The Journal of
Nephrology Social Work

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THE JOURNAL OF NEPHROLOGY SOCIAL WORK

The Council of Nephrology Social Workers (CNSW) of the National Kidney Foundation (NKF) is a professional membership organization of nearly 1,000 social workers dedicated to improving the quality of psychosocial services delivered to ESRD patients, as well as supporting the profession of nephrology social work.

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To qualify as an original manuscript, the article or a version of the article must not have been published elsewhere. Author(s) must inform the editor if the manuscript is being reviewed for publication by any other journals. Once accepted for publication by the editor, the author(s) cannot make revisions on the manuscript.

TYPES OF ARTICLES BEING SOUGHT

Research and Review. The *JNSW* welcomes reports of original research on any topic related to renal social work. The editors will also consider articles that document the development of new concepts or that review and update topics in the social sciences that are relevant to professionals working in the field of renal social work.

Reports and Commentary. The *JNSW* welcomes articles that describe innovative and evaluated renal social work education programs, that report on viewpoints pertaining to current issues and controversies in the field, or that provide historical perspectives on renal social work. Commentaries are published with the following disclaimer: "The statements, comments or opinions expressed in this article are those of the author, who is solely responsible for them, and do not necessarily represent the views of the Council of Nephrology Social Workers or National Kidney Foundation."

Reviews. Review articles—in traditional or meta-analysis style—are usually invited contributions, however, letters of interest are welcome.

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Practical Aspects Section. Contributions to this section are detailed protocols, forms, or other such materials that are successfully utilized for delivery of outcomes-based clinical social work services.

Case Studies. These detailed scenarios should illustrate a patient care situation that benefited from clinical social work intervention. Typically, they should consist of a brief clinical and psychosocial history, and a detailed intervention plan with discussion of recommendations focused toward practical application.

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Order of the Manuscript Sections

- Title page
- Abstract
- Text
- References
- Appendixes
- Author note
- Footnotes
- Tables
- Figure captions
- Figures

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Reference Examples

Journal Article, Two Authors

Wassner, S. J., & Holliday, M. A. (1989). Protein metabolism in chronic renal failure. *Seminar in Nephrology, 9*, 19–23.

Journal Article, Three to Six Authors

Gartner, J., Larson, D. B., & Allen, G. D. (1991). Religious commitment and mental health: A review of the empirical literature. *Journal of Psychology and Theology, 19*, 6–25.

Journal Article, More Than Six Authors

Larson, D. B., Sherrill, K. A., Lyons, J. S., Craigie, F. C., Thielman, S. B., Greenwold, M. A., et al. (1992). Associations between dimensions of religious commitment and mental health reported in the *American Journal of Psychiatry and Archives of General Psychiatry*: 1978–1989. *American Journal of Psychiatry, 149,* 557–559.

Journal Article in Press

Odaka, M. (in press). Mortality in chronic dialysis patients in Japan. *American Journal of Kidney Diseases.*

Complete Book, Edited

Levine, D. Z. (Ed.). (1983). *Care of the renal patient.* Philadelphia: Saunders.

Chapter of an Edited Book

Nixon, H. H. (1966). Intestinal obstruction in the newborn. In C. Rob & R. Smith (Eds.), *Clinical surgery* (pp. 168–172). London: Butterworth.

Article from a Journal Supplement

Paganini, E. P., Latham, D., & Abdulhadi, M. (1989). Practical considerations of recombinant human erythropoietin therapy. *American Journal of Kidney Diseases, 14*(Suppl. 1), 19–25.

Abstract

Bello, V. A. O., & Gitelman, H. J. (1990). High fluoride exposure in hemodialysis patients [Abstract]. *American Journal of Kidney Diseases, 15,* 320.

Editorial

Piantadosi, S. (1990). Hazards of small clinical trials [Editorial]. *Journal of Clinical Oncology, 8*, 1–3.

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Manuscripts submitted to *The Journal of Nephrology Social Work* are peer-reviewed, with the byline removed, by at least two professionals in the field of renal social work. The length of the review process will vary somewhat depending on the length of the manuscript, but generally takes two to three months. *The Journal of Nephrology Social Work* reserves the right to edit all manuscripts for clarity or length. Minor changes in style and clarity are made at the discretion of the reviewers and editorial staff. Substantial changes will only be made with the primary author's approval, prior to typesetting.

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ERRATUM

In "End-of-Life Care: We Can Do Better" (WINTER, 2008, vol. 30, p. 11), the following text should replace the last sentence in the first paragraph of column two: "A survey of approximately 400 staff from 12 Michigan dialysis facilities documented that staff could recall no discussion about advance directives having taken place with nearly 70% of their patients and 39% of the staff reported they had never discussed advance directives with any patient (Perry et al., 1996)."

Post-Transplant Employment and its Relationship to Physical Status in Kidney Transplant Recipients

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Wayne Paris, PhD, LCSW, Southern Illinois University Carbondale, Carbondale, IL

Post-transplant employment has long been considered an indication of functional benefit to the recipient and social benefit to the community. Some studies suggest that the majority of transplant recipients are physically able but remain unemployed and continue to draw disability post-transplant. In this article, the employment status and perception of 110 kidney transplant recipients from a specialty kidney transplant clinic that follows recipients from three hospital programs were compared by use of The American Medical Association's Guide to Physical Impairment (AMAGPI) and creatinine clearance. Overall, there was approximately the same number of males and females (54% vs 46%, respectively), in middle adulthood (mean = 43 years), well-educated (mean = 14 years of schooling), Caucasian (55%) and married (57%). Of those surveyed, 77% (n = 85/110) were classified as employed and 23% (n = 25/110) were disabled. After excluding those who were disabled and using AMAGPI criteria as the basis for comparison, it was found that 80% (n = 68/85) with kidney impairment ranging from 0% to 14% were employed compared with 64% (n = 16/25) for all other impairment classifications combined. When broken down by AMAGPI groups, no significant differences were found between mean creatinine clearances with regard to employment status and employment perception.

When employment status and patient employment perception are compared by traditional means (i.e., creatinine clearance), there is only minimal change in employment rates observed even as the lab values continue to decline and impairment level increases. Thus, use of criteria accounting for issues specifically related to kidney recipients (e.g., medication reactions, chronic pain) suggest that, unlike other solid organ transplantation, the reason for unemployment and continued perception of inability to work remains a complex phenomenon and is not directly related to organ functioning or physical impairment. These findings clearly conflict with earlier reports and indicate the need for additional study to help determine whether other physical limitations specific to the patient's continued perception of inability to work in the kidney transplant population exist or strategic rehabilitation interventions and case management (such as a structured rehabilitation program specific to outcomes) could improve employment results.

INTRODUCTION

Previous research has suggested that a transplant recipient's return to work post-transplant is an important indicator of functional benefit to the recipient and social benefit to the community (Paris et al., 1992). Some of the earliest research studies considered post-transplant employment feasible only for those who could return to a pre-transplant job. This body of work identified multiple barriers precluding new post-transplant employment, including changes in priorities where family and leisure activities were valued more than work; hiring discrimination based on advanced age (>56 years) or medical history; restrictive cost, including the impact on other employees or unavailability of medical insurance; poor local or regional economic conditions; and limited education and/or work skills (Evans, 1990; Harvison et al., 1988; Meister, McAleer, Meister, Riley & Copperland, 1986; Niset, Coustry-Degre, & Degre, 1988; Paris, 1990; Samuelsson, Hunt, & Schroeder, 1984; Shapiro, 1990; Wallwork & Caine, 1985). Results suggested that transplant programs (at that time) might be supportive of medical disability and were unlikely to encourage recipients to return to work (Paris et al., 1997).

In a later multi-center study of heart transplant recipients (*n* = 201), it was found that more than 85% of transplant recipients were assessed by their physicians as being physically able to work, but only 45% were doing so (Paris et al., 1993). This study also found that transplant recipients who perceived few limitations responded positively to expectations for employment and returned to former jobs (if available) or attempted to secure new employment. This was supported in a later follow-up study from a single transplant program that identified a younger, better educated group who remained unemployed because they viewed themselves as physically unable to work and did not respond to employment expectations regardless of the medical or social issues (Paris, Tebow, Dahr, & Cooper, 1997).

Historically, the literature has explored the issue of recipient employment after organ transplant by identifying variables associated with employment and comparing the number of recipients who are able (or want) to return to work with the number who actually do. For example, Evans (1986) found that 58% of American recipients were assessed by their physician as able to work but only 32% returned to employment. Wallwork and Caine (1985) reported that only 56% of European transplant recipients were employed, although 97% indicated a desire to work. It should be emphasized, however, that these numbers identified only those recipients who returned to their former employment and did not use any standardized measure of employment ability or capacity, nor were patients asked their plans for returning to work. Rather, they were asked if they "wanted" to return to work. As later research revealed, virtually all patients will say they

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"want" to return to work, especially when asked at the time of the pre-transplant assessment (Cooper & Paris, 1993). However, in reality, the number that return to work varies greatly from the stated intention and is thought to depend on the strength of expectations from the health care team and family and the rehabilitation-focused interventions and case management available post-transplant.

Some authors go so far as to say that the most difficult aspect of a recipient's rehabilitation is the psychological barrier that prevents them from deriving a perception of their full physical potential (Andrews et al., 1992). As with other chronic illnesses, transplant recipients may not be totally disabled but may have specific physical limitations and complaints that preclude only certain types of work (Paris et al., 1993).

Kidney patients, in particular, may often not work for long periods of time pre-transplant. Dialysis, which often precedes a kidney transplant, is an "automatic qualification" for Social Security Disability (SSDI). This reality increases the chances the individual patient will be less likely to work while on dialysis, if dialysis precedes kidney transplantation. Receiving SSDI may become a financial disincentive after receiving their kidney transplant (Callahan, 2005). Additionally, although SSDI is helpful, the reality is that being maintained on dialysis for long periods of time may ultimately result in work skills or educational certifications becoming obsolete. Also, medical complications may arise that will lessen the chances of employability with even the most motivated of patients.

Clearly, numerous issues determine whether a patient will return to work after his or her kidney transplantation. Vocational rehabilitation has shown some potential with kidney transplantation patients resulting in a 45% success rate in helping them return to work (Paris et al., 1997). Regrettably, the same positive vocational rehabilitation numbers have not been achieved with other transplanted organs. However, the most recent clinical research findings with heart and liver transplant recipients suggest that it may not be disability *per se* that influences a patient's employment potential or perception as much as his or her measured level of impairment (Paris, 2006). By "level of impairment" it is meant that there are agreed upon standardized factors that limit the individual's ability to carry out activities of daily living.

This work with kidney transplant recipients was the first attempt to more clearly delineate the extent to which employment decisions and perceptions may be influenced by very subtle physical, medication-induced and/or emotional factors that previously were not quantifiable with standardized assessment criteria. New findings with heart and liver transplant recipients show that use of the The American Medical Association's Guide to Physical Impairment (AMAGPI; American Medical Association, 1993) helped explain why patients who do not meet SSDI criteria and had been determined by their physician as "not being disabled" were influenced in their employment and employment perception by multiple mechanisms that limited their ability in ways that had not been previously quantifiable (e.g., heat, sun exposure, medication reactions). The current study was designed to determine whether these same factors are found to influence the kidney transplant patient's employment perceptions and decisions and hopefully provide the basis for the development and testing of alternative interventional paradigms.

METHODOLOGY

This study was designed specifically to explore whether or not the traditional form of physical disability or "impairment" best explained the employment decisions and perceptions of kidney transplant patients. This study was funded in part by grants from the National Kidney Foundation's Council of Nephrology Social Workers and the Society for Transplant Social Workers.

After approval by the both the hospital and university Internal Review Boards (IRBs), survey packets were mailed to adult kidney transplant patients. Two hundred post-kidney transplant patients were chosen through random sampling from a five-year (October 2001–2006) log of 1,306 patients admitted to Dallas Transplant Institute. Patient selection criteria included ability to speak English, competency and a valid U.S. contact address. Additional people excluded were those who had returned to dialysis. After randomization, patients (kidney transplant recipients between the ages of 18 and 55) were contacted only once via mail and asked to complete a short data sheet and return in an enclosed, addressed and stamped envelope. A cover sheet was included describing the proposed study, its aims, the mechanism to be used to maintain anonymity and their right of refusal without jeopardizing their medical care. The data sheet requested demographic, perceptual and historical information. There was a 55% (110/200) response rate. The design did not allow for follow-up for those who did not respond.

Once returned, the surveys were then compared to most recent creatinine clearance. This measure was chosen because it is consistent with the American Medical Association's view that creatinine clearance "…is the most accurate reflection of renal function and will quantitate the degree of functional impairment of the upper urinary tract" (American Medical Association, 1993, p. 250). A physician assistant was then asked to evaluate the patient's current medical status by use of the third edition of the AMAGPI.

All data analysis was done by use of Chi-Square or Mann-Whitney U comparisons with SPSS statistical software. If one of the variables was continuous with an n less than 30, the Mann-Whitney U, non-parametric test was used and the Chi-Square procedure was used for comparison of frequency data per guidelines, as suggested in Rubin and Babie (2008).

There were two measures of physical ability used. The patient's physical status was determined by physician categorizations based on objective scales that measured physical impairments from the AMAGPI (1993). The AMAGPI is the result of an agreed upon set of guidelines developed by 11 medical specialty societies, the Social Security Administration, U.S. Department of Veterans Affairs and the American Bar Association. The patient's perception of his or her physical capacity was determined by his or her answer to a very simple question, "In your opinion, are you currently physically able to work?"

An impairment, according to the AMAGPI definition, represents an informed estimate of the degree to which an individual's capacity to carry out daily activities have been diminished. Impairments are conditions that interfere with an individual's activities of daily living. It is recognized that "normal" is not a fine point or an absolute in terms of physical and mental functioning and good health. More often, normality is a range or a zone, as with vision and hearing. Normal can vary with age, gender and other factors. Disability refers to an activity or task that an individual cannot accomplish and may be thought of as the gap between what a person *can* do and what the person *wants* or *needs* to do. Accordingly, an impairment, although restrictive, may not necessarily result in disability.

None of the previous employment research had a tool that allowed physicians to make such an informed decision as to a patient's physical status. The use of this tool allows a flexibility that did not previously exist. Until now, there were no standardized comparisons available that allowed for medication reactions and complications. Previous studies have been very direct in stating that an inability to account for this problem raised questions about the existing physical assessments (Meister et al., 1986; Paris, 1990; Paris et al., 1992; Paris, Tebow, Dahr, & Cooper et al., 1997; Paris, Muchmore, Pribil, Zuhdi, & Cooper, 1994).

For the purposes of this study, patients were categorized in a manner consistent with previous research: employed, unemployed, medically disabled or retired (Paris, 1992; Paris et al., 1993; Paris, Tebow, Dahr, & Cooper et al., 1997; Paris et al., 1998). Employed meant working full- or part-time. Students and homemakers were included as employed if they had returned to their pre-transplant role post-transplant. Unemployed meant not working and not meeting SSDI criteria. Medically disabled meant meeting SSDI criteria. A recipient was not placed in this category unless identified as such by a physician. Retired meant the recipient was over age 65 or electively retired if under 65. These recipients were not receiving any form of disability income.

RESULTS

The random sample pool was surprisingly smaller than expected due to a higher amount of post-kidney transplant patients over the age of 55 and a fairly large number of patients that did not speak English. The demographic profile of those surveyed could be characterized, in general, as married Caucasian adults in middle adulthood with slightly more than a high school education and an equivalent number of males and females (see Table 1). When compared on the basis of employment and employment perception, demographic variables did not explain whether someone was employed post-kidney transplantation or perceived he or she was/was not able to work (not significant; data not shown).

Table 1

Kidney Recipient's Demographic Profile

	Kidney Recipients *$N = 110$*
Mean Age (SD)	43 (8)
Mean Education (SD)	14 (3)
Gender	
Male	60 (54%)
Female	50 (46%)
Ethnicity*	
Caucasian	60 (55%)
African American	27 (25%)
Hispanic	10 (9%)
Native American	2 (2%)
Other	11 (10%)
Marital status	
Married	63 (57%)
Single	26 (23%)
Divorced	21 (19%)

*($n = 5$ missing)

Of the 110 who completed the survey, 85 (77%) were employed and 25 (23%) were disabled (see Table 2). Ninety-three percent ($n = 79/85$) of those employed and 28% ($n = 7/25$) of those who met SSDI criteria viewed themselves as physically able to work. When the employed and unemployed were compared on the basis of their perception of physical ability, significantly more ($p < 0.01$) of the employed patients viewed themselves as physically able.

Table 2

Chi-square Comparison of Post-Transplant Employment Status by Patient Employment Perception

	Employed *$n = 85$*	**Disabled** *$n = 25$*
Physically Able	79*	7
Not Able	6	18

*$p < 0.01$

Employed patients who believed themselves physically able to work had significantly higher organ functioning (see Table 3). Disabled patients who believed themselves physically able to work had higher mean creatinine clearance, although the difference was not significant.

Table 3

Mann-Whitney U Comparison of Post-Transplant Employed and Unemployed Kidney Patients Compared by Employment Perception and Mean Creatinine Clearance

	All Patients $n = 110$	**Employed** $n = 85$	**Disabled** $N = 25$
Physically Able Mean creatinine clearance	66.2	67.2*	62.8
Not Physically Able Mean creatinine clearance	58.4	53.8	55.6

*$p < 0.05$

Employment perception was compared on the basis of physician assessment by use of AMAGPI (see Table 4). The numbers are reported in frequencies because the nature of the data was not amenable to collapsing of AMAGPI categories for non-parametric comparison. This would have required an attempt to compare impairment levels ranging from 15 to 100% in the same category. The findings suggest that patient employment and perception of work ability is not always consistent with the physician assessment of their level of medical impairment. When the patients were compared on the basis of employment perception and AMAGPI impairment level, 84% ($n = 70/83$) with 9–14% impairment, 86% ($n = 6/7$) with 15–34% impairment, 58% ($n = 7/12$) with 35–59% impairment and 83% ($n = 5/6$) with 60–95% impairment believed they were physically able to work.

Table 4

Chi-square Comparison of Post-Transplant Patient Employment Perception by Physician Assessment of AMAGPI (n = 2 missing)

	Class 1 *0–14% Impairment* $n = 83$	**Class 2** *15–34% Impairment* $n = 7$	**Class 3** *35–59% Impairment* $n = 12$	**Class 4** *60–95% Impairment* $n = 6$
Physically Able	70*	6*	7	5*
Not Able	13	1	5	1

*$p < 0.05$

Patient perception of their ability to work post-transplant is very strongly related to their level of impairment. There were significantly ($p < 0.05$) more ($n = 13$) who perceived an ability to work with in Class 1, 2 and 4. Only those patients with 35–59% (Class 3) did not have a significant difference based on their individual perception of work ability.

When employment status was compared with AMAGPI categories, there were significantly more of those who were employed in the 0–14% impairment. Two of the three remaining categories had nearly twice as many employed for each impairment level, but the differences were not significant (see Table 5).

Table 5

Chi-square Comparison of Post-Transplant Patient Employment Status by Physician Assessment of AMA Impairment Level (n = 2 missing)

	Class 1 *0–14% Impairment* $n = 83$	**Class 2** *15–34% Impairment* $n = 7$	**Class 3** *35–59% Impairment* $n = 12$	**Class 4** *60–95% Impairment* $n = 6$
Employed	68*	4	8	4
Disabled	15	3	4	2

*$p < 0.05$

When compared by *t*-test on the basis of mean creatinine clearance with employment status or employment perception there were no significant differences found (see Table 6). In all but three cases, those who were employed perceived themselves as physically able and had better organ functioning for each impairment level (e.g., Classes 2 and 4).

Table 6

Post-Transplant Patient Employment and Employment Perception by Physician Assessment of AMA Impairment Level and Most Recent Mean Creatinine Clearance

	Class 1 *0–14% Impairment* $n = 83$	**Class 2** *15–34% Impairment* $n = 7$	**Class 3** *35–59% Impairment* $n = 12$	**Class 4** *60–95% Impairment* $n = 6$
Employment Status Employed	71.8	48.8	37.5	17.3
Disabled	69.7	51.5	30.0	26.0
Employment Perception Physically Able	71.6	49.7	36.4	19.0
Not Able	70.1	45.0	34.6	19.0

DISCUSSION

It has been widely documented that employment is an important component in the reestablishment of a transplant recipient's identity, self-esteem and quality of life (Callahan, 2005). However, one of the primary assumptions associated with this research has been that there is, in fact, little or no relationship with employment, perception of ability to work and medical status (Raiz & Monroe, 2007). Given that 77% of the current cohort of patients were employed and believed they were physically able to work, often despite significant kidney dysfunction, this would challenge such an assumption. However, this does not mean that patients do not have medical "complications," because they do. But those same reports have also indicated that by one year post-transplant, most patients are functioning fairly normally again. Given the current findings, that may be open to debate and closer scrutiny. For example, as early as 1993, published research reported that transplant recipients may not be totally disabled but may have specific physical limitations and complaints that preclude only certain types of work (Paris et al., 1993). It was not until use of the AMAGPI that there has been an agreed upon mechanism or standardized criteria by which to evaluate or compare patients on multiple levels (AMAGPI, 1993).

Comparisons of functional disability and subjective perceived health status from pre- to post-kidney transplantation have revealed improved health status and physical function from one to three years (Gross, Limwattananon, Matthees, Zehrer, & Savik, 2000) with relatively low death or graft loss at one and five years (Cardinal et al., 2005), near normal rates of volunteer work, going out, socializing and leisure activities up to seven years post-transplantation when compared to the general population (Mei et al., 2007) and increased participation in daily activities and improved quality of life (Niu & Li, 2005).

With regard to employment post-kidney transplantation, there are multiple studies that have addressed this issue specifically. Employment rates have ranged from 29–76%, depending on the definition and age group under study (Gross et al., 2000; Taber, Lee, & Slapak, 1982) and with time frames for collecting data from 6 months to 8.6 years (Griva et al., 2002; Hathaway et al., 1998). There has also been a great deal of variation in the methodology used from standardized tools (Griva et al., 2002; Gross et al., 2000; Johnson, McCauley, & Copley, 1992) to self-constructed questionnaires absent documented reliability and validity (Flechner, Novick, Braun, Popowaniak, & Steinmuller, 1983; Russell, Beechcroft, Ludwin, & Churchill, 1992; Simmons, Abress & Anderson, 1998).

Sorting through these studies to try and clarify whether support for the current findings of some correlation between physical impairment and continued perception of disability exists is difficult. It is made more challenging because the above studies seldom mention employment in relation to the patient's physical status. However, reading closely, one finds comments such as "moderately impaired," "generally similar physical function," "mild limitations of daily activities." In other words, significant improvement does not imply being without limitations or complications.

The discrepancy between medical assessment of employability and the patient's continued perception of being unable to work that was suggested by previous employment research was not found in this study. In that regard, the current work is consistent with the most recent employment research from heart and liver transplantation, which links employment perception with impairment rather than overall disability status. There is heart transplantation quality of life research that also supports the current findings. Grady, Jalowiec and White-Williams (1999) found that a recipient's perceived quality of life is consistent with their perceived health status and functional ability. Given that 17% ($n = 19$) of the disabled patients were either employed and/or perceived themselves as physically able to work, it is logical to assume that even in the face of significant physical limitations some patients will have the perception of physical ability to meet the demands of certain types of full-time post-transplant employment and focused rehabilitation interventions, and that case management could improve employment outcomes.

While the current work does not facilitate the development of a universal definition of employability post-kidney transplantation, the findings from the use of AMAGPI in this population suggests the need to consider the development of such a comparison with later studies. In fact, comparisons with the AMAGPI suggest the need for a closer examination of the traditional measure of creatinine clearance as a valid measure of a kidney transplant recipient's employment ability. Current findings would suggest an inverse relationship between impairment and employment perception. In other words, as the percentage of physical impairment increases the individual patient's perception of employment ability declines. Because the AMAGPI are very standardized assessment categorizations, the potential for value-based judgments is lessened and the notion that these numbers must be taken seriously is supported. As kidney transplant professionals, we must look at a 15–34% level of functional disability with a new vision and a renewed sense of how to intervene with this particular segment of our transplant population.

Within the context of the broader transplant community, the question of whether creatinine clearance is the best measure of physical outcomes remains an important one. Disability may be too narrowly defined by organ functioning when the transplant patient's physical ability is impacted by multiple underlying medical problems. This may help to explain why transplant patient comparisons regarding employment and disability vary widely. Virtually every study has used primarily Social Security determinations, based on automatic qualification with the onset of dialysis as medical criteria, as the basis for stating a patient's employment ability. Yet, each transplant patient has some residual deficit or underlying disease process, the cause of which could be multi-factorial. We know, for example that more than 40% of incident and prevalent end stage renal disease patients have kidney failure due to diabetes (U.S. Renal Data System, 2008). Additionally, according to Sulanc et al. (2005), the incidence of new-onset diabetes after transplantation ranges between 2% and 50%. Further, the current study did not separate kidney-pancreas transplants from kidney transplants. This disease process alone may alter patient and staff perceptions about employment ability.

Creatinine clearance is a reliable measure of the medical status of the kidney. However, there are limitations associated with this study because of the limited number of participants, which means the statistical findings may be open to question and should be used more as a suggestion of significance rather than specific significance. Even so, the use of the AMAGPI may help the evaluation process in two ways: first, it moves patient claims from being merely subjective patient perceptions to one of objective physician assessments using agreed upon criteria; second, it opens the door to a new way for transplant staff to conceptualize individual patient employability potential. Although not addressed or part of the logic for the AMAGPI, it may be that ultimately employment perception is based on the cumulative effect of various forms of impairment the kidney patient may experience. Plus, one should never underestimate the value of dialysis in helping to take care of poor kidney functioning, which allows individual patients to function at a higher level when compared with other organs.

LIMITATIONS

There are limitations associated with this descriptive study. These include limitations associated with the use of a mailed survey, which narrowed the potential response rate. The survey instrument itself used by the investigators could have been a more in-depth analysis and potentially provided greater insight into barriers to employability. A more exhaustive survey was not chosen because of the narrow focus of the work, which was to address the question of organ functioning and patient employment and perception of employability. Given the question of the population's literacy level served, it was also important to keep the instructions and questions as simple as possible. In addition, the use of this survey allowed for comparison with previous work done with other organs for wider comparison with the existing literature. Also, sample size was lower than anticipated, partly due to the choice of using a mailed survey and design constraints that did not allow for contacting patients who did not initially respond. As with any employment study, it would be of interest to understand the work status of those who did not respond, as the investigators theorize that those who were employed were the most likely to respond. However, again, design protocol did not allow for this or any follow-up to occur.

Whether the conclusions of this work, given its limitations, are justified will need to rely on additional research that explores these questions and helps determine the reliability of the findings from such a small patient cohort. But, given the significant success with current employment rates from the current patient cohort, one is also left to ponder whether there is really any way in which to improve upon the results currently being reported, or whether only those more likely to have worked completed the survey about employment. Only additional studies will help to clarify the most likely answer. Regardless, the findings are important enough to justify the exploration of additional medical and psychosocial paradigms with the goal of continuing to improve overall patient employment.

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Early and Preemptive Transplant: Helping Patients and Providers Consider the Whole Picture

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ABSTRACT

This article briefly reviews a March 2007 KDOQI conference convened in 2007 to review information available regarding preemptive transplantation. Psychosocial implications as they relate to preemptive transplant are discussed. Social work assessment and psychoeduation is essential in identifying barriers in preemptive transplant that may differ from patients already on dialysis. Transplant social workers can provide collaboration and case management to improve patient outcomes through preparation.

INTRODUCTION

In March 2007, the National Kidney Foundation convened a Kidney Disease Outcomes Quality Initiative (KDOQI) conference in Washington, D.C., to review evidence and opinions regarding preemptive transplantation (transplant prior to dialysis). Fifty-two participants representing transplant centers, dialysis providers and payers were divided into three workgroups. The workgroups were divided to address the impact of early transplantation on chronic kidney disease (CKD), the educational needs of patients and professionals and finances (as they relate to providers and patients) of renal replacement therapy (RRT). Participants explored the benefits of preemptive (before RRT) and early (within the first year of dialysis) transplantation with respect to costs and outcomes, identified current barriers (at multiple levels) that hinder access to early transplantation and recommended specific interventions to overcome those barriers (Abecassis et al., 2008).

Despite emerging evidence that patients have optimum outcomes in terms of patient and graft survival when transplanted preemptively or early in the course of RRT, only 2.5% of patients who begin treatment for kidney failure undergo transplantation as their initial modality of treatment (Abecassis et al., 2008). Additionally, recommendations that CKD patients be referred for transplantation six months before beginning RRT are not widely followed (Kasiske et al., 2002). This may be due to lack of insurance for transplant at this stage of CKD. Insurance for many comes only with access to Medicare upon the initiation of dialysis. It may also be related to the practice patterns of nephrologists or to the lack of education available to patients. Nephrology social workers have a central role in preemptive transplantation and early transplantation in helping transplant candidates, potential donors and families through education, assessment, case management and counseling to overcome barriers and achieve a successful transplant.

Statistics show that preemptive transplant can provide the best survival and quality of life for patients (Meier-Kriesche & Kaplan, 2002). Statistics further show that transplant is most successful before the initiation of dialysis or within the first year of dialysis (U.S. Renal Data System, 2006). One of the reasons is that medical complications are avoided, such as dialysis exposure, cardiac events and those related to vascular access. From an economic and personal cost standpoint, preemptive transplantation is thought to be more cost-effective. For example, the cost of vascular access placement and the initiation of dialysis are avoided. From the patient perspective, the potential days of lost employment are lessened, anxiety may be reduced and destabilization of the family may be minimized. These costs are not minimal.

ENCOURAGING PREEMPTIVE AND EARLY TRANSPLANTATION: IMPLICATIONS FOR NEPHROLOGY SOCIAL WORK

Every patient is entitled to transplant referral and evaluation. A psychosocial assessment is a component of the transplant evaluation process as directed by *Medicare Conditions of Participation for Transplant Centers* (42 CFR Parts 405, 482, 488 and 498; Centers for Medicare and Medicaid Services [CMS], 2007). The transplant social work assessment not only assesses the strengths and weaknesses of the potential candidate but also educates the patient and family about what to expect in the way of needed savings, time off work, plan of care for children and the importance of beginning the work on planning for these issues *prior* to the transplant (Council of Nephrology Social Work, 2005). Rules pertaining to access to Medicare are daunting to navigate for patients and providers alike. For preemptive transplant, the problem involves the complex interplay among private and government payers, and the negotiation of these hurdles in a manner timely enough to allow preemptive transplantation to occur and patient access to medications and health care following transplant. Preemptive transplant is rarely possible for people without insurance. Some hospitals consider and can choose to approve going forth with transplant without insurance when an individual has a living donor and is Medicare eligible and entitled. The implications for medication cost and immediate post-transplant care would need to be planned for extremely carefully in this scenario.

> "Medicare coverage can begin the month you are admitted to a Medicare-approved hospital for a kidney transplant or for health care services that you need before your transplant if you meet the following condition:
>
> - Your transplant takes place in that same month or within the 2 following months" (CMS, 2008).

In most instances, the hospital would need to be ready to provide medications for the months until Medicare Part B was processed for anti-rejection medications (and then a Medicare Part B pharmacy could seek reimbursement from date of discharge for the same medications). Then, the hospital would need to cover the cost of other medications, including antiviral medications, until Medicare Part D became effective. While the use of pharmaceutical assistance programs (PAPs) may be possible in this situation, it may become quite complicated for the patient and family if income documents are not readily available or income guidelines are not met or if the patient cannot cognitively manage multiple PAPs. From the experience of this author, this scenario would rarely be recommended from a psychosocial perspective.

Transplant is not a panacea, and as the renal community focuses on early and preemptive transplant, a balanced presentation of pros and cons is important. With any transplant comes the standard risks associated with immunosuppressant medications: an increased risk of cancer, hyperlipidemia, diabetes, bone disease and nephrotoxicity, to name a few. Transplant may be considered the best option available for select people with kidney failure, but it is a treatment, not a cure, and psychosocial interventions may be needed at various stages during the course of chronic illness with transplant or dialysis.

Patients who have preemptive transplantation often have a shortened period to adapt to the challenges commonly experienced by CKD patients during their initiation phase of adjustment to CKD stage 5: trauma, disruption, fear and confusion (National Kidney Foundation/Council of Nephrology Social Work, 2008). There may be fewer initial challenges post-transplant if surgery and recovery goes smoothly, but when problems occur post transplant, such as a rejection episode, cancer or a virus, the nephrology social worker can refocus interventions on the adjustment goals of Phase 1: emotional and physical stabilization, family system stabilization and support, disease knowledge, trust and hope (National Kidney Foundation/Council of Nephrology Social Work, 2008). Setbacks with transplant, such as rejection episodes, can be especially difficult. Often, there is a tendency to consider transplant a cure rather than a treatment.

DESIGNING A BALANCED EDUCATIONAL APPROACH

Sometimes, patients hear the *message* of preemptive transplant. However, they have no donor and do not want to start dialysis. Perhaps they question whether they are really sick enough to need a transplant. For these patients, the message of preemptive transplant may instill fear and despair. While transplant centers incorporate information about preemptive transplant and dialysis facilities promote early transplant in an effort to help patients understand the medical and quality-of-life benefits, programs must be mindful of the meaning of this message for those who will remain on the transplant waiting list, nearing 80,000 individuals, for five or more years.

Also, sometimes a patient may appear to be an excellent transplant candidate from a medical standpoint. However, from a psychosocial perspective, barriers exist that will create stress and are predicted to contribute to an inability to adhere to medical recommendations. The patient may need to do fundraising to save money for the costs of medication co-pays, hospital deductibles, time off work, housing at the transplant center, transportation to and from the transplant center, etc. It is sometimes very difficult for surgeons and nephrologists who see a healthy individual to understand that the necessity to save money for the needs mentioned previously means that a preemptive transplant may not be realistic. The hospital may also not be in a position to forgo some of the Medicare Part B costs that would be non-reimbursable for the candidate who is waiting for Medicare. These costs would include surgeon and anesthesiology fees for the operation, as well as post-transplant outpatient services such as clinic visits and blood draws.

A social worker's goal is to meet patients where they are, advocate for them and help them to meet their goal. This is done in collaboration with the team and the patient while seeking the best outcome for the patient. Preemptive or early transplant *may* be the ideal situation for a patient, but looking at the patient holistically, preemptive transplant may not be possible. Referral for transplant evaluation at the earliest possible time will help the patient begin preparing all areas of his or her life for post-transplant needs. The KDOQI conference provided a broad review of topics relevant to patients, as well as providers regarding preemptive transplant. Transplant social workers can provide collaboration and case management between patients and providers to promote improved outcomes for patients particularly relating to adherence.

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Framing the Gift of Life: An Empirical Examination of Altruism, Social Distance and Material Incentives in Non-Directed Kidney Donor Motivation

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This study utilizes frame theory to examine the persuasiveness of the National Kidney Foundation's altruistic "gift of life" frame in improving the number of living kidney donations. We surveyed a sample of 73 individuals to assess the relationship between social distance, increasing material incentives and donor motivation. Our results suggest that altruism is significantly related to donor motivation only for donations to immediate family members and that limited material incentives, as well as strategic "re-framings" that address the social distance between donor and recipient, may be important in enhancing donations among individuals unrelated to kidney transplant recipients.

INTRODUCTION

According to recent data, more than 76,000 individuals are currently listed for a deceased donor kidney transplant in the United States (United Network for Organ Sharing, 2008). Between 5 and 20 of those individuals die every day as a result of a chronic shortage of deceased donor kidneys (OPTN/SRTR Annual Report, 2007). Roughly another 20 million individuals in the United States have unrecognized chronic kidney disease (CKD) that may require either dialysis or transplantation within the next seven years (Matas, 2007). If current trends continue, about 73% of those eventually listed for transplantation will die before a deceased donor kidney becomes available (OPTN/SRTR Annual Report, 2007).

The National Kidney Foundation (NKF), social scientists, renal specialists, nephrologists, transplant surgeons, social workers, potential recipients and concerned citizens and families of the chronically ill are attempting to find innovative solutions to the persistent kidney shortage. After 1954, when live kidney transplantation was first introduced, the NKF sought to improve the living donor pool by characterizing donations from family members and close friends as a "gift of life" (Fox & Swazey, 1978; 1992, p. 33). But, how effective is this narrative in motivating live donations from strangers? One survey concluded that while 77% of Americans think that it is acceptable for an altruistic stranger to donate a live kidney, only 24% are actually motivated to do so (Spital, 2001).

The purpose of this study is to explore the different rhetorical strategies, or "framings," the outreach programs of the NKF and other interested and concerned organizations and individuals might pursue to increase the number of living kidney donations. We are particularly interested in the effectiveness of the NKF's "gift of life" message in motivating donations among altruistic strangers unrelated to kidney recipients. First, we explore the social factors that motivate individuals to become living donors. Second, we examine the social distance between potential donors and recipients to empirically assess the willingness of donors to expand their giving beyond their primary groups (i.e., family and close friends). Last, we explore the ethics and effectiveness of the use of material incentives as a complement to "gift of life" altruism in the framing of kidney transplantation and live organ donation.

THE GIFT OF LIFE: RENAL TRANSPLANTS AND FRAMING

Organ transplantation has a long history. The first attempts occurred in the early 1900s, with the first kidney transplant performed in 1906 without the use of anti-rejection drugs and using various animal donors (Kutner, 1987). Human-to-human transplantation was first attempted in 1936 using a deceased donor. Although these early attempts failed, it was recognized in 1944 that transplant rejection was based on immunological factors. This gave the scientific community a solid base to change the practice of transplantation from an experimental procedure to an accepted form of treatment (NKF of Southern California, 2003; United Network for Organ Sharing, 2008).

The first successful organ transplant occurred in 1954 when surgeons Joseph E. Murray and John Harrison performed a live donor transplant between identical twins, which allowed the recipient twin to survive eight years (United Network for Organ Sharing, 2008). For the next 20 years, however, successful transplants were severely hindered by the persistent problem of transplant rejection. The subsequent development of effective immunosuppressant drugs, including cyclosporine, tacrolimus and CellCept®, changed the equation. Their development and pervasive use were key biomedical factors that led to what the transplant community termed a "boom" in the range, number and combinations of tissues and solid organs that were transplanted from the early 1980s to the present (Fox & Swazey, 1992, p. 7; NKF of Southern California, 2003). Consequently, it is the issue of organ availability rather than transplant rejection that is the foremost concern within the transplant community today (Matas, 2007, p. 2).

According to the United States Renal Data System (USRDS), in the case of kidney transplantation, more than half of the

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available organs in 2006 came from deceased donors, a change due, in large part, to increases in the use of expanded criteria donors (ECDs) and donations following cardiac arrest (USRDS, 2008). ECDs include all deceased donors over the age of 60 and donors over the age of 50 with any two of the following criteria: hypertension, cerebro-vascular brain death or a pre-retrieval serum creatinine level more than 1.5 mg/dL (Stratta, 2004). Between 2003 and 2006, living donations from blood-related donors fell by 36% while living donations from blood-unrelated donors increased by 45% as a result of paired exchange programs (USRDS, 2008). In 2006, the number of transplants rose by 4% while the waiting list grew by 8%. While approximately 50 kidney transplants were performed each day in 2006, up to 12 other people on the waiting list died as a result of unavailable organs (USRDS, 2008).

Limited organ availability has created a renewed interest in xenograft transplants and some new strategies, including genetically altered pigs, which scientists hoped would produce viable organs for transplantation. To date, however, this research has not produced significant results (Williams, 2009). As a result, transplant surgeons, policy makers and other interested parties continue to grapple with the perplexing question of how to increase the organ supply.

Because living donors are the preferred source for transplant surgeons, with live donations increasing life expectancy by more than 12 years over deceased donor transplants, interested organizations and individuals must attend to the perspectives of potential donors (Matas, 2007; USRDS, 2008). These individuals comprise a target audience for persuasive messages about transplantation and live organ donation (Fox & Swazey, 1992, pp. 46–47; Matas, 2007). It is our contention that the NKF and other organizations might help contribute to increasing living kidney donations by "framing" the problem of organ shortage differently. Citing Erving Goffman's *Frame Analysis* (1974), Snow et al. define a frame as a "schemata of interpretation that enables individuals to locate, perceive, identify, and label occurrences with their life space and the world at large. By rendering events meaningful, these schemata function to organize experience and guide action" (1986, p. 464).

In recent years, sociologists of social movements have used the concept of frames to demonstrate the critical importance of interpretation and reality construction processes to such things as movement participation and formation (Benford, 1993, p. 697). This scholarship shows that recruitment of members to a cause depends not only on the amount of resources an organization can devote to that cause but also on how an organization frames its message. Frames, in this context, are messages or narratives purposively manufactured by organizational leaders to have persuasive appeal. To operate effectively as recruitment mechanisms, such frames must "resonate" with the existing belief systems of potential recruits (Snow & Benford, 1988). While resonance is typically conceptualized in terms of a frame's credibility and salience, frames must also correspond to existing cultural narratives and meanings (Williams, 2006, p. 105). Put differently, they must tap a larger cultural "tool kit" of commonsense understandings, stories, rituals and worldviews and deploy these cultural "tools" in ways that make sense to the intended targets (Swidler, 1986).

Drawing from anthropologist Marcel Mauss (2000 [1954]), Fox & Swazey (1992) observe that the NKF has framed kidney donations from both deceased and live donors as a "gift of life." This narrative, they argue, has rhetorical power because it is organized around a strongly held ethic of volunteerism and freedom of choice (Fox & Swazey, 1992, p. 33). When framed as "gifts of life," transplants are recast from seemingly irrational surgical procedures involving the removal of a healthy live body part from one person and its transplantation into another into opportunities for selfless volunteers to make heroic and altruistic sacrifices (Fox & Swazey, 1992, p. 33).

The framing approach suggests that the persuasiveness of the "gift of life" frame must be understood from the perspective of a target audience (i.e., potential live donors). Traditionally, live donors have been immediate family members who are subject to a number of pressures, including cultural pressures concerning altruism and self-sacrifice (Fox & Swazey, 1992, p. 33; Matas, 2007, p. 8). Appealing to individuals other than relatives or close friends may require "re-framings" that capture cultural meanings other than altruism.

BEYOND THE GIFT OF LIFE: LEGAL AND ETHICAL CONSIDERATIONS

Medical professionals concerned with live donor availability have introduced the idea of material incentives as a means to motivate additional donors. For example, Friedman makes the argument in favor of allowing compensation for living donors, proposing that the availability of organs for transplant will be positively affected (2006). In the current arrangement, she argues, only the donor lacks in receiving tangible benefits from the procedure, and other body material donations such as hair and semen are already legalized for sale. While she recognizes the difference in the safety concerns of such donations, she points out that there is evidence of black market sales of organs already outside the United States, and a legalized system would be much safer for both donor and recipient (see also Osterweil, 2006).

Other prominent surgeons, such as Dr. Arthur Matas, the former president of the American Society of Transplant Surgeons, stand behind Friedman's position. In an article written for *ABC News*, Matas supports the reward of a compensation package to a donor worth between $60,000 and $70,000 (McKenzie, 2007). Elsewhere, he argues that a living donor transplant saves taxpayers more than $95,000 compared to maintaining a patient on long-term dialysis and that some of the savings should be used to pay for donor incentives (Matas, 2007, p. 9).

The debate does not go unanswered by opponents of the incentives view. One notable response to the question of compensation is whether the system would even work. In a 2002 study by the *Journal of the American Medical Association*, researchers demonstrated that material incentives produced a negligible increase in donor availability, as well as limited or no benefit to the economic well-being of the paid live donor (Science Blog, 2002).

Debates over material incentives and organ availability must be understood against the backdrop of a growing underground shadow economy and international black market in organ sales (Fox & Swazey, 1992). Cases of kidnapping, removing live kidneys and the selling of kidneys on the black market in India and other parts of Central and East Asia have been reported (China Daily, 2008; Humanitarian News and Analysis Service, IRIN, 2008). Some recipients have been from the United States and Europe and have used legitimate foreign medical facilities for the transplantation, but have not inquired about the source of the illegally obtained kidney (Humanitarian News and Analysis Service, IRIN, 2008). According to Human Rights Watch, China has used unethical means of organ procurement (1994). Starting in 1983, with its "Crack-down on Crime" campaign, economic and non-violent crimes became punishable by death, with the organs of those executed made available for transplantation (Human Rights Watch, 1994). One surgeon was reported to have removed the organs of prisoners scheduled for execution the following day (Human Rights Watch, 1994).

Many in the United States who are awaiting a kidney or have family members or close friends awaiting one think current methods of obtaining organs for transplant have crossed a moral boundary (Matas, 2007). They fear that allowing everyone's organs to be eligible for donation could result in the same type of system that China has developed. Rewarding donors could result in the unethical and coercive exploitation of the working class and those in poverty, especially in third-world countries (Matas, 2007, p. 17; *San Diego News*, 2009). The global procurement of live kidneys thus poses a serious outside threat to the inherent problem of supply of both deceased and live kidneys within the United States. Specifically, due to non-standardized health practices and safety concerns, recipients and donors of illegal kidneys risk the long-term consequences of unregulated surgeries and defective kidneys (Osterweil, 2006).

Historically, institutions like the American Medical Association, NKF, federal government and other gatekeepers have imposed strict ethical guidelines concerning potential kidney donations in the United States (Cherry, 2005). The National Organ Transplant Act (NOTA) of 1984 explicitly prohibits material compensation beyond medical expenses for organ donations (Medscape, 2003). Deceased donations are regulated by the 1968 Uniform Anatomical Gift Act (UAGA), which was adopted in different forms by all states by 1973 (Fox & Swazey, 1992, p. 65). It is this law that enables individuals to choose organ donor status on a driver's license (Fox & Swazey, 1992, p. 56). The rights of patients are further supported by the Patient Self-Determination Act (PSD) of 1990, which enables patients to establish end-of-life plans, including powers of attorney in the event of incapacitation, do not resuscitate (DNR) orders and any plans regarding organ donation or preservation. One recent study, however, found that less than 25% of all patients admitted to a hospital with a critical illness have an end-of-life plan (Verheijde, Rady, & McGregor, 2007). Moreover, the revised version of the UAGA allows doctors to presume that a recently deceased patient is an organ donor and grants them rights to use life support until the family or a power of attorney makes a final decision. This has created an ethical dilemma in the minds of many who are grappling with transplantation and donation issues in the United States (Cherry, 2005; Matas, 2007).

This study explores the use of material incentives as a possible complement to the NKF's "gift of life" frame by examining the potential of such incentives to increase support for live kidney donations from individuals both known and unknown to the recipient. We incorporate ethical concerns into our analysis by utilizing a value-added Ethical-Motivation Scale that allows us to assess declining supportiveness for living kidney donation simultaneous with increasing material incentives. Identifying an ethically-based tipping point beyond which individuals may be less supportive of linking material rewards to living kidney donations is critical to determining whether and what kind of material incentives should be incorporated into the "gift of life" frame. Although growing recognition of the need to "reduce financial disincentives" has led to the creation of the National Living Donor Assistance Center (NDALC), it is unclear that this language, which casts material incentives in the negative (i.e., financial matters are barriers to giving that need to be removed as opposed to rewards for giving to which donors are entitled), "resonates" with potential non-directed donors (NDLAC, 2008). Additionally, we explore the social nature of donor motivation by using the Bogardus Social Distance Scale (Bogardus, 1925; 1933) to measure willingness to donate. We expect that the less the social distance between donor and recipient, or the closer their social relationship, the more favorable the respondent will be toward live kidney donation.

RESEARCH DESIGN AND METHODS

Conceptualization and Measurement

Our exploratory study assesses willingness of respondents to undergo a living kidney donation with the Bogardus Social Distance Scale (Bogardus, 1925; 1933), which is an efficient measure of the willingness of individuals to associate with other kinds of people (Babbie, 2004). It is also used to assess respondents' relative comfort level with various social relationships (Neuman, 2000). It has not previously been used to measure the willingness of individuals to undergo a living kidney donation. Our use of the Bogardus Social Distance Scale is as follows:

1. I would donate one of my kidneys to a member of my immediate family.
2. I would donate one of my kidneys to a member of my extended family (e.g., aunt, uncle).
3. I would donate one of my kidneys to a close friend.
4. I would to donate one of my kidneys to an acquaintance or a friend of a friend.
5. I would donate one of my kidneys to a stranger.

As the above items illustrate, the Bogardus Social Distance Scale assumes that individuals who would donate their kidney to a stranger would also donate a kidney to an acquaintance, a close friend, members of their extended family and their immediate family. Based on their responses to this one-to-five scale, respondents were grouped into distance levels, which we used as an indicator of altruism (e.g., individuals who answered "yes" to item five were categorized as more altruistic than individuals who answered "yes" to item four but "no" to item five). This allowed us to measure the intensity of respondents' altruism with regard to the "gift of life."

To measure ethical considerations concerning material incentives, we use a cumulative summated-rating scale that links various material rewards to living kidney donation. This Ethical-Motivation Scale consists of nine dimensions of increasing material incentives, which were developed based on characterizations in the literature concerning both donor motivation and ethical issues related to donor compensation (see, e.g., Matas, 2007; Satel, 2008). On a scale of one to five, with five being the most favorable, respondents were asked to indicate the extent of their agreement with each of nine statements. These nine items, which we use as an indicator of donor motivation, are as follows:

1. Living kidney donors should not be compensated. The donation should be considered a free-will donation and purely altruistic.
2. Living kidney donors should be entitled to compensation for medical expenses related to the procedure.
3. Living kidney donors should be entitled to compensation for medical expenses and lost wages relating to the procedure.
4. Living kidney donors should be compensated for medical expenses, lost wages related to the procedure and should receive a "reward" package that may include a weekend getaway.
5. Living kidney donors should be compensated in the form a form of a federal deduction tax incentive.
6. Living kidney donors should be compensated for medical expenses and lost wages relating to the procedure and should also receive a "reward" package that may include cash or tax credit incentives.
7. Living kidney donors should be compensated for medical expenses and lost wages relating to the procedure and should also receive a "reward" package that includes lifelong medical coverage.
8. Living kidney donors should be compensated for medical expenses and lost wages relating to the procedure and should also receive a "reward" package that includes lifelong medical coverage, plus an amount of instant compensation up to $60,000 to $70,000.
9. Living kidney donors should be able to freely negotiate the price, compensation and reward they receive for their donation with no limitation on the amount or criteria.

Data Collection

Data for this research is based on a self-administered, self-report survey using a non-representative sample of convenience at a moderate-sized Midwestern State University. The University has a total enrollment of about 7,000 students, including 5,500 undergraduate and 1,500 graduate students. Although the majority of students are from four Midwestern states, 6% are international students from countries such as Russia, China, Japan, India and Finland. The University offers undergraduate degrees in the liberal arts, education, science and technology. For this study, two upper division social science courses and two lower division introductory sociology courses were selected to participate in the 2008 spring semester. The study was approved by the Department of Social Sciences' Internal Committee for the Protection of Human Subjects. A total of 73 students completed the survey (RR = 100%). All were undergraduates. Table 1 illustrates the demographic characteristics of the sample.

Table 1

Demographic Characteristics of the Sample

					Totals
Gender	Males	Females			
	46.4% (*n* = 34)	53.4% (*n* = 39)			100% (*N* = 73)
Age	16–18	19–21	22–29	30+	
	4.1% (*n* = 3)	68.5% (*n* = 50)	26.0% (*n* = 19)	1.4% (*n* = 1)	100% (*N* = 73)
Year in School	Freshman	Sophomore	Junior	Senior+	
	24.7% (*n* = 18)	17.8% (*n* = 13)	34.2% (*n* = 25)	22.3% (*n* = 17)	100% (*N* = 73)

Data Analysis

SPSS 16 was utilized for the statistical analysis of these data. Percentages and simple cross tabulations were used for nominal and ordinal variables to observe bivariate relationships. Descriptive statistics, including means and standard deviations, were used for ordinal-level scales. Cronbach's alpha was used to test the reliability of the Ethical-Motivation Scale. A Spearman correlation technique was used to examine the relationship between the Bogardus Social Distance Scale and the Ethical-Motivation Scale.

RESULTS

One purpose of this study was to examine the relationship between the social distance of donors to recipients and willingness to donate a kidney. We used the Bogardus Social Distance Scale based on the hypothesis that those who had the least social distance from the respondent would be the most likely choice for a donation (Bogardus, 1925; 1933). The data in Table 2 support the hypothesis that as social distance increases, the willingness of respondents to donate one of their kidneys decreases. Of respondents, 94.5% indicated they would donate one of their kidneys to an immediate family member while 86.3%, or approximately 6% less, were willing to donate a kidney to a close friend. Those who were willing to donate a kidney to a member of their extended family totaled 83.6%, or approximately 12% less. Interestingly, although our scale ranked extended family (e.g., aunts, uncles) as less distant than close friends, the 2.7% difference between willingness to donate a kidney to a close friend and willingness to donate a kidney to a member of one's extended family is statistically significant at the $p = 0.01$ level and may be explained by primary group relationships that predominate in the Midwest and in university life, especially as sources of social solidarity and support (Cooley, 1964 [1902]).

Table 2

Social Distance and Kidney Donation (n = 73)

	Yes	No
I would donate one of my kidneys to an immediate family member.	94.5% (*n* = 69)	5.5% (*n* = 4)
I would donate one of my kidneys to a member of my extended family.	83.6% (*n* = 61)	16.4% (*n* = 12)
I would donate one of my kidneys to a close friend.	86.3% (*n* = 63)	13.7% (*n* = 10)
I would donate one of my kidneys to an acquaintance.	37.0% (*n* = 27)	63.0% (*n* = 46)
I would donate one of my kidneys to a stranger.	26.0% (*n* = 19)	74.0% (*n* = 54)

Table 3

Supportiveness for Linking Material Incentives to Living Donation (n = 73)

	Mean	SD
Living kidney donors should not be compensated. The donation should be considered a free-will donation and purely altruistic.	3.08	1.12
Living kidney donors should be entitled to compensation for medical expenses related to the procedure.	4.10	.92
Living kidney donors should be entitled to compensation for medical expenses and lost wages related to the procedure.	3.95	1.0
Living kidney donors should be compensated for medical expenses, lost wages relating to the procedure and should also receive a "reward" package that may include a weekend getaway.	2.84	1.14
Living kidney donors should be compensated in the form of a federal tax deduction.	3.34	1.0
Living kidney donors should be compensated for medical expenses and lost wages relating to the procedure and should also receive a "reward" package that my include cash or a tax credit.	2.95	.98
Living kidney donors should be compensated for medical expenses and lost wages relating the procedure and should also receive a "reward" package that includes lifelong medical coverage.	3.01	1.11
Living kidney donors should be compensated for medical expenses and lost wages relating to the procedure and should also receive a "reward" package that includes lifelong medical insurance coverage plus an amount of instant compensation of up to $60,000 to $70,000.	2.47	1.07
Living kidney donors should be able to freely negotiate the price, compensation and reward they receive for their donation with no limitation to the amount or criteria.	2.64	1.22

In contrast to the high willingness associated with donations to family and close friends, 37% of respondents were willing to donate a kidney to an acquaintance and 26% were willing to donate to a complete stranger. Hence, 60% fewer respondents were willing to donate a kidney to a stranger than to an immediate family member.

A second purpose of this study is to understand the motivations of potential donors. Nine statements were created for this study and arranged into a cumulative summated-rating scale to examine the amount of support associated with increasing material incentives. A Cronbach's alpha of $\alpha = 0.72$ illustrates that this Ethical-Motivation Scale is an internally consistent and reliable measure of support for linking material incentives to living kidney donation (Voght, 2005, p. 71). As illustrated in Table 3, respondents agreed that living donors should be compensated for medical expenses (4.10). They also agreed that donors should be compensated for lost wages (3.95) and should receive a federal tax deduction (3.34). In declining order of importance, less agreement was expressed for: altruistic giving (3.08); compensation for medical expenses, lost wages and a reward package

Table 4

Correlations Between Social Distance and Support for Material Incentives

	Immediate Family	Extended Family	Close Friend	Acquaintance	Stranger
Altruism	0.303**	0.209	0.218	0.048	0.074
Medical expenses only	–0.101	0.070	0.096	–0.017	–0.028
Medical expenses and lost wages	–0.304**	–0.094	–0.068	–0.254*	–0.318**
Medical expenses, lost wages and weekend getaway	–0.114	–0.041	–0.157	–0.087	–0.287**
Federal tax deduction	0.128	0.210	0.069	0.058	0.134
Medical expenses, lost wages and cash or a tax credit	–0.289**	–0.040	–0.136	–0.170	–0.231*
Medical expenses, lost wages and lifelong medical coverage	–0.093	0.007	–0.149	–0.024	–0.081
Medical expenses, lost wages, lifelong medical coverage and a lump-sum cash payout	–0.024	–0.026	–0.181	–0.064	–0.093
No limits to compensation	–0.317**	–0.163	–0.030	–0.047	–0.194

**$p < 0.01$, 2-tail test
*$p < 0.05$, 2-tail test

consisting of lifelong medical coverage (3.01); compensation for medical expenses, lost wages and a tax credit reward package (2.95); compensation for medical expenses, lost wages and a weekend getaway reward package (2.84); free negotiation of compensation without limitation (2.64); and compensation for medical expenses, lost wages and an instant cash payout of up to $60,000 to $70,000 (2.47).

As illustrated in Table 4, a statistical examination of the relationships between the statements comprising the Social Distance Scale and the Ethical-Motivation Scale revealed positive correlations between willingness to donate a kidney to close or distant others and altruism and a tax deduction. Also positive was the relationship between willingness to donate to an extended family member or close friend and paid medical expenses and willingness to donate to an extended family member and lifelong medical coverage. Except for the relationship between altruism and willingness to donate to an immediate family member, none of these relationships were statistically significant. Willingness to donate a kidney to a close or distant other was negatively correlated with support for all other material incentives.

DISCUSSION

This research assesses the potential limitations of the "gift of life" frame as used by the NKF. The results support earlier research (e.g., Spital, 2001) by indicating that respondents are more likely to want to donate their kidney to their relatives and close friends than to acquaintances or strangers. Unlike previous research, however, this study used an established empirical tool (i.e., the Bogardus Social Distance Scale) to provide evidence of the impact of social distance on willingness to undergo a living kidney donation. Additionally, the framing approach we used suggests that while willingness to donate a kidney is confined primarily to family and close friends and declines considerably when more distant others are taken into account, it may be possible for the NKF to "strategically fashion" primary group intimacy among members of occupational, religious or ethnic groups, social clubs, athletic associations and the like. Although the precise forms this reframing should take are a topic for further study, research using frame theory has demonstrated the persuasiveness and hence mobilizing potential of a language of "rights" (Oliver & Johnston, 2000; Snow & Benford, 1992). Perhaps this language of equal, human or civil rights could be combined with both altruistic terms that invoke generosity and self-sacrifice, as well as community-centered messages that emphasize the common humanity and frailty of "people like us." Because such "social justice" terms are familiar to social workers, they may have a unique and important role to play in any future efforts to re-frame the "gift of life" (Congress, 1999).

The findings of this research also suggest that altruism alone is not a significant motivating factor for non-directed donations to distant others. Given these findings, the NKF might consider re-framing the "gift of life" to include material incentives such as tax deductions (see also Satel, 2008). Importantly, our research suggests that there is a limit to material concessions. In comparison to combination reward packages, respondents indicated stronger support for rewards linked directly to the transplant. Perhaps high-cost incentives unrelated to the procedure, especially the one-time cash payout of $60,000 to $70,000 together with other compensating benefits, create the "distasteful" impression that one's organs are commodities that are for sale. Additional research is needed to determine if a language of "compensation" is preferable to a language of removing or reducing financial "disincentives" (Gaston et al., 2006).

Most importantly, our research shows how the framing approach can inform studies of interpretive processes as they relate to the problem of organ supply. Much sociological scholarship attests to the value of attending critically and empirically to the crafting of rhetorical campaigns directed at the recruitment of individuals to a cause. Hence, to effectively address the question of how to increase non-directed live kidney donations, more research should consider both the packaging and the persuasiveness of organizational frames.

LIMITATIONS OF THE STUDY

There are several limitations to this study, including its small, non-representative sample and exploratory design. Of particular note is the use of attitude measures (i.e., willingness to donate a kidney and support for linking various material rewards to living kidney donations) as "indicators" of the motives and behaviors of living kidney donors. Research in psychology suggests that attitudes are an imperfect predictor of behavior and that motives are often more complex than can be assessed through a study of attitudes alone (Meyers, 1999). While this design feature cautions against generalizing from the results of this study, there are also limits to retrospective accounts provided postoperatively by those whose views may have been altered by the process and experience of giving the "gift of life." Those closest to the process (i.e., the transplant team, nephrology social workers, donors and recipients) are best situated to provide insight, through future research and analysis, into the motives that drive the "gift of life" and hence, the most effective strategies for increasing the organ supply.

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Dialysis Dogs Program Implementation at Saint Joseph Hospital's Outpatient Dialysis Clinic: Animal-Assisted Activity in the Dialysis Environment

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In recent years, interventions with animals in medical environments have become more prevalent and accepted as a unique approach to improving patient outcomes. Hospitals, rehabilitation centers and nursing homes often use animals as part of the therapeutic milieu. A wealth of benefits to patient well-being has been explored in the literature, as have the relative safety of animal activities in medical settings. In spite of these benefits and documented safety of such interventions, therapeutic activities with animals in dialysis settings have not become common, nor have such programs been explored in the literature as a therapeutic adjunct for dialysis patient care. In 2006 and 2007, following parameters developed by and in partnership with volunteer teams trained through the Delta Society, the social workers at the outpatient dialysis clinic at St. Joseph Hospital in Orange, CA, successfully implemented a dog visitation program with 22 patients in the outpatient adult hemodialysis clinic. This article explores the design and implementation of this pilot program, as well as the impact of this unique approach for both patients and staff at the St. Joseph Hospital Renal Center.

REVIEW OF THE LITERATURE

For centuries, animals have been used for therapeutic benefit in a variety of health care and therapy settings. In a manuscript on nursing, Florence Nightingale noted, "A small pet animal is often an excellent companion for the sick, for long chronic cases especially" (1860). The early 20th century saw a departure from using animals in health care settings, until the practice increased in the 1960s. It was not until the 1980s that researchers began to study the unique health benefits of such practices (Fine, 2000; Johnson, Odendaal, & Meadows, 2002).

Leading this new investigation was a groundbreaking study conducted by Friedmann and colleagues, who discovered that patients who owned pets were more likely to live longer following a cardiac hospitalization than non-pet owners (1980). Pets provide companionship and a unique source of comfort and support that, unlike human companionship, is almost limitless in supply. Additionally, the supportive exchange between pets and people lack the complications, ambivalence and varying emotions that sometimes accompany human relationships (Friedmann, Katcher, Lynch, & Thomas, 1980). Contacts people have with their pets are speechless; they have a relaxing quality, unfettered and unchallenging (Friedmann, Katcher, Lynch, & Thomas, 1980; Jorgenson, 1997).

When carefully administered, pet visitation programs can be appropriate in a wide range of health care settings with nearly any patient. Age and illness do not usually present a barrier (Barba, 1995; Saylor, 1998). Dog visitation programs have had positive results with patients in a variety of settings, including cardiac, oncology, general surgery, HIV/AIDS, coma and rehabilitation and hospice units (Barba, 1995).

Programs that are carefully planned, implemented and supervised present very low risk of incident or infection (Barba, 1995; Brodie, Biley, & Shewring, 2002; Guiliano, Bloniasz, & Bell, 1999; Miller & Connor, 2000). It is important that policies and procedures for pet visitations address several key concerns to manage risks. Patients should be carefully screened to identify fear of animals, allergy to animals, interest in participating in the program and whether the patient has a history of violent or unpredictable behavior (Barba, 1995; Brodie, Biley, & Shewring, 2002). Both the pet handler and the animal should be evaluated by a certifying organization, such as the Delta Society or Therapy Dogs International, and a consistent review of program participants, including handlers, animals and even unit nurses is essential (Stanley-Hermanns & Miller, 2002). Visiting animals should be kept from areas that must remain sterile, such as isolation rooms and medication rooms, and areas where food is prepared, such as staff break rooms. Animals can wear shirts to control shedding, and the surface on which they sit, including patients' laps, can be padded and changed (Saylor, 1998). As part of certification, visiting dogs must have a health clearance from a veterinarian, be current with vaccinations and demonstrate consistent behavior (Cullen, Titler, & Drahozal, 1999).

The benefits of pet visitation are many and have been noted across the health care continuum. From inpatient and acute care settings to rehabilitation and extended care facilities, increased relaxation evidenced by reductions in blood pressure has been documented in patients receiving pet visitation (Barba, 1995; Cole & Gawlinski, 2000; Cullen, Titler, & Drahozal, 1999; Guiliano, Bloniasz, & Bell, 1999; Proulx, 1998; Saylor, 1998). Where a bond exists between the human and the animal, this relaxation response has been shown to be enhanced (Proulx, 1998). Other psychological benefits are widely acknowledged, such as improved adjustment to body image changes in patients with AIDS, stroke or cancer (Barba, 1995). Increased motivation to participate in recovery efforts were noted in traumatically injured patients (Miller & Connor, 2000), and decreased anger and hostility in patients on a transitional care unit (Stanley-Hermanns & Miller, 2002). Pet visits can improve patient communication with hospital staff during and after contact with the animal (Stanley-Hermanns & Miller, 2002) and can make institutional settings seem more home-like (Barba, 1995). Pet visits have reduced patient need for pain medication by providing a diversion from pain (Miller & Connor, 2000). Interaction between visiting pets and staff have led to unexpected benefits, such as reduction in staff stress and improvement in morale, which in turn produced better patient care by raising caregiver spirits and inspiring a more optimistic attitude (Barba, 1995; Miller & Ingram, 2000).

DEFINITION OF TERMS

The Delta Society is one of several international organizations that endeavor to "improve human health and services through service and therapy animals" (Delta Society, 1996, p. 81). As such, they have expanded the therapeutic and service role of animals in health settings. The *Standards of Practice in Animal-Assisted Activities and Animal-Assisted Therapy* provides guidance in the development, implementation and management of animal visitation programs in a wide variety of health settings (Delta Society, 1996).

As defined by the Delta Society, there are two types of animal visitation: animal-assisted therapy (AAT) and animal-assisted activities (AAA). The Dialysis Dogs Program at St. Joseph Hospital (SJH) Renal Center conforms to the Delta Society's definition of AAA.

AAT "is a goal directed intervention in which an animal that meets specific criteria is an integral part of the treatment process" (Delta Society, 1996, p. 79). This intervention is delivered by a specially-trained professional within the practice and scope of his or her profession. Under this definition, the therapeutic process must be documented and evaluated, as well as designed to meet specific treatment goals as dictated by the individual needs of the client/patient. Progress should be measured through the course of the intervention (Delta Society, 1996). AAT is often referred to as animal-facilitated therapy, pet-facilitated therapy and simply pet therapy.

By contrast, AAA is "basically the casual 'meet and greet' activities that involve pets meeting people" (Delta Society, 1996, p. 79). This is a straightforward activity that is easily duplicated with a wide variety of patient populations, without the need to tailor the intervention to meet a specific set of needs or goals. It can be conducted by specially-trained professionals, paraprofessionals or volunteers in a variety of settings. A wide range of animals can be partnered with human handlers in AAA, including dogs, cats, rabbits, guinea pigs and others. Although conforming to the Delta Society's definition of AAA, the program implemented at SJH's outpatient dialysis clinic involved only dogs and the AAA is often referred to as "dog visitation" for clarity.

While the adoption of the dog visitation program endeavored to affect therapeutic benefit in patients of the dialysis clinic at SJH, it is important to distinguish the Dialysis Dogs AAA program from AAT. Although AAT was not used in this program, the distinction between the two forms of animal visitation is important. First, the guidelines for the use of AAT are far more stringent than the design and implementation of this program. Second, it has relevance for future study as its use allows for the possibility of greater impact and therapeutic response. The use of AAA in a dialysis setting is a necessary first step toward the implementation of a true AAT program.

The combination of a specifically trained therapy dog and its trained human handler, (almost always the dog's owner) is referred to in this article as the therapy dog team. The terms *therapy dog* or *therapy animal* refer to animals who have fulfilled the training requirements with their human partner to qualify to work in a health environment in an AAA capacity.

POTENTIAL BENEFITS

Elderly or socially isolated patients who experience a limited amount of positive touch in their personal lives or in the clinical environment can benefit from the soft, loving touch of a trained therapy animal. In addition to the benefits of touch, the presence of a pet animal can provide a soothing connection to nature in a medical environment that can feel severely clinical, sterile and even technologically alienating. In-center dialysis treatments average three to four hours in length. Patients struggle to find satisfying ways to stay occupied during treatment; they are limited by the need to stay seated, and mobility of both arms is restricted by a blood pressure cuff and the need to protect the placement of the dialysis needles. Visits from an animal could provide a welcome distraction for dialysis patients, given the circumstances of the treatment even in patients who are simply observing the process and not actually participating in a visit. In addition, interaction and conversation with the handler could be as equally satisfying as the interaction with the therapy dog.

Adjustment to chronic illness often involves multiple losses and changes in roles and physical functioning. Patients can experience changes in body image, alienation from friends and family and withdrawal from activities, all of which can have a profound effect on an individual's self-esteem. Dogs (and other pet animals) offer enthusiastic and universal acceptance of the patient despite medical problems, disabilities or unusual appearance. As pet visitation and other AAA in medical settings have shown, the potential benefits to patients include decreased stress and anxiety around medical treatments. For the dialysis patient whose regimen includes treatments three times a week, these benefits could influence how patients feel about attending treatment and may even lead to fewer absences or fewer shortened treatments.

Additionally, there are concrete potential benefits for dialysis patients exposed to AAA in the clinic setting. Social workers at SJH Renal Center noted that dialysis patients frequently report feelings of anxiety and dread around the cannulation that accompanies every treatment. In the dialysis clinic, needle sticks are associated with the routine touch exchange between patients and dialysis staff. While patients exposed to therapy dogs would still have to endure needle sticks, the presence of a calming pet animal and the opportunity to engage in positive touch could have a counterbalancing effect to these uncomfortable feelings.

The presence of the animal can provide a conversational centerpiece with no connection to sources of emotional fear or insecurity. For withdrawn patients, the pet can provide a welcome subject matter that is simply outside patients, their bodies and their medical situations. Pet animals can also provide a conversational centerpiece through which patients and staff can find a pleasant commonality that may even be connected to cherished memories of childhood or a happier time. Such social interactions could help build relationships between patients and staff and with little effort from the participants.

Given the unique, positive nature of this social interaction, it is possible that the use of AAA programming could result in greater patient satisfaction with the treatment provider. One study showed that almost half of medical consumers would choose a hospital based on the availability of animal-assisted programming (Voelker, 1995). While this is only one study, the inference that the availability of animal programming in a routine medical clinic setting could lead to greater satisfaction with the provider is a compelling one, and warrants further research.

In addition to the many benefits to patients, it was also expected that the Dialysis Dogs program would present potential benefits to staff. Dialysis teams can become adversely affected by the chronicity of the clinic atmosphere and long hours of task redundancy, leading to apathy or even boredom in the work setting. It was hoped that the presence of therapy dog teams in the clinic environment would provide a welcomed break in routine for the staff, and through witnessing positive interactions between animal and patient, the mood of staff members could benefit along with the patients' and potentially lead to an increase in job satisfaction.

PROGRAM DESIGN

The major contribution of this social worker's work time took place before the program began, ensuring that a proper policy and procedure was in place and approved by the necessary governing bodies, surveying patients and staff, obtaining informed consents for participation, training staff to understand program design and safety measures, and implementing documentation. During the pilot phase, the social worker assumed the role of coordinator, and the primary task was observing the program directly and through contact with staff to ensure integrity and monitor for unanticipated problems.

To implement a dog visitation program in the adult hemodialysis clinic of SJH, it was necessary to first develop a policy and procedure for the program and then meet the approval of the Infection Control Board. As SJH already had an established policy and procedure for pet visitation in other units of the hospital, the existing policy and procedure was modified and adapted to meet the unique needs of the dialysis clinic to ensure safety and consistent program implementation. Additionally, approval from the dialysis facility's medical director had to be granted for the program's implementation, and additional clearance for each patient was required by one of the clinic's six nephrologists managing their individual care, which was given in writing and kept in the patient charts.

AAA programming at SJH is supervised by the volunteer coordinator. As the hospital's volunteer coordinator already had experience in the use of AAA, she was an important collaborator in the design of a safe, successful program tailored for the dialysis population. The volunteer coordinator collaborated with a social worker from the dialysis clinic during the design and approval processes, using the Delta Society's *Standards of Practice for Animal-Assisted Activities and Animal-Assisted Therapy* as a guide (Delta Society, 1996).

Therapy dog teams who contributed to the Dialysis Dogs program in the SJH outpatient dialysis clinic were oriented to SJH as volunteers and were required to attend a two-day orientation program covering hospital policies and procedures and interact with hospital patients in appropriate and sensitive ways. All therapy dog teams volunteering in the hospital were required to submit the necessary documentation of their certification to qualify them as a therapy dog team from a certified therapy dog organization, such as Therapy Dogs International or the Delta Society. Each volunteer animal handler and dog was required to wear a hospital photo identification badge while volunteering on hospital grounds. Prior to participation in the dialysis dog program, each dog therapy team was oriented to the dialysis unit by a dog handler with extensive experience providing dog visitation at SJH.

Once cleared by the volunteer department, the volunteer coordinator identified volunteer dog teams that might work well in the Dialysis Dogs program. The program benefited from having therapy dog teams who could be available weekly to provide a consistent presence in the clinic, as well as teams who could be available at the specific times of day when animals could safely enter the treatment area. Dialysis treatments typically last at least three hours, and the clinic operates all day, six days a week, which provides many opportunities for dog teams to visit at a time that is convenient to them. In designing this program, however, special attention was paid to the "turnover" time. Dialysis patients attend treatments in "shifts" consisting of approximately four hours each. Turnover is the commonly used term to describe the initiation of treatment and the termination of treatment, and the entrance of the next "shift" of patients to go onto the machines. During turnover, dialysis needles are being inserted and removed and catheters are exposed to air. The dangers of potential infection and accidents are increased and dog visitation is not allowed until all the patients are on the machine for that shift. Turnover can take up to 30 minutes and therefore limits the time available for therapy dog teams to essentially less than two hours at a time. This limitation required that the therapy dog teams have the flexibility to be available at these very specific times of the day.

Consideration was given to special measures that needed to be taken because of the dog's physical attributes, such as size and breed. Small dog breeds like Pomeranians are hard for patients to interact with from a dialysis chair unless the dog was placed in their laps. Large dogs, like Labradors, are too large to sit in patients' laps safely, and may need something to sit on to be easily reachable by patients. In the case of both large and small dogs, it was important to ensure that the patient could easily interact with the dog while keeping the access site secure. With small dogs, it was important to move blood lines out of the way and tape them in place so they were not accidentally stepped or tugged on by the dog. For infection risk reasons, the dog was not to come into contact with any part of the medical equipment, including the blood lines. Disposable pads were placed on patients' laps to ensure that the animal would only come into contact with patients' hands.

Infection prevention was addressed in several ways. Before and after each visit, patients used antibacterial hand gel to minimize the spread of germs from patient to animal and vice versa. This practice also served to minimize allergic reactions. To further minimize infection risk, animal activities were not allowed on the treatment floor during turnover time, when treatments were being initiated or terminated. This precaution ensured that the clinic atmosphere remained free of any unwanted contaminants during the time when it is most important for the environment to remain sterile. Animal handlers were given a detailed schedule, and clinic staff was responsible for approving animal teams' entrance into the treatment area, as turnover activities may exceed the limits of a set schedule. If an animal team arrived in the clinic during a turnover time, they would have to limit their visits to the waiting area until it was safe to enter the treatment area. Animal activities would not be permitted in isolation rooms.

As outlined by requirements for all animal activities in the hospital, each animal entering the dialysis clinic had to follow strict guidelines of hygiene and infection control. Handlers were required to maintain annual veterinary records ensuring that the animal was free of any infectious disease. Animals would have to be bathed and combed within 24 hours prior to all visits to the dialysis clinic, and nails had to be kept trimmed and filed to avoid risk of scratches.

Prior to the introduction of the dog visitation program, each patient and staff member was asked to complete a questionnaire containing items to identify any allergy, fear or aversion to animals. Only those patients who responded to questions about fear, allergy and aversion negatively and agreed to participate would be eligible for the program. Once a patient expressed a desire to participate in the program, informed consent was obtained by the social worker. The program was explained and patients were informed of their right to decline visits at any time. Staff members were asked if they wanted to be involved in program implementation, which meant assisting handlers in identifying patients who were approved for visits and completing required logs upon entering and exiting the facility and being aware of the dog handlers' activities to ensure that safety precautions were followed. If safety violations were noted, the staff was asked to report it to the social worker program coordinator.

As it would be impossible to screen every visitor to the outpatient dialysis clinic for fear, allergy or aversion to dogs, a large sign with a prominent picture of a dog was displayed during the course of the program announcing the possible presence of dogs in the clinic and the lobby. This sign asked visitors to speak to a member of the staff if they had any concerns about coming into contact with a dog in the dialysis center or lobby area. Of course, if at any time an individual became uncomfortable in the presence of a therapy dog team within the clinic, the therapy dog team would be required to calmly leave the area.

Two separate logs were used to track dog visitation in the dialysis clinic. As therapy dog teams entered the clinic, they were required to sign a log book kept at the nurses' station with the name of the handler and the dog, indicate the time they entered and left the clinic, and which patients received visits on that day. After the visits, handlers were asked to submit a more detailed log of the day's visits. The logs provided a brief record of the patient/animal contact and included general observations such as patient's mood and reaction to the animal, discussion topics during the visit and how the animal interacted with the patient physically. Other observations might also be recorded, such as whether the visit lasted longer or shorter than usual with a particular patient or if the patient fatigued easily.

RESULTS

The duration of this program until the time of the evaluation was seven months, from June 2, 2007 through January 2, 2008. When the program was launched in June 2007, only one therapy dog team was set up through the volunteer coordinator's office to visit the dialysis clinic. By the time of the program evaluation, there were seven teams visiting the dialysis clinic at varying degrees of regularity. There were 35 total therapy dog team visits to the dialysis facility in the seven-month pilot, and the average number of monthly therapy dog team visits to the dialysis clinic was five. July was the slowest month, with only two therapy dog teams visiting the clinic, and November was the busiest with eight.

Twenty-two dialysis patients who received regular visits with dogs completed questionnaires at the pilot program's completion. Although a majority of participating patients were female, the sample was otherwise consistent with the general demographics of in-center hemodialysis patients at SJH Renal Center (see Table 1). Follow-up questionnaires were used to evaluate the program's impact. The questionnaire consisted of 10 questions (including Likert-style, yes/no questions and open-ended questions) that attempted to determine the patients' overall satisfaction with the program, as well as solicit a more personal impression of how the program impacted their experience in the dialysis center.

Table 1

Participant Demographics: n = 22

Variable	Number	Percentage
Gender		
Male	6	27%
Female	16	73%
Ethnicity		
Hispanic	9	41%
Caucasian	12	54%
Asian	1	5%
Age		
30–39	2	9%
40–49	1	4%
50–59	5	23%
60–69	7	32%
70–79	5	23%
80+	2	9%
Years on Dialysis		
1.00 – 1.99	9	41%
2.00 – 4.99	4	18%
5.00 – 9.99	4	18%
10.00–19.99	2	9%
20.00–29.99	2	9%
30+	1	5%

Table 2

Dialysis Patient Response to Dog Visitation: n = 22

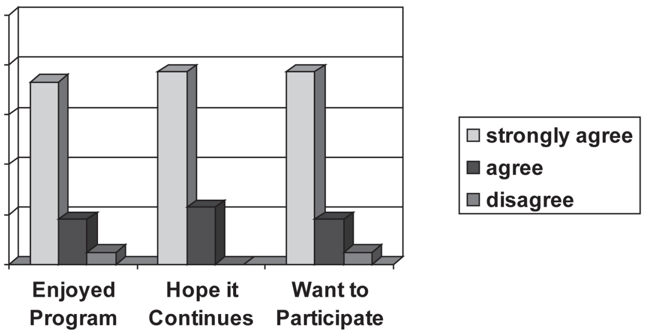

Table 3

Dialysis Patient Response to Dog Visitation: n = 22

Responses to the Likert-style questions were positive. Of the patients who completed questionnaires, 95% indicated that they enjoyed the program, 100% percent indicated that they would like to see the program continue and 95% would like to continue participating in the dog visits (see Table 2). When participants were asked if they had any negative experiences, none were reported. The questionnaire also asked patients whether the dog visitation program changed the way they felt about coming to dialysis and 36% of the participants indicated that it did. Those who did not indicate any change in their feelings about coming to dialysis nonetheless had only positive comments about the program (see Table 3).

Responses to open-ended questions (Appendix A) provided compelling information about the program's benefits to patients who participated. Some patients reported that the program was "soothing" and "relaxing," echoing the findings of similar programs in various medical settings. Comments like "When the dogs come, I just forget I'm here" and "Dialysis is more enjoyable now" supported the hypothesis that the presence of the dogs could provide a positive distraction. Other patient responses "It brightens my day and I go home happy" and "The program gives me something to look forward to" further illustrate the positive impact of the presence of pet animals.

A similar questionnaire solicited the dialysis clinic staff response to the program. Twelve staff members were surveyed, and all 12 indicated that they enjoyed the program and hoped to see it continue. Staff indicated that they enjoyed seeing the dogs in the clinic for the entertainment value, and also identified that therapy dog visits had a calming effect on staff and patients alike. Staff also appreciated the dogs' capacity to bring smiles to the patients, and their unique ability to facilitate positive discussion among patients and between patients and staff.

Ten dogs visited patients in the dialysis facility during the Dialysis Dogs pilot program, representing several different breeds. Patients were visited by a Great Dane, Shi Tzu, Whippet, three Golden Retrievers and two Labrador Retrievers. Individual patients developed preferences for different dogs and different dog breeds. Patients who completed the questionnaire were asked to indicate whether they had a favorite among the visiting dogs. The answers were varied. Some liked Olga (the Great Dane) and Bogie (a black Labrador) because of their temperament and the nature of the interaction with large dogs: the dogs approached the patient's chair side and presented themselves for petting. Others liked Daisy (the Shi Tzu) because she was small and could sit on a patient's lap for a more interactive experience. Some patients enjoyed these different interactions equally and could not identify a favorite. Of all, Daisy was identified most often as the favorite visiting dog in the follow-up questionnaire, and this dog's individual temperament and entertaining nature (patients enjoy her tricks) seemed to be the most compelling reason for this distinction.

Observations throughout the program and comments from patients, visitors to the clinic and clinic staff also contributed to the impression of the program's success in the clinic. At the time of the program evaluation and this article's completion, the Dialysis Dogs program at SJH Renal Center continues, and there is no immediate plan to end the program.

STUDY LIMITATION

The SJH dog visitation program was coordinated by the dialysis social worker in collaboration with the SJH volunteer coordinator. As such, the program relied on the use of volunteers whose training and experience varied considerably. A few of the handlers had experience in the medical field, but most did not have any direct training in patient care. When the program was evaluated at the end of the pilot phase, some disparity in the quality of the handlers' logs was identified. While those with some medical experience provided a thorough description of the dog visit experience for each patient, others simply repeated general information similar to what was required on the clinic log such as patient names and amount of time spent with each. Hospital policy does not require that volunteers conducting pet visits complete detailed logs, but for the dialysis clinic pilot program it was clear that this data could be an important means of evaluating the administration, safety and program impact. Despite these inconsistencies, however, the majority of the handlers submitted detailed logs contributing to sufficient data to develop a basic understanding of the nature and benefit of the visits.

During the pilot program, limitations around turnover time in the clinic presented a challenge to coordinating dog team visits. Dog teams were instructed to wait until turnover time was complete before entering the treatment area for both safety and practical reasons. This often resulted in patients falling asleep before the dog team was able to enter the treatment area. Staff remained sensitive to the dog handlers and such situations, which could lead to frustration and even deteriorate the volunteers' experiences. Because the program relied on volunteers staying motivated to continue to visit SJH Renal Center on a regular basis, the team sought to find ways to show appreciation to the volunteers.

The reports from some handlers provided anecdotal data suggesting that patients who developed an attachment to a visiting dog (or reported that a particular dog was their favorite) impacted the quality of the visits. While all patients responded to visits positively, those who became attached to a particular dog seemed to indicate the highest degree of appreciation and enjoyment. Had all handlers' reports been consistent in providing the type of feedback that supports this observation, it may have led to a more compelling conclusion. Given that the handlers were volunteers with no specific training in assessing patients' emotional responses, it may be necessary to provide training to handlers to collect comparable data in future programs.

DISCUSSION

The Dialysis Dogs program, while not a social work intervention in the strictest sense, was developed out of the social work notion of addressing patient needs in unique ways that address the whole person in the situation. Starting a dog visitation program at SJH was the idea of one social worker at the Renal Center who had a particular interest in this type of intervention, and sought to determine whether dog visitation could impact areas of patient well-being that are otherwise difficult to address through other means and could serve as a creative adjunct to social work counseling and interventions. As a hospital-based organization, the resources of an existing pet therapy program already being utilized at SJH were available to the dialysis unit. The Renal Center administration responded positively to the social worker's advocacy for the development of a pilot program. As this program was conceived, designed, implemented and managed by social workers, this innovative approach provides unique opportunities for social workers to contribute positively to the unique environment of medical social work.

Given the growing popularity of animal activities in medical settings, literature on the use of animal activities as part of the therapeutic milieu in dialysis facilities is notably absent, despite the wealth of potential benefits. AAA has been shown to decrease blood pressure and elevate mood in patients in a variety of medical settings (Barba, 1995; Cole & Gawlinksi, 2000; Cullen, Titler, & Drahozal, 1999; Guiliano, Blonaisz, & Bell, 1999; Miller & Connor, 2000; Proulx, 1998; Saylor, 1998; Stanley-Hermanns & Miller, 2002). Studies that specifically seek to determine whether these effects can be documented in dialysis patients would contribute to the current understanding of the therapeutic potential of this intervention. Other areas of interest for future study would include impact of dog visitation programming on treatment attendance or patterns of shortening treatments. AAA has been noted in the literature to have greater outcomes when there is a bond with the animal, whether or not the animal is a personal pet. Study of the effects of dog visitation in dialysis facilities over time, particularly when patients are exposed to the same dog on a regular basis could impact future implementation. This program did not seek to systematically gather or analyze the impression of visitors to the clinic or patients who were not receiving dog visits, but observing. It would be interesting to develop an understanding of how AAA programming in dialysis settings impacts these populations as well.

AAA programs initiated in institutional settings should be always be informed by accepted standards of practice and developed along with set guidelines for safe program administration. Because AAA and AAT programs are still relatively new, some concerns remain that animal teams, both certified and uncertified, may be introduced to clinical environments without proper implementation of a program policy and procedure to ensure safety to patients, staff and the visiting animal. Worse still, some clinic staff may be tempted to bring their own pets to the workplace to visit with patients without proper training, certification or expert consultation.

The Dialysis Dogs program at SJH's outpatient dialysis clinic demonstrates that with appropriate precaution and careful implementation, dog visitation in the in-center dialysis setting can be a safe and effective way to positively impact the dialysis patients' treatment experience. The impact of AAA programs is difficult to imitate through other interventions. A dog visitation program requires little commitment of time from clinic staff, relies on volunteers and is therefore inexpensive, and has a positive impact on both patients and staff. The use of AAA provides a unique opportunity for social workers in partnership with volunteer groups to make a positive contribution to the interactions between patients and the dialysis center environment.

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APPENDIX A

Dialysis patient responses to open-ended questionnaire items to solicit responses to the dog visitation program:

- "All of my life I had dogs and I miss them, so it’s nice to see them here."
- “It helps the patients; it cheers us up.”
- “I would like to make a personal connection with one of the dogs.”
- “The program gives me something to look forward to. I wish the dogs could come frequently.”
- “It brightens my day, and I go home happy. The dogs remind me of my youth.”
- “They make me feel good; it’s good for patients.”
- “It is a pleasant experience. It’s the warm and hospitable greeting that cheers you up.”
- “Dialysis is more enjoyable now.”
- “It’s good for the patients; it’s soothing.”
- “Some people don’t get to have animals.”
- “I think it’s nice. It’s relaxing.”
- “It’s fun to have them come around. They all have different personalities.”
- “When the dogs come, I just forget I’m here.”
- “It puts me in a good mood. I call it a ministry because it is like accomplishing something from God.”
- “I like animals, it doesn’t seem so clinical.”

CNSW Research Grants Program

National Kidney Foundation®
Council of Nephrology Social Workers

PURPOSE

In keeping with the overall goals of the National Kidney Foundation (NKF) and its Council of Nephrology Social Workers (CNSW), the purpose of the CNSW Research Grant Program is to further knowledge of psychosocial factors in kidney failure and to enhance clinical social work intervention with dialysis and transplant patients/families.

AREAS OF INTEREST

- Research on psychosocial factors in kidney failure
- Clinical practice research projects focusing on social work assessment and treatment strategies with patient/families or staff
- Educational programs to enhance patient/family understanding of kidney failure treatment and its psychosocial implications
- Pilot or demonstration projects which have broad applicability to nephrology social work services and/or nephrology social workers

ELIGIBILITY

Grant applications must meet the following eligibility requirements:

- Regular membership in CNSW
- Minimum of two years nephrology social work experience (CMS Guidelines)
- Approval of the department head or facility director of the organization within which the research is to be conducted
- Residence in the United States or its territories
- Applicant must meet the definition of a “qualified social worker” as stated in the Conditions for Coverage

Preference will be given to applicants who:

- Have ACSW accreditation or are licensed by their state

Awards will be announced in March. The Review Committee reserves the right to award grants or to decline funding without stating its reasons.

GRANT REQUIREMENTS

Each grant recipient is responsible for:

- Conducting the project as set forth in the proposal and consistent with accepted, systematic research methods
- Obtaining appropriate human studies clearance within the dialysis/transplant facility and maintaining data in a confidential manner
- Completing the project within the specified time frame
- Providing financial reports as required by the National Kidney Foundation
- Acknowledging NKF/CNSW grant assistance on all publications arising out of the work done during the duration of the grant
- Submitting three interim progress reports and other requested reports, preparing a final report of the work accomplished within 60 days of the end of the grant year, and presenting a paper at the NKF Spring Clinical Meetings describing the research, results and implications for practice
- Submitting a manuscript based on the results to *The Journal of Nephrology Social Work* (and with the committee’s approval, another related journal)

FUNDING

- CNSW annually requests grant monies from NKF.
- One or more grants will be awarded. Applicants submitting to more than one granting agency will be awarded the difference between the amount awarded by the other agency and the amount applied for from CNSW.
- CNSW grants assist in defraying the cost of research and projects. They are not intended to cover the entire cost of the research (i.e., office space, basic supplies, services, overhead, administration fees).
- Funds may not be used for the purchase of equipment.
- Budgets must allocate $750.00 for airfare and one night’s accommodation to enable grantees to present their research at the NKF Spring Clinical Meetings. This amount will be withheld until the first draft of the manuscript is received by the *Journal of Nephrology Social Work* co-editors and the awardee has presented findings at the next NKF Spring Clinical Meetings.
- Funding for CNSW research grants runs from July 1 of the year of approval through June 30 of the following year.

CNSW Research Grants Program *(cont'd)*

HOW TO APPLY

If you are interested in preparing a proposal, please submit a letter of intent to the CNSW Research Grant Program, c/o the National Kidney Foundation by **October 15**. Your letter of intent is not part of your actual application, but rather a device to assist you and the grants coordinator in identifying your research objectives and goal. The letter of intent must include the following:

1. Name of the person and organization submitting the proposal
2. Address
3. Telephone number
4. Name of the principal investigator and his or her CNSW membership number
5. Short title of the project
6. Approximate cost
7. Brief abstract under 250 words, which includes:
   a. A description of the project goal
   b. How it relates to the purpose of CNSW research

Upon receipt and acceptance of your letter of intent, NKF-CNSW will send you a grant application packet.

CONSULTATION COMMITTEE

CNSW has volunteer consultants available to provide recommendations and prior review of your proposal. For more information, please contact your CNSW Region Representative or the CNSW Chair-Elect.

Review Schedule

October 15	Letter of intent due
December 1	Grant Proposal due
January – February	Council Research Grants Committee Review
March	Awards Announced
July 1	Approved projects begin operation and continue until June 30th of the following year.

The Council of Nephrology Social Workers (CNSW) is a professional organization established by nephrology social workers in 1973. CNSW is one of four Professional Councils of the National Kidney Foundation (NKF). The functional structure of CNSW includes an Executive Committee with regional representation, standing and ad hoc committees, and local chapters.

For more information contact:

Stephanie Stewart, LICSW, CNSW Chair-Elect

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www.kidney.org/professionals/CNSW

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