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The Role of Religion in Heart-Transplant Recipients' Long-Term Health and Well-Being

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ABSTRACT: While religion has long been recognized clinically to provide important coping strategies in the face of serious health problems, there has been little systematic consideration of its role in organ transplant recipients' long-term reactions and adjustment to this experience. This study examines these issues through qualitative and quantitative evaluation of longitudinal data collected from 40 adult heart recipients followed during their first year post-transplant. Large proportions of recipients expressed strong beliefs and were able to increase religious participation over the 12-month study period. They delineated specific ways in which their faith had provided them support, as well as ways in which the transplant experience itself further strengthened their beliefs. We found empirical evidence that recipients with strong beliefs who participated in religious activities had better physical and emotional well-being, fewer health worries, and better medical compliance by the final 12-month assessment. The findings suggest the development of specific nursing, social-service, or pastoral-involvement strategies, continuing staff education about the role of religion in patient care. The implications of such interventions for maximizing quality of life in transplant recipients are discussed.

Introduction

Religion is often of major importance in the lives of people who seek medical care. Especially among individuals with life-threatening medical conditions, issues of religious faith and practice can assume prominence in decisions concerning treatment options, the nature of social services provided, and day-to-day interactions of patients with physicians and health professionals. The expanding field of organ transplantation has provided a particularly impor-

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tant context in which to address the role and impact of patients' religious faith. A growing literature adresses the ethical and moral issues entwined with decisions as to whether or not one should donate organs and under what circumstances (Nolan and Spanos, 1989; Shanteau and Harris, 1990; Wakeford and Stepny, 1989). Additional work has begun to consider the role of patients' faith during the crisis period of awaiting a suitable organ (Sears and Greene, 1994).

Given the continued improvements in post-transplant survival rates and the fact that many transplant recipients can now anticipate living with their new organ for many years, equally important concerns are organ *recipients'* long-term reactions and adjustment to receiving the "gift of life" (Simmons et al., 1987). Religion has long been recognized clinically and anecdotally to serve as "a potent coping strategy that facilitates adjustment to the stress of life" (Williams et al, 1991, p.1261). Moreover, health-care professionals who work with seriously ill patients and their families are often exhorted to identify supports and build on patients' belief systems (York, 1987). However, there has been little *empirical* consideration of the role that religion may play in organ-transplant recipients' health and well-being and their continued survival. Empirical work in a wide variety of other patient populations, including individuals with breast cancer (Johnson and Spilka, 1991), hypertension (Levin and Vanderpool, 1989), end-stage heart disease (Sears and Greene, 1994), and adult burn patients (Sherrill and Larson, 1988) suggests that religion may indeed be an important variable to consider. Even so, most such studies have included only a single indicator of religion, such as denominational affiliation or attendance at services (e.g., Meador et al., 1992, Levin et al., 1987). The few that consider religious issues in greater depth (e.g., Sears and Greene, 1994) include limited assessment of the impact of patients' beliefs on their health. In the present study, therefore, we substantially extend previous work in this area by (a) examining the role of religious faith and coping through quantitative and qualitative analysis of a sample of heart-transplant recipients' responses to a rich array of questions regarding their faith, and (b) consider the impact of their faith on multiple domains of physical and emotional well-being.

Our interest in the role of religion in heart transplantation evolved from clinical studies of the stressful waiting period pre-transplant (Sears and Greene, 1994), plus our own anecdotal observations that religious concerns may become of even greater importance in the long term after the medical crisis period is over. In particular, some heart recipients appear to undergo the entire transplant experience with a quiet assurance evident to the surgeons, nursing staff, and those who provide social services. When asked about how they cope, many of these patients spontaneously describe the central role of religious faith in their lives. Some describe their faith as always having been important; others have newly embraced religion during the crisis period of awaiting and receiving their transplant. Could these patients' sense of

spirituality and recognition of a "pervasive divine presence" (Muldoon and King, 1991) actually have contributed not only to their apparent quiet confidence, but to their long-term health and well-being post-transplant? Our clinical observations were not sufficient to address this question; in effect, we have observed a biased sample composed of individuals who volunteered comments about the importance of their religion. But what of the remainder of patients whose views are unknown?

We designed the present study to provide a systematic account of a complete, unbiased sample of patients who were followed well beyond the medical crisis of awaiting and receiving a new heart. An important aim of the study was to use empirical data to begin to see how religious issues could be better incorporated into psychosocial supports and interventions offered to transplant recipients in the long term after they return home.

Methods

Respondents. As part of an ongoing longitudinal study of health and well-being following heart transplantation (Dew et al., in press), we followed 40 adult (aged 18+) cardiac transplant recipients during their first twelve months post-surgery. All had received their transplant between July, 1989 and April, 1991 in the Cardiothoracic Transplantation Program at the University of Pittsburgh Medical Center. All respondents had end-stage heart disease; the majority (87.5%) had been diagnosed as having idiopathic and/or ischemic cardiomyopathy. Information on psychosocial characteristics of these respondents is shown in Table 1. As is true throughout the U.S., the majority of the recipients were men. They tended to be in their late 40's and early 50's; most were Caucasian, and almost half had some education beyond high school. The sample was predominantly Protestant and Catholic. Most were currently married, and half of the respondents had an annual family income of under $30,000.

Procedure. Respondents received individual, 90-minute, semi-structured interviews conducted by trained clinicians with masters' degrees in mental-health fields (e.g., social work, nursing, counseling, psychology). Each person was interviewed on three occasions: 2-, 7-, and 12-months post-transplant. Interviews were conducted at the time of patients' regularly scheduled visits for routine endomyocardial biopsies and follow-up care. Informed consent was obtained after study procedures were fully explained.

Interview measures. In addition to sociodemographic information, respondents were questioned extensively at each interview about their religious faith and their health and health habits since the transplant. Both closed-ended items with specific response categories and open-ended items were used.

TABLE 1

Psychosocial Characteristics of 40 Heart-Transplant Recipients

Characteristic	*Percent of Sample*
Gender	
Male	80.0
Age	
18-45	27.5
46-56	55.0
57-60	17.5
Race	
Caucasian	80.0
Education	
High school or less	57.5
Vocational/college	32.5
Graduate school or professional degree	13.0
Religion	
Protestent	55.0
Catholic	40.0
Jewish	2.5
Other or none	2.5
Marital Status	
Married or remarried	92.5
Divorced	7.5
Never married or widowed	0
Income Level	
$5,000-$14,999	30.0
$15,000-$29,999	20.0
$30,000-$40,000+	50.0

Religious faith. Questions regarding both the nature and the extent of their beliefs and spirituality, as well as their religious practices, were included.

With respect to religiosity, five items were asked. The first three were closed-ended. They are listed in the upper section of Table 2 and pertain to the degree to which respondents felt that their beliefs and faith had influenced their lives during the past several months, whether they consulted God when important decisions had to be made, and whether they prayed privately. They also responded to two open-ended items regarding the extent to which (a) their faith had helped them during the transplant experience, and (b) the transplant experience had changed their religious beliefs and views. Answers to these latter two questions were recorded verbatim. It is important to note that the open-ended items were asked *prior* to all closed-ended items

TABLE 2

Distributions of Responses to Closed-Ended Religiosity and Religious Practice Questions at Each Post-Transplant Interview Among 40 Heart Recipients

	Months Post-Transplant			
	2 months	*7 months*	*12 months*	*F-test*
Religiosity				
Religious beliefs influence my life				
% No, not at all	12.8	7.9	31.4	
% Yes, a little	12.8	26.3	14.3	
% Yes, somewhat	28.2	28.9	17.1	
% Yes, very much	46.2	36.8	37.1	
Scaled Mean (1 = no, 4 = very much)	3.08	2.95	2.60	3.32*
I consult God when I have important decisions to make				
% No, never	33.3	44.7	51.4	
% Yes, occasionally	25.6	15.8	20.0	
% Yes, sometimes	15.4	15.8	5.7	
% Yes, regularly	25.6	23.7	22.9	
Scaled Mean (1 = never, 4 = regularly)	2.33	2.18	2.00	1.87
I pray privately in places other than church/synagogue				
% No, never	7.7	10.5	14.3	
% Yes, occasionally	17.9	26.3	14.3	
% Yes, sometimes	23.1	13.2	14.3	
% Yes, regularly	51.3	50.0	57.1	
Scales Mean (1 = never, 4 = regularly)	3.18	3.03	3.14	0.83
Religious practices				
I have attended religious services in the past month				
% No	57.6	37.1	40.6	
% 1-2 times	24.2	25.7	15.6	
% 3-4 times	18.2	37.2	43.8	
Scaled Mean (1 = no, 3 = 3-4 times)	1.61	2.00	2.03	4.75*

TABLE 2 *Continued*

	Months Post-Transplant			
	2 months	*7 months*	*12 months*	*F-test*
My level of activity within a religious congregation				
% Inactive	48.7	43.6	47.5	
% A little active	20.5	25.6	20.0	
% Moderately active	25.6	20.5	25.0	
% Very active	5.1	10.3	7.5	
Scaled Mean (1 = inactive, 4 = active)	1.92	1.97	1.92	1.25
I currently make financial contributions to a religious organization				
% No	38.5	43.6	35.0	
% Yes	61.5	56.4	65.0	
Scaled Mean (1 = no, 2 = yes)	1.62	1.56	1.65	0.32
I have used prayer to cope with specific health problems since the transplant				
% No	48.7	50.0	58.6	
% Yes	51.3	50.0	41.4	
Scaled Mean (1 = no, 2 = yes)	1.51	1.50	1.41	0.57

*p<.05

so that respondents' comments would not be biased by the content of the closed-ended questions.

With respect to religious practices, three closed-ended questions were included: (a) how often they had attended services in the past month, (b) how active they currently felt themselves to be in their church or synagogue, and (c) whether they made financial contributions to their church or synagogue. These are listed in the lower section of Table 2.

Perceptions of post transplant health and health habits. At each interview, respondents were questioned regarding physical functional status, emotional well-being, and general health concerns since transplant. Regarding physical status, respondents gave an overall rating of their physical functioning (1 = excellent, 5 = poor; Chambers, 1984). In addition, the Karnofsky Index of Functional Impairment was completed by Transplant Program Nurse Practi-

tioners for each participant in the sample (1 = normal: no complaints, no evidence of disease; 10 = moribund: fatal processes progressing rapidly; Grieco and Long, 1984, Karnofsky and Burchenal, 1949).

With regard to emotional well-being, respondents completed the anxiety and anger-hostility subscales of the Symptom Checklist-90 (Derogatis, 1983), in which they rated their responses to symptoms in each area in the two weeks prior to the interview (0 = not at all distressed, 4 = extremely distressed). In addition, respondents' self-esteem was assessed by the 10-item Rosenberg Self-Esteem Scale (1 = high, 4 = low; Rosenberg, 1965).

Finally, regarding health concerns since transplant, they were asked how difficult it had been to follow the many components of their daily regimen for maintaining their health (1 = not at all difficult, 3 = extremely difficult). Respondents also evaluated the amount to which worries, or ruminations, about their health interfered with daily activities (1 = no, 2 = occasionally, 3 = worries interfere often).

Analysis. We performed quantitative analyses of the closed-ended items, first examining the distributions of responses to religion items at each interview. We also computed Pearson correlation coefficients in order to determine the degree to which religious beliefs and practices in early post-transplant experiences predicted respondents' *subsequent* health and health habits at the final followup interview. Finally, we qualitatively analyzed respondents' comments elicited from the open-ended items concerning their faith in the context of the transplant experience.

Results

Quantitative analysis of responses. Table 2 displays heart recipients' patterns of responses to each closed-ended item concerning religiosity and religious practices at each post-transplant interview. For each item, we present percentages of respondents selecting each response category, as well as the average, mean response across the 40 respondents. For example, at the 2-month interview, 12.8% of the sample answered "no, not at all" to the first question about whether beliefs influenced their lives; 12.8% responded "yes, a little," and so on. In addition, if the four categories of responses to this item are considered to form a 4-point ordinal scale, ranging from 1 (if answered "no") to 4 (if answered "yes, very much"), the mean response at the 2-month interview was 3.08, indicating that responses averaged at the "yes, somewhat influential" category.

Examination of the changing distribution of responses, and similarly changing mean responses, over the three post-transplant interviews reveals that respondents felt their beliefs to be less influential at later interviews

than at the first one (upper section of Table 2). Respondents' mean responses across the interviews were statistically compared via one-way Analysis of Variance, the results of which are shown in the right-most column of Table 2. These tests indicate that the degree of change in average response over time was indeed statistically significant for this initial religiosity item. The remaining two items in this area show lesser degrees of change over time: about one quarter of respondents at each interview reported that they regularly consulted God, and about half at each interview reported that they prayed regularly.

Turning to the religious-practice items (lower section of Table 2), at the 2-month interview 42.4% of the sample reported that they had attended religious services at least once in the past month. Over time, attendance increased, such that by 12 months post-transplant 69.4% attended services. Among the attenders, the most dramatic increase was in the proportion who attended services as many as 3 to 4 times per month. With regard to level of activity within a religious congregation, the scaled mean remained relatively stable, with a slight increase at 7-months post-transplant that then returned to the initial level by 12-months post-transplant. Finally, although responses to the final item remained similar across the three interview times, the fact that well over 55% of the respondents indicated that they made financial contributions to religious organizations is noteworthy.

We next examined the extent to which religiosity and religious practices early post-transplant predicted the three domains of health parameters at the final followup interview. Correlations between these two sets of variables are presented in Table 3. The negative direction of almost all of these correlations indicates that reports of *greater* religiosity and *more* religious practices early on predicted *better* health and well-being by the time of the 12-month post-transplant interview.

Specifically, with respect to physical health outcomes, respondents who felt that their beliefs exerted greater influence over their lives, and who consulted God to make important decisions, were more likely to report better physical functional status by the time of the 12-month interview. Early activity within a congregation and praying privately were also related to subsequent more positive physical health perceptions, though to a lesser degree. Overall, religious beliefs and practices early in the post-transplant experience more strongly predicted respondents' perceptions of physical functioning than their Karnofsky scores at followup.

Anxiety and self-esteem scores were significantly predicted by several religion items, while anger was less strongly related to earlier religious re-

TABLE 3

Correlations of Religious Responses Early Post-Transplant with Health and Health Concerns at Final Followup Interview

	Health at Final 12-month Interview						
	Physical health[a]		Mental health[a]			Health concerns[a]	
Religiosity and Religious Practices[b]	Physical Functioning	Karnofsky Index	Anxiety	Anger	Self-Esteem	Health Worries	Difficulty with Regimen
Initial 2-month Interview							
Beliefs influence life	−.36*	−.06	−.28@	−.11	−.29@	−.39*	−.37*
Consult God to make important decisions	−.28@	−.14	.07	−.15	−.18	−.24	−.44**
Pray privately	−.23	−.09	.03	−.23	−.21	−.05	−.33*
Attended religious services recently	−.11	−.11	−.36*	−.26	−.20	−.30@	−.26
Active within congregation	−.26	.01	−.13	−.14	−.32*	−.22	−.30@
Make financial contributions	.03	.13	−.05	−.04	−.10	−.20.	−.22

[a]Higher score indicates *worse* health; more health concerns.
[b]Higher score indicates *more* religious.
@ $p<.10$
* $p<.05$
** $p<.01$

sponses. The early feeling that their beliefs influenced their lives was associated with subsequent lower levels of anxiety and better self-esteem. Items pertaining to religious practices were also associated with less anxiety and better self-esteem at followup: respondents who had attended more religious services were subsequently less anxious, while those reporting higher general levels of activity within their congregation went on to have significantly higher self-esteem levels by the final interview.

Finally, considering the pattern of associations with the health-concern measures, the most noteworthy finding is the consistently strong ability of most of the religion items to predict subsequent degree of difficulty with following the health regimen: individuals scoring higher on all three religiosity items, as well as those more active within their congregations, reported considerably less difficulty with their daily health-maintenance activities by 12-months post-transplant. The pattern of association with health worries was more variable, but indicated generally that stronger beliefs and more religious activity predicted less worry by the final interview.

Qualitative analysis. Heart-transplant recipients expressed a wide spectrum of responses to open-ended questioning at each interview about the help and/or support that their faith had provided. The open-ended question—"Has your faith helped you? Or have religious beliefs not really entered in to how you have coped?"—elicited a total of 98 separate comments over the three interview times. While one-third of responses (31%) indicated only that faith had been helpful, without further elaboration, we were able to classify the remaining more detailed responses (69%) into six categories that reflected the major themes expressed by the heart recipients. These are detailed below in decreasing order of frequency.

1. *God's Help and Direction.* Over the three interview times, the largest proportion of recipients' comments (19.6%) reflected the belief that God had directly provided help or direction for their well-being. Heart recipients attributed their good fortune in the receipt of a heart and their subsequent good health to the direct assistance of God. Some felt that God had determined their selection as recipients, the skill of the surgeons, and their very survival. They often used phrases that personified God and attested to a personal relationship with Him, as illustrated by the following responses:

> Faith has helped. [I'm] never afraid of anything. The good Lord won't send me more than I can handle.
>
> (#4, 2-month interview)

> Yes, before the surgery I put it all in God's hands. [I have] a tremendous faith in God so I just left it in his hands.
>
> (#41, 2-month interview)

Religion has helped. The Lord helped me get the heart fast, I feel very fortunate. Many others were waiting ahead of me.

(#51, 2-month interview)

I do believe I've gotten better because God wanted me to.

(#13, 12-month interview)

Yes, [it] feels like God has been watching after me or I wouldn't be here today.

(#3, 12-month interview)

I know God gave me some good surgeons. The surgeons saved my life.

(#13, 2-month interview)

2. *Strength to Survive*. The debilitation and deterioration of end-stage heart disease while awaiting transplantation greatly weakens the recipients. The subsequent recuperation also demands great stores of strength. 15.5% of the responses focused on faith as the source of that strength.

[Faith has] given me my strength to get through it.

(#2, 7-month interview)

I feel the good Lord lets me help other people to know that they can do it if they have the strength and courage.

(#4, 7-month interview)

[Faith] helped. (It has) given me inner strength to draw on.

(#19, 2-month interview)

3. *Power of Prayer*. 15.5% of recipients' responses described their own use of personal prayer and the value of prayer by others. Some reported that their churches had established "prayer chains" while they were in surgery or during their recovery.

Religious beliefs and prayers have helped [me] get through this. [I] wouldn't have made it without prayer.

(#32, 2-month interview)

Religious faith has given me a positive outlook. Everyone was praying for me.

(#49, 2-month interview)

My friends have been through a lot, they prayed for me.

(#54, 2-month interview)

My faith is what has gotten me this far. Faith, family and friends' prayers have gotten me through the transplant.

(#16, 12-month interview)

4. *A Reason for This Second Chance.* Across the three post-transplant interviews, some responses (8.2%) indicated that the transplant was viewed as a second chance at life. Recipients affirmed that the transplant afforded them opportunities to continue with their life's activities. They asserted that there was a purpose or reason for their second chance, or that God had brought them through the experience for His own reasons.

> Yes, I have strong faith. There's a plan and a reason for going through this . . . a second chance for some reason.
>
> (#1, 2-month interview)

> Yes I have faith. The "Man Upstairs" has brought me through this so far, there's a reason for everything.
>
> (#3, 7-month interview)

> God has a purpose for me. I'm a better person. People's feelings are more important for me. I pay attention to others now.
>
> (#4, 12-month interview)

5. *Faith Relaxes Me.* 6.2% of the responses indicated that recipients' sense of faith relieved their anxieties and gave them feelings of calm and relaxation.

> [My] faith has made [me] more relaxed. Nothing more, I just felt more relaxed because of my faith.
>
> (#17, 2-month interview)

> [My] faith has helped. I've relaxed more because [my] faith is stronger.
>
> (#17, 7-month interview)

> [Faith] has helped ease [my] mind, helped [me] cope.
>
> (#49, 12-month interview)

6. *Consultation with the Clergy.* Recipients were often visited by the clergy both before and after the transplant surgery. Several responses (3.1%) described specific interactions with clergy as the means by which faith had been helpful.

> Basically I talked to the priest and got the position of the church regarding heart transplants. I was concerned about that.
>
> (#9, 2-month interview)

> [My] faith really helped [me]. I received communion more than I usually do, five times a week.
>
> (#21, 2-month interview)

Aside from the question about whether and how recipients' faith had helped, we asked an additional open-ended question at the first post-transplant interview: "Some people have mentioned that their health and their transplant changed their views about religion and about their belief in a God. Have your beliefs been affected by your health experience?" The majority of responses (56.7%) indicated that recipients felt that their beliefs had been significantly strengthened by the transplant experience.

> I'm more of a believer that there is another being out there working for us.
> (#16, 2-month interview)

> Since the transplant I have become more devout, [my] beliefs were made stronger.
> (#35, 2-month interview)

Remaining responses (43.3%) indicated that recipients' beliefs had not been affected by their health experience, but the vast majority of these (77%) reported that their faith had *already* been strong and had remained that way after the transplant.

> I have always believed in God. [My views] haven't changed at all.
> (#47, 2-month interview)

> I don't think [my beliefs were affected]. I have always been a pretty strong believer.
> (#51, 2-month interview)

Discussion

The present study examined the nature of heart-transplant recipients' religious beliefs and practices, and the extent to which religiosity predicted subsequent physical and emotional well-being during the first year post-transplant. The study is unique in that we considered these issues through (a) *quantitative* analyses of the statistical relationships between recipients' responses to religious questions and additional data regarding their health, as well as (b) *qualitative* analyses of how, in the recipients' own words, they felt that their faith had influenced their recovery and well-being. Moreover, our longitudinal study design represents an advance over previous investigations of these issues because it strengthens our ability to examine *predictive* effects of faith on health.

Not surprisingly, recipients reported relying most heavily on their faith during the earlier post-transplant recovery period. As they distanced themselves from the surgical experience, they also felt that their beliefs were somewhat less influential and they reduced their reliance upon prayer. Most

remarkable, however, were the large proportions of patients—from one-quarter to over half of the sample—who at one-year post-transplant *continued* to express strong beliefs, consult God, pray regularly, attend services, and make financial contributions to religious organizations. Indeed, the degree of activity and involvement with religious congregations increased markedly over the year following surgery.

Many recipients described specific ways in which their faith had supported them during the transplant experience, as well as how the experience had, in turn, further strengthened their beliefs. External support from faith was described by those who felt helped by clergy and prayer groups. Faith provided internal support for an even greater number of recipients, who maintained that their faith gave them direction and strength, or relaxed them.

In addition to heart recipients' own profession of the impact of their beliefs, we also found empirical evidence that recipients with stronger beliefs, who also participated in religious activities, actually had better physical and emotional well-being by the final 12-month post-transplant interview. Thus, subsequently, we found better perceptions of physical functional status among recipients with stronger faith. With regard to mental health, there was evidence of lower anxiety and higher self-esteem.

Finally, the predictive analyses indicated that recipients with a strong sense of religion tended to report less worry subsequently or rumination over their health. It is especially noteworthy that, by the final 12-month post-transplant interview, they also reported significantly less difficulty in complying with the various components of their medical regimen. This association with medical compliance has important implications for developing and maintaining successful clinical and psychosocial treatment plans for individuals in the long-term post-transplant, as we discuss further below.

In the light of our findings, how can health-care providers more effectively "mobilize the strengths of religious commitment to foster healthier lives and relationships" (Larson and Larson, 1991, p. 38) in organ-transplant recipients? There are at least two classes of strategies that might be employed. First, an increased presence of lay leaders and clergy both prior to *and* following transplantation might be helpful. Although most health-care settings have chaplains regularly available to inpatients, our data suggest the importance of expanding such programs to enable outpatients to talk with such persons. At most centers, organ-transplant recipients maintain a long-term relationship with the Transplant Team because they are required to return for outpatient follow up care for the remainder of their lives. This post-transplant comprehensive care might be strengthened by the inclusion of clergy who are available to outpatients during their followup visits. In other words, "just being there—what the clergy call the Ministry of Presence—can offer vital support to recipients and their families as they approach and move away from their fears" (Rauch and Kneen, 1989, p. 55).

A second class of strategies involves continuing education of health-care

personnel and, in particular, "desensitizing" them to the topic of religion in patient care. For the social worker, or nurse, religious support can be a valuable tool in the therapeutic relationship. Routine social work and nursing assessments typically involve the ascertainment of religious denomination, yet many health-care providers are hesitant to question patients further about their beliefs. This hesitancy may involve not only a concern that a patient's privacy not be invaded, but may also reflect fears of imposing one's own beliefs on a patient, and discomfort because a patient's religious practices are different from one's own and not well understood. An initial step toward dealing with staff discomfort might be to institute periodic in-service sessions to educate all social service and health care professionals about key religious terms, holy days, and customs of major religious faiths. This information might also be made available in written form, in pamphlets for example. In fact, the chaplaincy of the University of Pittsburgh Medical Center is currently compiling such information for routine use by all levels of the medical and social service staff.

The highly technological nature of organ transplantation and its followup care may also be a factor which has limited staff's recognition and use of patients' religious beliefs as potent coping resources. In other chronic-illness situations health-care professionals have long realized the role that religion may play in fostering or inhibiting patients' medical compliance and their quality of life, as well as its role in family members' styles of coping with the patient's health. High-technology medicine, however, with its complex and staff-intensive procedures, often restricts the ability of health-care personnel to attend to psychosocial aspects of patients' well-being. In addition, as mentioned earlier, when religious issues are discussed in the context of transplantation, the focus is generally on moral and ethical issues of donation and receipt of an organ, rather than on the utilization of patients' beliefs and religious practices in order to maximize the quality of life of the long-term post-transplant. There is no easy solution as to how better to incorporate psychosocial care and treatment into highly technological care. The comprehensive-care approach, with a truly integrated *team* of different kinds of specialists, may hold the most promise (Dew et al., in press). Our results, again, suggest the importance of including team members who are able not only to discuss potentially sensitive religious issues with patients, but can use patients' own faith to facilitate patients' coping with their health.

In sum, it is incumbent upon those in the health-care professions to call upon whatever strategies would benefit patients' survival and well-being in the long-term post-transplant. Given our own and others' evidence (e.g., Hannay, 1980; Kirn, 1991; Larson and Larson, 1991; Lough, 1988) that persons active in their faith not only report it to affect their daily lives, but also show it through empirical analysis to have health advantages, might we not be still more creative and innovative in the use of religion as yet another coping strategy available for the betterment of our patients?

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