when I tell someone that they have a diagnosis of cancer or diabetes or heart disease, or that their significant other is dying, it is in those conversations that these questions come up, and not so much outside of the clinical setting.

The physician may be the very first person to deal with some of these issues. That's the overriding principle. But there are also ethical issues, and Dr. Koenig alluded to some of them. Religious, spiritual, and cultural beliefs can impact how people understand their illness.

Very, very common in a religious population is to question the illness and wonder if perhaps people are being punished: punishment from God. I sinned, and therefore I have this illness. That can impact how a person is going to react, how open they are going to be to treatment, to treatment options, to coming back to visit the physician.

It's important that I, as a physician, know that that may be a dynamic operating in how a person understands their illness so I know how to communicate my recommendations and how to work with my patient. Maybe the appropriate thing to do before recommending any therapy is to suggest that that person talk further with their clergy person about those issues. Or perhaps I recognize some guilt and some other issues that have been unresolved; maybe pastoral counseling, maybe even counseling with a psychiatrist might be helpful.

There's also been some data from Ken Pargament on negative and positive religious coping that plays a lot into this first ethical parameter. Religious beliefs, spiritual beliefs can affect decision-making. Dr. Koenig referred to a couple of studies, but particularly around end-of-life care, religious beliefs play a large role. Whether someone would like to be taken off the ventilator or not, whether people are comfortable using feeding tubes—religious beliefs really affect those decisions.

Sometimes patients will have these religious beliefs, but they may come from an unclear understanding of what their religious principles hold. So it's very important to work in partnership with spiritual care providers who are trained, such as chaplains, who can help people understand their decisions. When it comes to decision-making, I hope that as a physician, I provide medical informed consent. Chaplains provide spiritual informed consent, which is not something people fully realize.

But chaplains who are trained may challenge patients about their belief system so that, in the end, when the patient arrives at a decision for a particular course of action with treatment or end of life, they are comfortable and sit comfortably in that decision, understanding the medical consequences as well as their religious and spiritual beliefs. It also could, for many patients, be a patient need.

Most of these data are survey data. Is it strong research, scientific data? Probably not; but from my perspective as a clinician, if there's enough survey data that says for some people spirituality and religion is very important and they would like, at least, their physician to be aware of that dynamic in their life, I think that is an important reason to address it.

Patient coping: In our interview with our patients, we ask a lot about coping factors. I ask my patients about family support, exercise, meditation, other ways that they might cope. Why not, then, ask about spiritual beliefs that might also help people cope?

If we broaden the definition beyond religion, there's a lot of data in the end-of-life field. In that field, people use what is called a quality of life instrument. One of the domains is what's called an existential domain that measures purpose in life and meaning in life and acceptance of one's situation. When people are able to do that, that correlates with having better quality of life at the end of life, which is again a reason why, particularly around chronic illness and death and dying, spirituality is important to address.

In addition, there's some research about pain. Pain is multi-factorial. There are physical dimensions to pain, but there are also social, emotional, and spiritual dimensions. A group in Calgary Hospital up in New York has developed a pain scale for patients to use—these were chaplains that developed it, and clergy—to identify their spiritual pain: Where is their spiritual pain relative to their physical pain? Can patients use a scale to describe these different types of pain?

There are some studies now—they are just beginning; there's not a lot in this area—where people are looking at the impact of spiritual distress on the perception of physical pain as well. There is much anecdotal evidence from patients that if their physical pain can be controlled, but if the spiritual pain is not well-controlled, they are still in tremendous distress and pain, and morphine will not take care of that.

Let's move to what we are teaching in the courses. First of all, I mentioned that our definition of spirituality is very broad-based. It's defined as a person's search for ultimate meaning in life, which can be expressed through religion but is much broader than that. It can be through other types of spiritual beliefs, relationship with a Higher Power or God

outside of a religion, family, nature, rationalism, humanism, and the arts: very, very broad.

For the theologians in the audience, I know that raises a lot of questions, but for us as clinicians, this definition is what's applicable in the clinical setting.

The outcome goal of the courses is that students understand that spirituality may play a role in a patient's life and that we learn how to respond to a patient's spiritual concerns. The students learn about their own spirituality as a basis of their calling in the profession, but also as a basis for self-care and how to nurture that throughout their profession, and they recognize that the care of patients involves more than just the physical, but also the psychosocial and the spiritual.

What we teach about spiritual care is, number one, being fully present to our patients; number two, recognizing that we are not trained spiritual care providers, so we learn to work in an interdisciplinary model of care where chaplains are the ones who are trained to provide spiritual care in most hospitals, and there are other types of spiritual care providers such as spiritual directors, pastoral care providers, and parish nurses.

We talk about doing a spiritual history as part of a social history, and there's an acronym I developed called "FICA." The focus of this history, though, is not a religious history; it's to ask what gives meaning to a person's life and whether they have spiritual beliefs that help them cope with stress or what they are going through. Find out how important that is, find out the community aspect, and then be thinking about how we should address or take action on what our patients have told us.

We also teach ethical aspects. Proselytizing is not allowable in the clinical setting. We make no bones about that. That is an absolute in the courses that we teach: that chaplains are the spiritual care providers; that physicians are not trained to get into lengthy discussions about spiritual issues or religious issues with their patients; that the focus on spirituality is more on the inherent value that religion or spirituality gives to that person as a human being, not so much on positive health outcomes.

In terms of prayer, we recommend that physicians not lead prayer, but request a chaplain to do that. However, if a patient requests a physician to pray, that physician could stand by in silence and allow the person to pray in their own tradition.

So for the "A" part of the FICA, how we need to address it, one of the options that we teach our students is just to listen and be supportive. This is a time to listen to what's going on with your patient, understand what dynamics might be playing in that patient's life at the time, and, again, refer the patient to chaplains and other providers.

Many patients will ask about yoga, meditation, and other types of spiritual practices, and then there will be a lot of reflection on past spiritual support practices. For example, if I have a patient who says meditation has been helpful to me, or going to church or temple or mosque has been helpful, and they stopped doing that and feel a lot of stress, I might reflect that "In the past you told me meditation, for example, helped. Where does that sit in your life right now?" But it would not be prescribing religion to patients. That would not be ethical.

In conclusion, I think there's a tremendous amount of support for the courses. It is controversial, but what we're talking about is the inherent importance of the doctor–patient relationship.

Part of our definition of spirituality is that it's not just our patient's spirituality, but it's our own. It's spirituality in the broadest sense of that word that goes to our interaction with our patients as compassionate human beings, that goes to our interactions with others on the interdisciplinary team. So many of us would actually talk about medicine as a spiritual practice.

DR. BUTLER: Our next speaker is Dr. Cynthia Cohen, a Senior Research Fellow at the Kennedy Institute of Ethics at Georgetown University, also here in Washington, D.C., and a Fellow at the Hastings Center in Garrison, New York. Dr. Cohen has published widely on the issues of biomedical ethics and the role of prayer and faith in health care.

CYNTHIA COHEN: In contrast to some of our other speakers, I'm a philosopher and a lawyer by training. I have worked in a health care context, having taught medical ethics in three different medical schools, gone on rounds, and having been an associate at the Hastings Center, which is a medical ethics think tank in New York. Now I am at the Kennedy Institute of Ethics here at Georgetown.

Why has the subject of prayer become such a compelling topic of interest in recent years? It's hard to open a newspaper, listen to the radio, without hearing something about the efficacy of prayer, about studies that suggest that this is a novel way of looking at patient care and helping patients to recover from illness. Yet we know that prayer is not exactly a novel way in which to address the needs of those who are sick. Praying for the sick is one of the oldest religious practices in the world, engaged in by people across a variety of religious denominations.

The difference is that the new interest in prayer is trying to look at it in terms of its efficacy. Is this something that can be used as a treatment? You can understand where medical practitioners are coming from because they don't want to use a medication or a procedure on patients unless they are sure it's safe, unless they are sure that it has some sort of impact.

The way they usually go about this is through scientific studies. So far, the studies seem to show that prayer in particular seems to work on some patients. There are studies that show that prayer has apparently been associated with improved health care outcomes for a high proportion of patients in certain studies. However, other studies show that prayer doesn't seem to have the same degree of effectiveness.

On the basis of these studies, some commentators have said health care practitioners ought to talk about patients' religious beliefs and practices with them, and indeed ought to encourage them in the practice of prayer, even get them going if they don't know how to get started on their own.

Making it a routine thing for health care professionals to delve into their patient's religious faith raises certain ethical questions: Are these inquiries consistent with professional ethics? Could they involve a violation of patient privacy, as was believed in medicine for much of the 20th century, as Dr. Koenig pointed out? Might some patients feel coerced into responding to doctors' inquiries about their religious and spiritual practices?

I appreciate Dr. Puchalski's broader concept of spiritual beliefs. I wonder, though, if I were a patient who was asked to talk about my spiritual beliefs, if this would not be a synonym for religious belief, but instead would bring to my mind implications of, say, spiritualism, séances, or the Dalai Lama, who drew 7,000 people to the Washington Cathedral on the basis of his spiritual approach.

So I would love to get into a broader conception of what doctors ought to be addressing. I'm a little concerned about using the word "spiritual" because of unintended associations that it would have for patients.

Might some patients feel coerced into responding to doctors' inquiries in the way in which they think doctors would want them to? Health care very much hinges on what the physician thinks of the patient. The physician seems to have a lot of control over the hospital setting.

Should doctors or nurses initiate prayer themselves as a means of helping patients to improve? The risk that patient privacy, patient autonomy, and patient well-being might be subverted by professional proselytizing or inadvertent or direct coercion looms over calls to physicians to inquire into religious beliefs to their patients.

The study that brought to the fore the question of whether medical science can prove that prayer works was carried out by Dr. Randolph Byrd in 1998. He was a cardiologist who looked at patients in a cardiac care unit. He separated patients who had suffered heart attacks into two groups. There were those in the coronary care unit who got standard medical care. Then there were others who, in addition, got prayer from anywhere from three to seven born-again Christians.

Byrd found that the patients who were the subjects of prayer needed fewer antibiotics, experienced a lower percentage of congestive heart failure, and were less likely to develop pneumonia. He concluded that "Intercessory prayer to a Judeo–Christian God has a beneficial effect in patients admitted to a coronary care unit."

Since then, other investigators have mounted studies to display the efficacy of prayer in that setting and in other settings, and the results have by and large been positive, but not altogether. Some do seem to show that prayer works and makes people better, but there are others that give reason to be less sanguine about this.

For instance, when psychiatrist Scott Walker tested whether prayer could speed the recovery of individuals who were addicted to alcohol, he found

that those who were prayed for were no more likely to recover than those who were not. When he asked his patients about this afterward, they said, "Well, I had people praying for me in my family, and frankly, I behaved very badly to them when I was drunk. They probably were sending negative prayers about me to God, and that's how your study was affected and how the prayers were answered."

Is it possible to test the efficacy of prayer scientifically? What does the standard, randomized, double-blinded controlled study in science have to say about this? In this sort of study, patients who seem to be alike in significant respects are assigned by chance to one of at least two groups. In one group, they're going to get the kind of treatment that's under study. The control group is going to get placebo treatment of some kind. The study is said to be double-blinded because neither patients nor doctors are told who's in either group until the conclusion of the study.

Could prayer be subject to this experimental approach? Patients would have to be divided into at least two groups: patients who were receiving genuine prayer and patients who were receiving no prayer—or, if you want to follow the standardized model, patients who were receiving placebo prayer. How could investigators ensure that one group was receiving prayer and the other group none? How could they verify the presence or absence of prayer? How could they coax the patients in the study who were receiving prayer not to pray for themselves? How could they get people all over the world who are praying for the sick on a daily basis not to pray for the people in this particular study? It just doesn't seem possible.

Moreover, the design of these studies requires uniformity and careful empirical measurement. Wouldn't you have to use the same prayer for every single patient in this study? The Byrd study said praying to a Judeo–Christian God was efficacious. Yet you wonder, would it be effective and appropriate for a Muslim or a Hindu patient? Do we need to investigate and find some sort of interdenominational prayer that would be effective? This could create a problem for Zen Buddhists, who don't tend to appreciate the value of spoken prayer. They are more involved in wordless meditation. How would we address their medical needs, then, if we were trying to study prayer?

When you are measuring drugs in medical studies, you look at the dose response effect of that drug. You look at whether a standardized amount of medication evokes the uniform response across the board, or whether a larger dose increases the desired effect. How could researchers similarly quantify the dose response of effective prayer and evaluate whether more is better? What amount and degree of intensity would this require? What outcomes would be required to distinguish prayer as the sole cause of improved patient health?

Surely, when you've got a very firmly defined outcome such as death, you can look at studies involving, say, pancreatic carcinoma or rabies or smallpox—diseases with almost 100 percent mortality—and decide whether the outcome has been changed by prayer. But what about outcomes other than death? Should we investigate restoration of motor function after a paralytic stroke in patients? What about return of a normal coronary angiogram in those with higher evidence of significant coronary obstruction? What about cure of a cold? How serious and how discrete should the outcome be to prove that prayer alone had prevented it?

Finally, you'd always get an argument about what the study results proved. People who found that prayer seemed to work, for example, would get an argument that they hadn't included enough patients in their studies. The same would be true if the reverse were found; if prayer were found to be inefficacious, there would be objections from those who thought that it was efficacious.

Basically, what I'm suggesting is that the effort to test the efficacy of prayer is grounded in an impossibility. Prayer is not the sort of practice that can be tethered and measured, and nobody can sincerely practice a faith—certainly not the Jewish, Christian, or Muslim faiths, theistic faiths—for their health benefits. Theists engage in prayer because that's where they encounter God. They present themselves as needy, but they don't encounter God solely to get their needs met. They come to meet God, their most fundamental need.

In short, the theistic traditions don't view prayer as a sure means of getting God to give humans their way. This doesn't mean that we ought to abandon prayer for the sick. Surely, in theistic traditions, such prayer is embraced as recognizing human

dependence upon God. That God answers prayer, though, is a corollary of belief in God, not the test for the vindication of that belief.

Let's consider other studies that don't focus on prayer, but look at attendance at religious services, other religious and spiritual practices that have a beneficial impact on the way patients respond to sickness. Some studies have found that religiosity and spirituality are associated with improved physical well-being, including lower blood pressure, decreased levels of pain, a higher likelihood of surviving cardiac surgery.

I would contend that these studies in themselves, even if they are found to be in accord with scientific methodology, would not justify a claim that health care professionals ought to delve into their patients' religion to improve their health. There are many factors, such as patients' movie-going habits, their selection of reading material, their choice of a pet, that can have a positive effect on their health, but we don't consider these as within the domain of usual professional inquiry.

I think that the reason it's appropriate for health care professionals to open the door to talking about religious beliefs with patients is because patients in individual cases may want them brought into consideration as important to the way they make health care decisions. Some patients will indicate this openly in the course of certain conversations with doctors as they enter into long-term care with them. Other patients will not, though, because they are concerned that this is not something that doctors talk about, and I'm not going to go that way because I don't want to offend my doctor.

There's a third group of patients who want to have nothing to do with this. In order to accommodate these patients, it would seem that what we ought to do is have physicians ask very general questions—What's important to you that you think I ought to know about as we enter into your health care? What are your sources of support?—and to take it from there, see what kind of answer physicians get, and perhaps move into religious belief if this seems to be important to a particular patient, or artistic concerns if this seems to be what's important to patients.

There's a very large issue at stake. Basically, religion and medicine have been closely linked historically. Each has been seen as an important way to meet human needs. Are both medicine and religion to be regarded as ways of delivering comprehensive human well-being?

The practice of religious faith is directed towards meeting the deepest and most comprehensive needs of people as religious practitioners understand these to be, and in that very broad sense, it may be said to be therapeutic. It certainly is responsible medical practice to consider how religious convictions affect patients' health.

But both medicine and religion are in danger of distortion if we don't understand their distinctiveness. It's a misunderstanding of religion to view it as detachable from a commitment to a way of life, from religious belief, as if it could be reduced to a treatment modality or engaged in simply for the sake of lowering blood pressure.

Just as surely, it's a distortion of medicine to see it as capable of delivering comprehensive human meaning or fulfillment. Medicine is limited not only by human ignorance and error, but ultimately, by mortality. Every patient is lost in the end, and not even the best medical care can stave off death forever or provide a means of living bravely and well with that reality.

DR. BUTLER: Our final speaker, Dr. Richard Sloan, is Professor of Behavioral Medicine in the Department of Psychiatry at the College of Physicians and Surgeons at Columbia University in New York. He is also chief of the Department of Behavioral Medicine at the New York State Psychiatric Institute and Director of the Behavioral Medicine Program at the Columbia Presbyterian Medical Center in New York City.

Dr. Sloan's principal work focuses on identifying the autonomic and nervous system's mechanisms, linking psychological risk factors such as depression, hostility, and anxiety to heart disease. In addition, he and his colleagues have recently explored and criticized the purported links between religion, spirituality, and health that have appeared in popular and medical publications. He has identified, in his view, very significant ethical problems associated with making religious activity an adjunctive medical procedure—some of the issues that Dr. Koenig raised at the very end of his presentation.

RICHARD SLOAN: Let me begin by thanking the Heritage Foundation for assembling this panel.

Although, both in print and in public, I've disagreed with a number of assertions that you've already heard, it's an honor to be on the same panel with these participants. These are among the best people in the field.

Let me also begin by saying that nobody disputes that for a great many people in the United States, religion and spirituality are enormously important. Correspondingly, nobody disputes that for a great many people in the United States, religion and spirituality provide comfort in times of difficulty, whether it's related to illness or otherwise.

The question for us is whether medicine and physicians can add to that. There are a number of reasons to suggest that the answer is that they cannot. As a number of the speakers have already indicated, it's a very complex problem; and as H. L. Mencken said, "For every complex problem, there is a solution that is simple, neat, and wrong."

In my view, tying religion and spirituality closely to health outcomes is misguided for a number of reasons. Those reasons are empirical—that is, the quality of the evidence; practical—what actually happens in the clinical setting; ethical; and theological. Let me go over each of them.

The empirical evidence is, in my view, far less solid than Dr. Koenig believes it is. The most current comprehensive review was published in January of this year in *The American Psychologist*. Lynda Powell and colleagues reviewed nine different domains of evidence purportedly linking religious and spiritual beliefs to health outcomes. They include examining the relationship between attendance at religious services and mortality; recovery from coronary artery disease; prevention of coronary artery disease; prevention of cancer; recovery from cancer, stroke, et cetera; and immune function. Of the nine, only one, in their view, had strong evidence in support of it. That was the link between self-reported attendance at religious services and reduced mortality.

In that area, there are a number of good studies now, although there were some weak ones previously. The problem with that evidence is we don't have any idea what the self-reported assertions of religious attendance mean.

Almost all of these are based on surveys that are conducted. Patients are interviewed either by phone or in person and asked to report how often they go to church or synagogue; for example, once a week or more than once a week, a couple of times a month, three times a year, never, et cetera. Garrison Keillor commented that anyone who believes that sitting in church makes you a Christian must also believe that sitting in a garage makes you a car. That illustrates the vagaries of what sitting in church means. It means a great many things to a great many people, so we really don't know what it means.

Moreover, there is persuasive evidence that when data are collected in interview format, either in person or by phone, respondents systematically inflate their reports of church attendance. There are a number of publications in the sociological literature that suggest that this happens in order to satisfy what researchers refer to as self-presentation bias. The respondents want to look better to the interviewer. It doesn't happen on paper-and-pencil questionnaires, but it does happen in interview methods.

So the evidence linking religious attendance and health outcomes is weaker than it seems because it is very likely that the reports of attendance are inaccurate. That's one empirical consideration.

The other empirical consideration was illustrated very nicely by Dr. Cohen, talking about the Randolph Byrd study, which is the first major study of the impact of intercessory prayer; that is, the prayer of one group of people on behalf of others. The Byrd study measured 29 different outcome variables. Dr. Cohen mentioned a few.

It turns out that only six of the 29 showed a benefit for the prayer group. Moreover, of those six, they were not independent. So, for example, the patients who received the intercessory prayer had fewer cases of pneumonia and fewer cases of newly prescribed antibiotics. Those are the same thing. You prescribe antibiotics for pneumonia. Moreover, the patients who received prayer had fewer cases of heart failure and fewer new prescriptions for diuretics. Again, the same thing; you prescribe diuretics for heart failure. So they are not independent.

The approach to the analysis to these 29 variables is epitomized by physicist Robert Park's example of the sharpshooter's fallacy. Park is the former president of the American Physical Society and a

critic of junk science. He wrote a book a few years ago called *Voodoo Science*, in which he described the sharpshooter's fallacy. The fallacy is that the sharpshooter empties the six-gun into the side of the building and then draws the target. That's what happens in a great many of these studies. A slew of variables are collected, and then researchers conduct a large number of statistical tests and say, "Aha, there's something" because one of these tests meets the criteria for statistical significance, ignoring the other statistical tests conducted.

So, on empirical grounds, the evidence is much weaker than we're led to believe. In these days of interest in promoting evidence-based medical services, that's a serious problem.

Then there are practical considerations. Earlier this year, in *The American Journal of Public Health*, a paper was published indicating that if practicing physicians in the United States followed all of the recommendations of the U.S. Preventive Services Task Force, they would spend 7.4 hours per day. That's before they did anything else: 7.4 hours per day.

The question I have is, should we be spending time exploring patients' religious and spiritual beliefs when we already know that, even today, not enough physicians ask about smoking. Not enough physicians ask about diet and nutrition. Not enough physicians ask about exercise. Not enough physicians ask about depression and stress. All of those are demonstrably related to deleterious health outcomes. With a limited amount of time, what do we want physicians to spend their time on?

Those are some of the practical considerations. Then there are the ethical considerations. We have focused on three. The first is the risk of manipulation or coercion; the second, invasion of privacy; and the third, actually causing harm.

Let me talk about manipulation. The nature of the physician–patient relationship is asymmetrical. Patients seek the medical expertise of physicians, and both physicians and patients assume that the patient will follow the recommendations.

That's the nature of any relationship in which someone seeks the services of an expert. If you seek the services of a tax accountant, you expect that you are going to follow the recommendations of that tax accountant, and the accountant expects the same thing. In any relationship between an expert and somebody seeking expertise, that's the assumption.

That's fine in the medical setting as long as the physician's recommendations derive from his or her medical expertise. But when physicians depart from their expertise to promote other agendas, it runs the risk of manipulation. It runs the risk of promoting a potentially coercive agenda and, as such, is a threat to religious freedom.

The second concern is privacy. There are a great many factors in our lives that are demonstrably linked to health outcomes but that are regarded as out of bounds to medical practice. The best example is marital status. There is an abundance of evidence suggesting that being married promotes greater longevity and is good for your health. There's more recent evidence to suggest that it may depend upon gender. It may pertain to men and work in the opposite way for women.

Regardless of which direction it works, we don't expect physicians to make recommendations about marital status to their patients because of the reputed health benefits. We don't expect physicians to address a male patient and say, "Bob, I've got this wealth of evidence here that suggests that being married is good for your health. You're single, and I think you ought to get married because it's going to be good for your health."

The reason we don't do that is because we regard marital status as personal and private and out of bounds of medicine, even if we can show that it's related to health outcomes. That is abundantly true, and probably more so, of religious pursuits, which for a great many people are personal and private.

The third ethical concern is actually causing harm. Even in these days of medical consumerism, patients still confront age-old folk wisdoms about personal and moral responsibility for adverse health outcomes. Because of the problems in considering anecdotes, in the empirical setting, I tend to stay away from relying on anecdotes; but when illustrating an ethical point, I think an anecdote is perfectly fine.

I want to recount an experience that I had early in my research career when I was interviewing a young woman who was awaiting the result of a gynecological biopsy. She was in a semi-private room. The other woman in the room was also awaiting the

results of gynecological biopsies. Of course, they were separated only by a thin curtain. The other woman had members of her family and friends there.

While I was interviewing my patient, the other woman's biopsy result came back, and it was negative. Her father exclaimed to nobody in particular, "We're good people; we deserve this." Now, that's a perfectly reasonable thing for the father of a potentially gravely ill young woman to say. It's an expression of relief. It's fine.

What was the young woman I was interviewing supposed to say to herself when her biopsy came back positive? Was she supposed to say, "I'm a bad person; that's why I got cancer? I haven't been sufficiently devout; that's why I got cancer?" It's bad enough to be sick. It's worse still to be gravely ill. But to add to that the burden of remorse or guilt about some supposed failure of devotion is simply unconscionable. That's what you get when you make suggestions that religious activities are associated with beneficial health outcomes.

Finally, there are theological considerations. Dr. Cohen actually touched on a number of these. Many theologians are extremely concerned about suggestions that religious beliefs and activities are treated by medicine in the same way as prescribing a low-fat diet. In what way are religious activities like taking a beta-blocker or consuming a low-fat diet? It seems to me that such suggestions demean the transcendent meaning of religion and are actually sullying what religion is to a great many people.

Let me conclude by reiterating that nobody disputes the value of religion and spirituality in bringing comfort to a great many people in times of distress, whether it's related to illness or otherwise. The question, it seems to me, is whether medicine should be involved in this, whether physicians should be involved in this.

As I see it, the answer is generally "no."

Q & A

DR. BUTLER: I want to thank all of our panel for excellent and very provocative presentations. Let's start with questions and use that as the basis for discussion.

SPEAKER: I'm surprised that no one mentioned the religious denomination of Christian Science. I'm not a student or a practitioner, but it's my impression that they are a fairly successful Protestant denomination who put practically all of their health eggs in the prayer basket.

All of you, I'm sure, have more knowledge of Christian Science practices than I do. I'd like to hear something about it.

DR. COHEN: I don't think you're going to find many Christian Scientists coming to physicians' offices or to the hospital, just because of their religious beliefs. I think that when you have children involved, this becomes difficult. Some states have passed laws saying that a child who falls seriously ill cannot be prevented from receiving medical care because the parents are Christian Scientists, but other states haven't. So, in a sense, within the health care setting, it's often not a live issue.

DR. SLOAN: Christian Scientists range in their beliefs from either completely abstaining from medical care to receiving care just like you and I receive care. So there's a wide range. Some earlier studies published in *JAMA*, and then in some of the public health reports, indicated the Christian Scientists did not have as good health as those in the general population that they compared them to. They had greater mortality when they compared the length of their lives in graduates from certain colleges. They had worse outcomes from cancer.

DR. PUCHALSKI: I would like to address that question, but actually broaden it a little bit because it addresses a very important point—something, again, that we teach in the medical schools. I will defer to the exception of children, but regarding adults, I do have some patients who are Christian Scientists and will accept some limited amount of medical treatment and actually will see me because, for the most part, I will respect that and not give additional treatment that they are not comfortable with.

I have a lot of colleagues I work with who are Christian Scientists and who do not seek traditional medical treatment. But beyond that is the importance of respecting where a patient is. We could even broaden that question to accepting any kind of treatment.

In our interactions with patients, as Dr. Sloan would say, we may be experts in certain things, but I think unlike other types of professions, we recognize that we're not experts in everything. Even when it comes to recommending treatment, patients will bring a variety of different beliefs to us with regard to whether they're going to accept that or not. Traditionally trained physicians by and large have an agenda and a focus to try to get the patient to accept a particular treatment.

The novel thing that we're trying to do in the courses is to say don't necessarily have that agenda. You have a recommendation, but if your patient has a strong belief—it doesn't even have to be religious; it can be other types of belief—about whether they're going to accept a treatment or not, you need to respect that and not try to force that belief out of that person in order to have your agenda met.

Christian Science is one. Another is the Jehovah's Witnesses. I had an oncologist at a conference yesterday ask me how in all good conscience I could not give transfusions to a Jehovah's Witness. Am I not violating my ethical principles as an expert physician who knows that transfusion would alleviate a serious life-threatening anemia? I say it's just the opposite. I think it's unethical to force something that violates a person's belief.

SPEAKER: Dr. Puchalski, as I understand it, you are involved in a development of some sort of ethical norms, or at least in the investigation of it. I understood you to say that with respect to physicians, if they are asked to pray with a patient, that they could then stand silent. Is that a suggestion, then, that the physician who does overtly pray with the patient at his or her request is somehow deviating from the norm and is subject, possibly, to a liability of some sort or a punishment?

DR. PUCHALSKI: To my knowledge, there's been one lawsuit around that, but I'm not certain of the details. I was never able to find documentation of that.

Let me back up to what you said about prayer. Generally speaking, what many physicians feel and recommend about prayer goes to what Dr. Sloan very well described as the power differential between doctors and patients. In anything that we do, be it prayer or any other kind of conversation we have with our patients, we have to be very careful that we're not being coercive.

Let's say a patient asks me to pray with them, and I say, "Fine, I will do that," because that's a very felt need; that's an important question the patient asks me. But then I lead it in my tradition. Am I not risking imposing my tradition onto that patient?

Second, there is a lot of training that goes into leading prayer. I might be able to lead prayer in my tradition, in my faith community, but in terms of being someone who learns the skill of asking what the person wants to pray for, what does it mean in the context of their beliefs? Chaplains and clergy are trained to do that. We are not. That's why the recommendation against physician-led prayer is very strong, because, number one, we're not really trained to lead prayer and, number two, it opens that door of possible coercion.

Why many of us recommend standing by in silence is that when a patient requests prayer, that's a very intimate request. To have someone turn around and say, "No, I'm not going to do that" could be very rejecting. So we recommend an alternative, which is maybe stand by in silence or invite the chaplain in if you're in a hospital to lead the prayer and be present at that. Then your patient doesn't feel that sense of abandonment and rejection.

There are exceptions, though. There are physicians who, for their own moral, ethical reasons, feel very uncomfortable about participating at all. They don't believe in prayer. They think they're lying if they pray with a patient. We would not recommend that physicians do something that goes against their own moral principles.

There are also exceptions where physicians have long-term relationships with their patients, where, in many parts of the country, the physician actually attends the same church that the patient does and they know each other in a social context. In that case, more active prayer may be appropriate.

So there are going to be some exceptions, but these are general principles that we discuss in order to protect the patient's privacy and not to feel that that person is going to be coerced.

DR. KOENIG: Christina and I are generally in agreement, but not entirely on the issue of doctors praying with patients. I think if the physician takes a

spiritual history and knows that this patient is religious and that they are praying, and in particular if the patient requests it and if the physician is of the same religious background as the patient, and if the situation warrants it—if it's a serious condition such as the diagnosis of cancer or disability, for example, or recent stroke—I think it's permissible for the doctor to actually say the prayer.

That's just my opinion. I have prayed with patients. I don't do it very often. I do it in the context of a relationship. In the last two to three years, I've prayed with two or three patients. I've known those patients for five to seven years. I know they're religious. I know they cope through their faith. I know that's very important to them, and they have asked me, and when I've done it, I've just seen amazing things done.

It's not a long prayer. It's a short prayer, just a comforting prayer. In hospitals, you see the cleaning women praying with patients. You don't need a whole lot of training to pray with somebody. We pray with our families, particularly if you're of the same religious background and it's clear that it would bring comfort to this patient.

Sometimes patients don't recognize that their doctor would even be open to this. I've given some talks in churches, for example, and they said, "Well, I'd be a little reluctant to ask my doctor to pray with me. I don't think he'd be open to it." I guess maybe the doctor could say something like, "Should you ever want to pray, I'd be open to that."

Leave it up to the patient. The patient doesn't have to respond, but at least allow this information to the patient so that they know this is something they can talk to their doctor about, and if they want him to pray with them, he can. This is not something you can do with every patient. You have to be extremely sensitive because these are very deeply, personal, private issues that have to be respected.

DR. SLOAN: Dr. Koenig's remarks illustrate one of the concerns I have: that is, if I understood you correctly, if it's a serious matter, then it might be acceptable. The assumption is that the physician is going to make a determination about what's a serious matter in the mind of the patient. The patient is asking for the physician to pray, and the physician is going to act as an arbiter of that value, to determine whether this is a situation which merits prayer with the patient or not.

It seems to me that physicians are completely ill-equipped to make those determinations and should simply not get involved. The patient should be free to do whatever he or she wants. But if a physician is going to start making decisions about what's an appropriate religious belief to have and what's an inappropriate religious belief, that's a very dangerous thing.

DR. COHEN: Not that I completely agree with Harold, but just to pursue this a little bit further, I think Harold was talking about not so much the situation regarding prayer, but clearly that there are some circumstances that we make decisions on.

If a patient's parent just died and they're sitting there crying and it's a very serious issue for them, or if the patient says this is serious, or they're actively dying, we can sit here and talk about the research and the ethical principles, but there's not some book that we can follow and a script that we can follow. We lead from our experience, our heart, and our judgment call.

I do think physicians are actually equipped to make the judgment call of whether something is serious or not. I think what you were trying to say is: Is it serious enough to warrant my leading a prayer? I think that's what I heard you say.

DR. SLOAN: Oh, no. It seems to me the assertion was that if the physician deems it a serious matter, then he or she could accede to the demand; otherwise, not. If the patient has the sniffles and asks for a prayer, is that a situation in which the physician then makes a decision: "No, this is not serious enough; I won't accede to the request?" Or if the patient is dying of cancer, what gives the physician the right to determine when a religious request is sufficiently serious? It seems to me, nothing.

DR. KOENIG: I would agree. When I said "serious," I meant serious in the mind of the patient. That's what I would have said.

DR. COHEN: However, if a patient has the sniffles, and they turn to me and say, "Doctor, will you pray with me," that's a very different situation when the patient makes that request. That does happen in a clinical setting. What are we to teach our physi-

cians? Not to respond at all or to turn red and panic and run out of the room—which does happen—and then jeopardize the patient's reaction, feeling that they somehow opened themselves up and now the physician has rejected them?

That's why I'm recommending that much kinder or balanced approach, which is to say, "If that's important to you, you are welcome to do that," and then maybe to stand by in silence and allow the person to do that.

DR. PUCHALSKI: The other side of the coin is that we all know stories of physicians who have responded to such requests by being overbearing and very assertive and very coercive. We want to try to avoid that as well.

DR. BUTLER: I have a quick question on the methodology. Maybe both Dr. Sloan and Dr. Koenig could comment on this.

Both of you alluded to the issue of whether religious practice may involve other activities for which there may well be some evidence that this is connected to improved recovery and so forth. For example, people who have a strong religious activity may have a very strong support group. Many people come to visit them. They have a community that they know is caring about them. They may have more confidence about recovery.

Is there any evidence from the research that there may be some more demonstrated characteristics of behavior that overlap in many instances with religious activity that might in fact be better explainers of this connection or otherwise?

DR. SLOAN: Certainly, certain religious denominations proscribe certain risk behaviors: cigarette smoking, consumption of meat, caffeine. The epidemiologic studies that compare, for example, Seventh Day Adventists with other religious denominations often show health advantages to the Seventh Day Adventists. It's purely attributable to their dietary habits. Anybody who consumes the same diet will have the same health benefits.

So if the concern is that religious practices promote certain risk-reducing behaviors, I would certainly agree. But there are many vehicles by which one can modify health behaviors. It's not just becoming a Seventh Day Adventist, for example.

DR. KOENIG: I think that religion provides a package of things that are hard to get elsewhere. The effect that religion has on health is mediated through such mechanisms as the support it provides people and the commitment of not only receiving support, but also giving support to others.

I think this is part of the way religion influences health. Also, by affecting health behaviors in terms of those doctrines that we don't like to listen to—the "thou shalt nots"—that you're to respect your body; you're not to drink heavily; you're not to smoke; you're to live a healthy life style by showing respect to your body.

This is how religion does it. I don't think that we're studying some kind of miraculous effect here. I think what we're looking at are the effects of the social support, the better mental health, the ability to cope better, the living of a healthier life, the making of better decisions. This "results" in better health.

I'd have to admit to both Cynthia and Richard that the intercessory prayer studies, in my opinion, are worthless because they are not built on any scientific paradigm, and also, theologically, they have serious problems. So we try to avoid that particular area as much as possible.

DR. SLOAN: Again, the issue of concern is the potential for physicians to become arbiters of what's appropriate and not appropriate religious behavior.

Dr. Koenig is absolutely right. There are many religions that provide a faith community, that provide social support and proscription of risk behaviors. But there are other religious traditions that promote the use of psychoactive drugs, for example, or snake handling. Are we going to make decisions about those as inappropriate religious practices? Who are physicians to make those decisions?

SPEAKER: Dr. Sloan, you may want to share the same experience that the author Franz Werfel may have experienced. Beginning in 1940, he was an author escaping from Germany. He felt the best way to get out was over the French border into Spain and found himself delayed by train in a small town in southern France called Lourdes.

When you go to Lourdes, you will find there something called the Medical Bureau. It is made up of doctors from all over the world, all dealing with

the matter of, from April to October, people of all sorts of denominations coming to Lourdes with intercessory prayer with respect to the miracles and miraculous cures that have taken place there. Four million people a year.

Since 1858, there have only been 67 documented miracles in Lourdes, but millions come there per year. One would have to ask the question, why do they come there? It has to do with their understanding of the value of prayer and that, if there is a cure, there are very specific medical examinations made with respect to the role that prayer played with respect to the cures that are there.

Franz Werfel said, for those that believe, no explanation is necessary. For those who do not believe, no explanation is possible.

DR. SLOAN: Precisely. That's the difference between faith and science. They are independent domains. Who would want to disabuse people from going to Lourdes or anywhere else in the service of their religious beliefs? Nobody. But that's not science; that's religion.

DR. KOENIG: Everything about Lourdes suggests that they are connected, specifically connected.

DR. SLOAN: Well, I don't believe there's any evidence.

SPEAKER: I'd like to ask Dr. Sloan: I'm a volunteer chaplain. On one hand, I resonate to some of the things Dr. Puchalski was saying. On the other hand, I've been what I call a professional cynic as a systems analyst and mathematician in my professional life, and I sometimes feel a little bit like Dr. Sloan.

When you say they are completely independent, what I'm hearing is the dilemma that modern medicine faces, and doctors face now, that simply brings them together in your life. As a chaplain, I was thinking, "Yes, it's better for the doctor to call the chaplain when the patient wants a prayer." But as you pointed out, the first time that this patient is going to run into this situation is in your office, and you haven't got a chaplain.

Does that mean that it is not appropriate to start preparing doctors for dealing with that in whatever way is right for them, which is probably different for every doctor? Some doctors may be comfortable in asking what the patient's spiritual background is and feel comfortable in praying. Others may say, "I'm of a different faith. Why don't you pray?" Others may avoid it altogether.

But doctors need to be prepared for it. It is part of practicing medicine now, no matter how you look at it. You've got to deal with that, so why not train for it?

DR. SLOAN: Of course, you're right. Physicians have to be prepared to deal with it, in the same way that they have to be prepared to deal with any areas in which they lack expertise. When you see an internist and you have a cardiology problem, the internist refers to a cardiologist, who has expertise that the internist lacks.

In the same way, an internist who is confronted with a patient who has religious or spiritual concerns ought to avail himself or herself of the services of a religious professional, a member of the clergy. I don't mean to suggest in any way that these are not important matters to patients and that they're not important matters to physicians.

The question is whether physicians are equipped to handle them. Are there ethical concerns about the way in which physicians address these matters? Even if coursework were universally available and thorough, it would pale in comparison to the training that professional clergy receive.

These are complicated matters. Fortunately, we have professional clergy who are skilled at these things.

DR. PUCHALSKI: Richard, I agree with a lot of your concerns. You mentioned that physicians will bring these issues to our office, and that's one reason that we should be able to be responsive to it, which, of course, I agree with. I think we need to go one step further and make patients feel comfortable and open to being able to bring up those issues if they are there. That's why I take it a little bit further and say we should do at least an opening question.

I actually differ a little bit with Cynthia in that I think we should use the word "spiritual," because if I ask as a physician what gives your life meaning, people won't necessarily think doctors are open to spiritual or meaning issues. Even though those

issues are there, they may not feel open. So it's an invitation more to bring up these issues.

Second, on your comment about chaplains, Richard, again, I agree that we are not training doctors to be chaplains. But just like with the rest of our history-taking, we do teach people how to ask sensitively about marital status, sexual history, domestic violence questions, et cetera. We are not experts in those areas, but we teach our students to refer.

That's why I'm hoping chaplains are getting more and more referrals as a result of these courses.

DR. KOENIG: Family physicians do have to check the heart and check the blood pressure to determine if a cardiology consult is warranted. Therefore, I think the spiritual history is a necessary part of identifying the issue.

DR. COHEN: I just want to clarify one thing. Richard mentioned the case where one patient overheard the reaction of a relative to a diagnosis or a test of a particular condition. The fact is that that relative's response in terms of most theistic traditions was totally inappropriate. No theistic tradition would teach that this patient deserves to be cured and this patient does not.

So a physician has to be equipped at some very basic level to be able to respond to the patient overhearing this. That person didn't really understand what's at issue theologically. I'm not equipped to go into detail about it, but I can understand how that response would bother you, and if you'd like, I can get a chaplain to come in and talk to you about it.

SPEAKER: I have two quick questions. The first one is, addressing your issue of physicians making these judgment calls, what would the ramifications of discrimination be? The second is a time issue. A short prayer is one thing, but different rituals could extend beyond that. What are we talking about in terms of other patients who might need their physicians for the actual medical purposes?

DR. KOENIG: I'm happy to speak about the time issue. This does have to be done in addition to what the doctor does in taking care of the patient. He can't take a spiritual history and not take the blood pressure. So it does add some time. The question is: How much time?

There has recently been a study—and it's not published yet, so I'm a little bit reluctant to talk about it—that looked at how much additional time it took to take a short spiritual history. It's not more than two minutes. So it is adding two minutes to whatever the doctor is doing. The doctor would do that not in a 10-minute office visit, usually. He'd probably do it in a history when they're admitted to the hospital, when they have more time with the patient.

SPEAKER: But beyond that, what about the actual interaction?

DR. KOENIG: When you are getting involved in rituals with patients, you have to be extremely careful. The only one I can imagine is a short prayer if you know the patient and the patient wants it, and you know this would bring comfort to that patient, which even then is done with some degree of trepidation.

DR. PUCHALSKI: To follow up a bit on that, the spiritual history that I teach does take a little less than two minutes. But if you think about everything else that we do in the context of all the questions that we ask, the domestic violence, the hobbies—there's a huge number of things.

In the overall scheme of what we teach medical students is the need to use your judgment as to what to do with the information that patients are giving us. Let's say we're doing a global depression assessment. We do a very quick depression assessment with our patients. If that person is depressed, we're not going to go on with the rest of the exam. If that person is acutely depressed, we are going to respond to that.

Similarly, with the domestic violence question, if that person is a victim of domestic violence, we're going to need to adjust what we're doing in order to respond to that particular need. With the spiritual history, if something comes up that requires a lot more discussion or referral to a chaplain or something that the person just wants to talk about more, we may need to defer other parts of the history.

That's why the system of health care we have right now does not meet patient's needs, because it tries to pigeonhole people into 10-minute visits. We should not teach to a bad system. We should teach to an ideal and then try to teach our students to work around the current problem.

SPEAKER: The other side of this is that, for someone who is in a vulnerable time and has a lot of faith, their faith is completely at question, whether you the doctor know it or not, as they hear this news. The physician who has not explored his or her own spiritual tenets, by rejecting the patient's inquiry or struggle, is in effect impacting their faith. That has an impact on their healing or on their own faith because of the authority position the physician is in.

DR. COHEN: I think the kinds of discussions that Christina carries out in medical school teaching do stimulate physicians-to-be to ask themselves, "Where do I stand with regard to this?" If a physician is not somebody who adheres to a particular faith tradition, that physician certainly should realize that they are going to have an obligation to be aware that patients may very well consider this very important and ought to learn how to address those patients, how to help them, and how to learn what the limits of their own expertise are.

I think that's one of the important things that Richard is pointing out. That does concern me: that physicians may go well beyond what their level of training is, what their level of expertise is and background. Granted, some are well-trained to do this. There are some physicians who are also trained in chaplaincy or who are priests or brothers. But that's the rare exception. Most physicians aren't.

Even though they may be exemplary in their own religious life, there is a line beyond which I would contend they should not go. They should open the door; understand how patients' religious beliefs affect or might affect their medical care; put aside their own disbelief, if that's the case for them; and then try to understand where to go next with this patient, whether this patient needs special help, whether the chaplain in the hospital is any good.

I've been in situations where doctors would not refer patients to the chaplain in their hospital because they felt this would be extremely damaging. I have also been in on scenarios where doctors would not refer patients to their own ministers for the same reason. The minister's interpretation of the religious tenets of their tradition, they feel, is very severe and could be damaging to the patient, and then they get the chaplain in.

So there's no universal answer to these questions. The concern is whether this could be coercive or harmful to the patient and how to address that.

SPEAKER: I was wondering if each of you could just quickly define prayer. There's petitioning; there's affirming a good God; there's a God of fear. Could each of you quickly define what sort of prayer you are referring to in your presentations?

DR. KOENIG: Prayer is what the patient defines as prayer, because that's the way many of these studies are done. The patient is asked, "How frequently do you pray?"

DR. PUCHALSKI: I think prayer, again, comes from the patient's definition, but my general definition would be that it's an encounter with God, or however a person understands that.

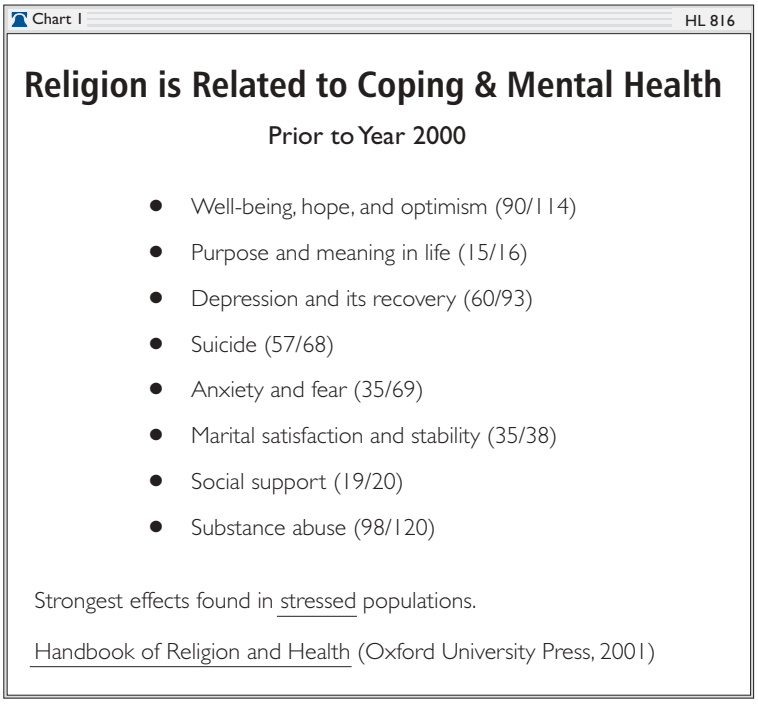
DR. COHEN: Very often in these studies, it is considered intercessory prayer, a particular kind of prayer where you are asking God for something. In traditional theistic religions, there's often a pattern that is suggested that you follow. Intercessory prayer often comes third, after adoration and thanksgiving. In the studies, it seems to be intercessory that is the focus.

DR. SLOAN: I can't add anything to what Dr. Cohen suggests.

DR. BUTLER: I want to thank the panel very much for the excellent presentations, the thoughtful discussions. I don't think we've exactly resolved the question we posed, but I think in discussing it, we've learned a great deal.

Appendix

Panels from Dr. Harold G. Koenig's PowerPoint Presentation



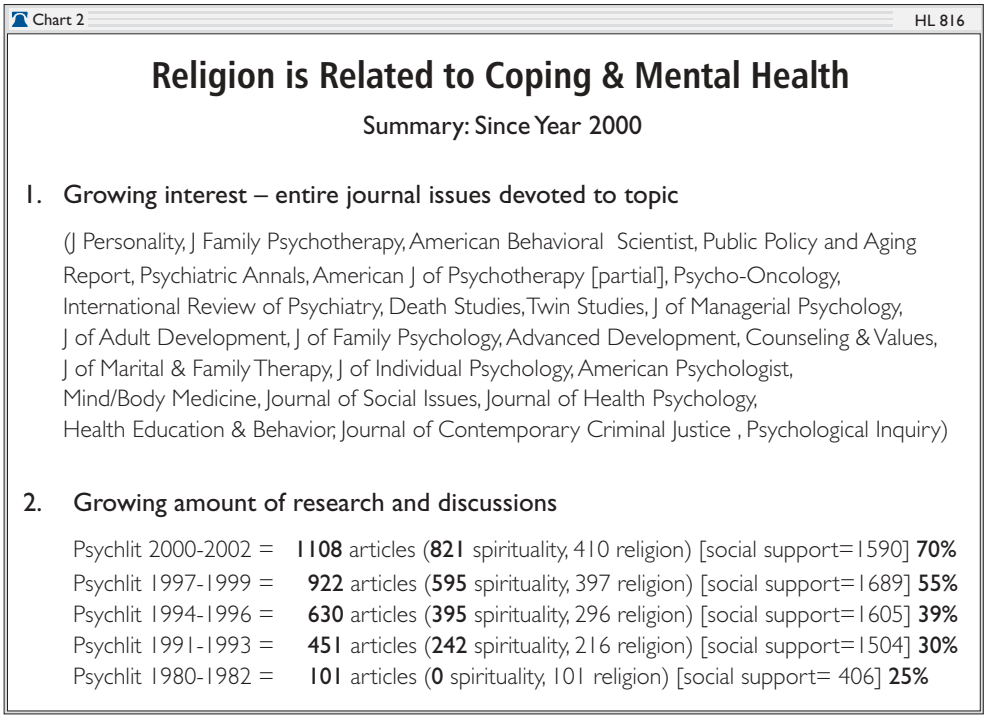


Chart 3 HL 816

Better Mental Health, in turn, is Related to Better Physical Health

Studies in past 6 months

- Rao B et al. Depressive symptoms and health-related quality of life: The Heart and Soul Study. JAMA 2003; 290:215-221
  [**depressive symptoms** impact **health-related quality of life** more than biological factors such as cardiac ejection fraction and coronary artery blood flow]
- Kiecolt-Glaser et al. Chronic stress and age-related increases in the proinflammatory cytokine IL-6. Proc Nat Acad Sci 2003; 100(15): 9090-9095
  [**stress of caregiving** affects **IL-6 levels** for as long as 2-3 years after death of patient]
- Blumenthal et al. Depression as a risk factor for mortality after coronary artery bypass surgery. Lancet 2003; 362:604-609
  [817 undergoing CABG followed-up up for 12 years; controlling # grafts, diabetes, smoking, LVEF, previous MI, **depressed** pts had **double the mortality**]
- Rosenkranz et al. Affective style and in vivo immune response. Neurobehavioral mechanisms. Proc Nat Acad Sci 2003; 100(19):11148-11152
  [**experimental** evidence that **negative affect** influences **immune function**]
- Brown KW et al. Psychological distress and cancer survival: a follow-up 10 years after diagnosis. Psychosomatic Medicine 2003; 65:636–643
  [**depressive symptoms** predicted **cancer survival** over 10 years]

Chart 4 HL 816

Religion is Related to Health/Medical Outcomes

Many studies
Different populations, investigators, time periods, disorders
Methodological weaknesses are common, but not all
Almost all epidemiological (except meditation)

Research Prior to Year 2000

- Better immune/endocrine function (3 of 3)
- Lower mortality from cancer (4 of 6)
- Lower blood pressure (14 of 23)
- Less heart disease (7 of 11)
- Less stroke (1 of 1)
- Lower cholesterol (3 of 3)
- Less cigarette smoking (23 of 25)
- More likely to exercise (3 of 5)
- Lower mortality (11 of 14) (1995-2000)
- Clergy mortality (12 of 13)
- Numerous new studies now under review

Chart 5 HL 816

Strength of the Effect

Additional People Alive (if causal)

When 50% of pop has died, number of additional people alive/100 or dead/100 because of the activity=Binomial Effect Size (BES)

Risk/Protective Factor	OR	BES	Affected Pop	Alive
Exercise rehab following CAD	1.35	3.7	12,900,000	477,300
Psychosocial Treatments in CAD	1.70	6.6	12,900,000	851,400
Cholesterol lower drugs in CAD	1.35	3.7	12,900,000	477,300
Hazardous alcohol use	1.24	(2.6)	28,910,538	(751,674)
Weekly Religious Attendance				
McCullough et al (2000)	1.37	3.9	122,650,765	4,783,380
NIH (2003) (confounds only)	1.43	4.5	122,650,765	5,519,284
NIH (2003) (full model)	1.33	3.6	122,650,765	4,415,428
Last 4 largest studies (full)	1.37	3.9	122,650,765	4,783,380
Strawbridge (women) (full)	1.52	5.2	68,900,528	3,582,827
Cigarette smoking (women)	1.72	(6.8)	33,130,892	(2,252,900)
Other Comparisons				
Population of Washington, DC				572,059
Circulation of Newsweek				3,198,000

Chart 6 HL 816

Religious Beliefs Impact Medical Decisions

1. Ehman et al. (1999). Do patients want physicians to inquire about their spiritual or religious beliefs if they become gravely ill? Arch Internal Medicine, 159, 1803-1806
   (66% of patients indicated that religious beliefs would influence their medical decision)

2. Silvestri et al. (2003). Importance of faith on medical decisions regarding cancer care. J Clinical Oncology 21:1379-1382
   (Family and patients ranked "faith in God" as #2 (ahead of effectiveness of Rx); oncologists ranked it last)

3. Brett. "Inappropriate" treatment near the end-of-life: Conflict between religious conviction and clinical judgment. Arch Internal Medicine 2003; 163: 1645-1649
   (End-of-life decisions related to religious beliefs can cause serious conflict)

4. Mitchell et al. Religious beliefs and breast cancer screening. Journal of Women's Health 2002;11:907-915.
   Random sample of 682 eastern North Carolina women over age 40:
   If self-discovered breast lump:
   44% would trust more in God to cure their cancer than medical Rx
   13% only a religious miracle could cure cancer, not medical Rx