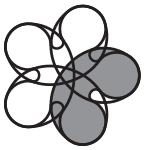
The Journal of Nephrology Social Work



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The Editorial Board of *The Journal of Nephrology Social Work* encourages the submission of original manuscripts. The *JNSW* contains articles addressing contemporary issues/topics relevant to nephrology social work. Authors may wish to address any of the following topics, which are listed as guidelines:

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The Journal of Nephrology Social Work (JNSW) is the official publication of the Council of Nephrology Social Workers of the National Kidney Foundation, Inc. Its purpose is to stimulate interest and research in psychosocial issues pertaining to kidney and urologic diseases, hypertension, and transplantation, as well as to publish information concerning renal social work practices and policies. The goal of *JNSW* is to publish original communications and research that maintain high standards for the profession and that contribute significantly to the overall advancement of the field.

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***Exclusive Publication*:** Articles are accepted for publication on the condition that they are contributed solely to *The Journal of Nephrology Social Work*. Authors should secure all necessary clearances and approvals prior to submission. All manuscripts are peer-reviewed by two reviewers. Receipt of manuscripts will be acknowledged within two weeks, and every effort will be made to advise contributors of the status of their submissions within eight weeks.

A submitted manuscript should be accompanied by a letter that contains the following language and is signed by each author: "In compliance with Copyright Revision Act of 1976, effective January 1, 1978, the undersigned author(s) transfers all copyright ownership of the manuscript entitled _____ to *The Journal of Nephrology Social Work* **in the event this material is published."**

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TYPES OF ARTICLES BEING SOUGHT

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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 the National Kidney Foundation."

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

Original Research. Full manuscript format should include: introduction, methods, results, and discussion of original research. Length usually should not exceed 15 double-spaced pages, including references.

Clinical/Research Briefs. Abbreviated manuscript format presents clinical practice experience, preliminary research findings (basic or clinical), or professional observations in a shortened report form. Length usually should not exceed six double-spaced pages.

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.

Letters to the Editor. Letters should be restricted to scientific commentary about materials published in the *JNSW* or to topics of general interest to professionals working in the field of renal social work.

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Manuscript Format. Manuscripts should be formatted according to the rules laid out by the *Publication Manual of the American Psychological Association, Fifth Edition*. What follows is a brief synopsis of the broader style points used by the APA.

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Order of the Manuscript Sections

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

Title Page. The manuscript's title page should contain the title of the manuscript and the name, degree, and current affiliation of each author. Authors are generally listed in order of their contribution to the manuscript (consult the *Publication Manual of the American Psychological Association, Fifth Edition,* the APA style guide, for exceptions). The title page should also contain the complete address of the institution at which the work was conducted and the contact information for the primary author. A running head (a shortened version of the manuscript's title) should be set in the upper left-hand corner of the page, in all uppercase letters. Page numbering should begin in the upper right-hand corner of this page. With the exception of the page numbers and running heads, all text on the title page should be centered.

Abstract. The manuscript's abstract should be set on its own page, with the word "Abstract" centered at the top of the page. The abstract itself should be a single paragraph with no indentation and should not exceed 120 words. All numbers—except for those that begin a sentence—should be typed as numerals. Running heads and page numbers should continue from the title page.

Text. The text (or body) of the manuscript should begin on a new page, after the abstract. The title of the manuscript should be set at the top of the first page, centered and double-spaced. Running heads and page numbers should continue from the abstract.

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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.

REVIEW PROCESS

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.

AFTER ACCEPTANCE

If a manuscript is accepted for publication, the author will be required to send the following to the editorial office:

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- Most other file formats (PowerPoint, JPG, GIF, etc.) are not of sufficient resolution to be used in print. The resolution for all art must be at least 300 dpi. A hard copy of each figure should accompany the files. These images should be grayscale (black and white) only. They should be TIFF or EPS file formats only.
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Council of Nephrology Social Workers

Caseloads and Salaries of Nephrology Social Workers by State, ESRD Network, and National Kidney Foundation Region: Summary Findings for 2007 and 2010

Joseph R. Merighi, MSW, PhD, Boston University School of Social Work; Teri Browne, MSW, PhD, University of South Carolina College of Social Work; Kathleen Bruder, BA, Boston University School of Social Work

The Council of Nephrology Social Workers and the National Kidney Foundation conducted two national online surveys of nephrology social workers to assess caseload and salary trends by state, End-Stage Renal Disease Network, and National Kidney Foundation Region. Between 2007 and 2010, outpatient dialysis social workers experienced increases in mean caseload size from 73 to 79 (up 8.2%) for those employed 20–31 hours per week, 113 to 121 (up 7.1%) for those employed 32–40 hrs/wk, and 117 to 126 (up 7.7%) for those employed 40 hrs/wk. Increases in mean hourly wage were also reported across all three employment status groups for dialysis social workers: $25.03 to $28.16 per hour (up 12.5%) for 20–31 hrs/wk, $24.65 to $27.18 per hour (up 10.3%) for 32–40 hrs/wk, and $24.49 to $26.93 per hour (up 10%) for social workers employed 40 hrs/wk. For transplant social workers, mean hourly wage data showed increases across all three employment status groups: $22.96 to $27.74 per hour (up 20.8%) for those employed 20–31 hrs/wk, $25.19 to $29.56 per hour (up 17.3%) for those employed 32–40 hrs/wk, and $24.57 to $29.79 per hour (up 21.2%) for those employed 40 hrs/wk. In general, increases in caseload and hourly wage were found for nearly all states, End Stage Renal Disease Networks, and National Kidney Foundation Regions.

The Council of Nephrology Social Workers (CNSW) and the National Kidney Foundation (NKF) conducted two national online salary and caseload surveys of nephrology social workers in 2007 and 2010. The overall goal of these surveys was to obtain quantifiable data in order to investigate anecdotal reports of increased work demands in the field of nephrology social work. Through the online surveys, CNSW has successfully scanned the nephrology social work landscape and collected a rich source of empirical data. The focus of this article is to provide a snapshot of caseload, hourly rate, and annual summary data for 2007 and 2010. Future analysis of the two data sets will include a comprehensive examination and discussion of job-related work conditions, burnout, and perceived changes since the implementation of the 2008 Medicare and Medicaid Program Conditions for Coverage for End Stage Renal Disease Facilities (Federal Register, 2008).

DATA COLLECTION AND ANALYSIS

Online surveys of nephrology social workers were conducted by NKF in the fall of 2007 and spring of 2010. NKF distributed announcements about the survey to its CNSW membership via a membership e-mail listserv, which reaches the majority of CNSW members. The announcements included information about the study aims, instructions on how to access the surveys, and requests to distribute the announcement to other nephrology social workers. Prospective respondents were informed of the confidential and voluntary nature of these surveys and no incentives were offered for participation. All data were initially sent to NKF and housed on their secure server prior to their release for statistical analysis. Once the data were de-identified by NKF staff (i.e., by removing e-mail addresses and other information that could potentially reveal the identity of an individual respondent), two of the authors (JRM and KB) received them in Excel spreadsheets. These two authors transferred the data from Excel to Statistical Package for the Social Sciences to facilitate data management and multivariate statistical analysis. All the data sent to JRM and KB are stored on a secure network at Boston University.

KEY FINDINGS

The survey data are summarized according to three employment status groups, based on the number of hours worked per week (hrs/wk): 20–31 hrs/wk, 32–40 hrs/wk, and exactly 40 hrs/wk. The "exactly 40 hours per week" category was created by selecting only the respondents who reported having a 40 hrs/wk position. Therefore, these respondents constitute a subset of the 32–40 hrs/wk category. Individual sample sizes are provided for all categories.

Descriptive findings (i.e., mean, median, and range) for salary and caseload data collected in 2007 and 2010 are presented in Tables 1–13 at the end of this article (see *List of Tables* for descriptions). Overall summaries for social workers in outpatient dialysis, transplant, outpatient dialysis/transplant, and other settings are provided in Tables 1–4. Breakdowns by state, ESRD Network (see Appendix A for map), and NKF region (see Appendix B for map) are provided for social workers in outpatient dialysis settings in Tables 5–13. In order to preserve the confidentiality of the relatively small number of social workers who are employed in transplant, outpatient dialysis/transplant and other settings, only aggregate data are provided for these respondents in Tables 2–4.

Between 2007 and 2010, outpatient dialysis social workers experienced increases in mean caseload size from 73 to 79 (up 8.2%) for those employed 20–31 hrs/wk, 113 to 121 (up 7.1%) for those employed 32–40 hrs/wk, and 117 to 126 (up 7.7%) for those employed 40 hrs/wk. Increases

in mean hourly wage between 2007 and 2010 were also reported across all three employment status groups: $25.03 to $28.16 per hour (up 12.5%) for 20–31 hrs/wk, $24.65 to $27.18 per hour (up 10.3%) for 32–40 hrs/wk, and $24.49 to $26.93 per hour (up 10%) for social workers employed 40 hrs/wk.

Due to a change in how transplant social worker caseload information was collected between 2007 and 2010, it is not possible to make valid comparisons between these two waves of data. However, mean hourly wage data showed increases across all three employment status groups: $22.96 to $27.74 per hour (up 20.8%) for those employed 20–31 hrs/wk, $25.19 to $29.56 per hour (up 17.3%) for those employed 32–40 hrs/wk, and $24.57 to $29.79 per hour (up 21.2%) for those employed 40 hrs/wk.

In general, caseload and hourly wage data by state, ESRD Network, and NKF Region showed similar trends to the overall/aggregate trends reported above for social workers employed in outpatient dialysis settings. Please see Tables 5–13 for more details.

SUMMARY AND CONCLUSION

The summary tables presented in this article provide important snapshots regarding social worker remuneration and caseload demands across a spectrum of work contexts and geographic regions. CNSW hopes that social workers will find this information helpful in their self-advocacy efforts with employers. Additional analyses of the survey data will be presented in forthcoming issues of *JNSW*.

Acknowledgements

The Council of Nephrology Social Workers and the National Kidney Foundation are grateful to all the social workers who participated in the surveys conducted in 2007 and 2010. The authors wish to thank Aaron Herold for his invaluable assistance with the surveys and comments on this manuscript.

REFERENCE

Medicare and Medicaid Programs; Conditions for Coverage for End-Stage Renal Disease Facilities; Final Rule. 42 CFR Parts 405, 410, 413 et al. 73 Fed. Reg. 20369 (April 15, 2008). Retrieved from **http://www.cms.gov/CFCsAndCoPs/downloads/ESRDfinalrule0415.pdf**

LIST OF TABLES

Key to Abbreviations

n = number in subsample; hrs/wk = hours per week; PT = part time; FT= full time

TABLE 1.
Social Workers in Outpatient Dialysis Settings

	2010		2007	
	Mean / Median	**Range**	**Mean / Median**	**Range**
Caseload				
20–31 hrs/wk	78.79 / 77.50	15–210	73.12 / 69.50	15–267
32–40 hrs/wk	120.80 / 120.00	1–711	113.13 / 112.00	4–425
40 hrs/wk	126.17 / 125.00	1–711	117.23 / 117.00	4–425
Hourly Wage				
20–31 hrs/wk	28.16 / 27.48	16.00–45.00	25.03 / 24.25	14.00–38.60
32–40 hrs/wk	27.18 / 26.52	14.42–50.00	24.65 / 24.03	9.90–43.00
40 hrs/wk	26.93 / 26.36	14.42–47.00	24.49 / 24.00	9.90–40.29
Annual Salary				
32–40 hrs/wk	54,635 / 53,531	29,994–97,760	49,506 / 48,381	20,592–83,795
40 hrs/wk	56,019 / 54,829	29,994–97,760	50,942 / 49,920	20,592–83,795

Sample sizes for 2010: PT caseload = 214, PT hourly wage = 224, FT caseload = 1,037, FT hourly wage = 1,056, FT annual salary = 1,056, 40 hrs/wk caseload = 815, 40 hrs/wk hourly wage = 833, 40 hrs/wk salary = 833

Sample sizes for 2007: PT caseload = 222, PT hourly wage = 235, FT caseload = 1,160, FT hourly wage = 1,202, FT annual salary = 1,202, 40 hrs/wk caseload = 919, 40 hrs/wk hourly wage = 945, 40 hrs/wk salary = 945

TABLE 2.
Social Workers in Transplant Settings

	2010		2007	
	Mean / Median	**Range**	**Mean / Median**	**Range**
Caseload (Potential Donors)				
20–31 hrs/wk	—— / ——	—— / ——		
32–40 hrs/wk	40.48 / 17.00	0–500	142.33 / 150.00	54–200
40 hrs/wk	44.74 / 20.00	0–500	248.23 / 200.00	12–800
Caseload (Potential Recipients)			277.77 / 205.00	12–800
20–31 hrs/wk	50.00 / 50.00	20–80		
32–40 hrs/wk	225.33 / 190.00	0–750		
40 hrs/wk	232.62 / 200.00	0–750		
Hourly Wage				
20–31 hrs/wk	27.74 / 27.00	25.97–30.26	22.96 / 23.00	18.42–26.52
32–40 hrs/wk	29.56 / 28.85	21.47–40.80	25.19 / 24.79	15.35–40.86
40 hrs/wk	29.79 / 29.33	21.47–40.80	24.57 / 24.04	15.35–40.86
Annual Salary				
32–40 hrs/wk	60,079 / 60,008	42,765–84,864	50,050 / 49,587	29,137–84,989
40 hrs/wk	61,956 / 61,006	44,658–84,864	51,104 / 50,003	31,928–84,989

Samples sizes for 2010: PT donors caseload = 0, PT recipients caseload = 2, PT hourly wage = 3, FT donors caseload = 29, FT recipients caseload = 33, FT hourly wage = 37, FT annual salary = 37, 40 hrs/wk donors caseload = 23, 40 hrs/wk recipients caseload = 26, 40 hrs/wk hourly wages = 30, 40 hrs/wk salary = 30

Sample sizes for 2007: PT caseload = 6, PT hourly wage = 7, FT caseload = 40, FT hourly wage = 58, FT annual salary = 58, 40 hrs/wk caseload = 30, 40 hrs/wk hourly wage = 44, 40 hrs/wk salary = 44

TABLE 3.
Social Workers Who Work in Both Outpatient Dialysis & Transplant Settings

	2010		2007	
	Mean / Median	**Range**	**Mean / Median**	**Range**
Caseload (Dialysis)				
20–31 hrs/wk	67.50 / 82.50	10–95	48.80 / 55.00	19–80
32–40 hrs/wk	128.08 / 105.00	30–300	88.61 / 100.00	2–160
40 hrs/wk	127.89 / 110.00	30–300	82.90 / 95.00	2–160
Caseload (Transplant Potential Donors)				
20–31 hrs/wk	2.50 / 2.50	0–5	25.00 / 25.00	20–30
32–40 hrs/wk	7.70 / 2.00	0–48	141.08 / 80.00	10–500
40 hrs/wk	7.75 / 2.00	0–48	111.75 / 80.00	10–400
Caseload (Transplant Potential Recipients)				
20–31 hrs/wk	9.00 / 7.00	5–15		
32–40 hrs/wk	34.27 / 15.00	4–170		
40 hrs/wk	34.00 / 15.00	4–170		
Hourly Wage				
20–31 hrs/wk	30.15 / 27.45	23.26–40.00	25.70 / 22.25	18.10–40.19
32–40 hrs/wk	29.12 / 27.50	18.30–57.00	25.11 / 24.00	18.00–36.00
40 hrs/wk	27.56 / 26.48	18.30–42.00	24.32 / 23.51	18.00–36.00
Annual Salary				
32–40 hrs/wk	57,860 / 55,078	38,064–103,740	50,005 / 49,005	37,440–74,880
40 hrs/wk	57,316 / 55,078	38,064–87,360	50,579 / 48,890	37,440–74,880

Sample sizes for 2010: PT dialysis caseload = 4, PT donors caseload = 2, PT recipients caseload = 3, PT hourly wage = 5, FT dialysis caseload = 25, FT donors caseload = 10, FT recipients caseload = 15, FT hourly wage = 34, FT annual salary = 34, 40 hrs/wk dialysis caseload = 18, 40 hrs/wk donors caseload = 8, 40 hrs/wk recipients caseload = 13, 40 hrs/wk hourly wages = 26, 40 hrs/wk salary = 26

Sample sizes for 2007: PT dialysis caseload = 5, PT transplant caseload = 2, PT hourly wage = 4, FT dialysis caseload = 28, FT transplant caseload = 13, FT hourly wage = 35, FT annual salary = 35, 40 hrs/wk dialysis caseload = 21, 40 hrs/wk transplant caseload = 8, 40 hrs/wk hourly wage = 26, 40 hrs/wk salary = 26

TABLE 4.
Social Workers in "Other" Settings

	2010		2007	
	Mean / Median	**Range**	**Mean / Median**	**Range**
Caseload (Dialysis)				
20–31 hrs/wk	98.00 / 64.00	55–175	62.60 / 60.00	48–80
32–40 hrs/wk	120.00 / 83.00	10–442	89.88 / 100.00	7–180
40 hrs/wk	128.00 / 75.00	10–442	89.15 / 100.00	7–180
Caseload (Transplant Potential Donors)				
20–31 hrs/wk	0.00 / 0.00	0–0	—— / ——	——
32–40 hrs/wk	—— / ——	——	63.60 / 17.50	5–500
40 hrs/wk	—— / ——	——	63.60 / 17.50	5–500
Caseload (Transplant Potential Recipients)				
20–31 hrs/wk	10.00 / 10.00	10–10		
32–40 hrs/wk	—— / ——	——		
40 hrs/wk	—— / ——	——		
Hourly Wage				
20–31 hrs/wk	29.72 / 29.69	21.50–38.00	25.36 / 24.88	20.85–31.25
32–40 hrs/wk	28.65 / 25.71	18.67–49.00	25.00 / 24.76	15.72–41.50
40 hrs/wk	28.53 / 24.50	18.67–49.00	24.86 / 24.76	15.72–37.42
Annual Salary				
32–40 hrs/wk	57,702 / 48,984	37,274–101,920	50,919 / 50,440	32,698–77,834
40 hrs/wk	59,347 / 50,960	38,834–101,920	51,714 / 51,490	32,698–77,834

Sample sizes for 2010: PT dialysis caseload = 3, PT donors caseload = 1, PT recipients caseload = 1, PT hourly wage = 4, FT dialysis caseload =11, FT donors caseload = 0, FT recipients caseload = 0, FT hourly wage = 24, FT annual salary = 24, 40 hrs/wk dialysis caseload = 7, 40 hrs/wk donors caseload = 0, 40 hrs/wk recipients caseload = 0, 40 hrs/wk hourly wages = 19, 40 hrs/wk salary = 19

Sample sizes for 2007: PT dialysis caseload = 5, PT transplant caseload = 0, PT hourly wage = 8, FT dialysis caseload = 33, FT transplant caseload = 10, FT hourly wage = 56, FT annual salary = 56, 40 hrs/wk dialysis caseload = 26, 40 hrs/wk transplant caseload = 10, 40 hrs/wk hourly wage = 48, 40 hrs/wk salary = 48

TABLE 5.
Caseload of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Alabama						
20–31 hrs/wk	0	—— / ——	——	2	72.50 / 72.50	70–75
32–40 hrs/wk	8	141.63 / 135.00	105–225	13	134.23 / 132.00	49–265
40 hrs/wk	8	141.63 / 135.00	105–225	9	151.44 / 140.00	100–265
Alaska & Montana						
20–31 hrs/wk	0	—— / ——	——	1	45.00 / 45.00	45–45
32–40 hrs/wk	3	63.67 / 59.00	32–100	1	100.00 / 100.00	100–100
40 hrs/wk	3	63.67 / 59.00	32–100	0	—— / ——	——
Arizona						
20–31 hrs/wk	5	56.60 / 65.00	15–75	6	72.50 / 68.00	30–110
32–40 hrs/wk	27	121.56 / 127.00	67–173	29	121.21 / 120.00	75–240
40 hrs/wk	25	123.40 / 130.00	67–173	25	122.12 / 120.00	75–240
Arkansas						
20–31 hrs/wk	1	47.00 / 47.00	47–47	2	186.00 / 186.00	105–267
32–40 hrs/wk	5	157.00 / 135.00	102–300	8	120.50 / 127.50	56–175
40 hrs/wk	3	193.33 / 145.00	135–300	5	122.00 / 130.00	56–175
California						
20–31 hrs/wk	18	92.00 / 85.00	53–180	22	73.91 / 70.00	20–156
32–40 hrs/wk	92	132.01 / 123.00	50–500	139	120.09 / 119.00	15–425
40 hrs/wk	72	137.39 / 127.50	72–500	110	125.73 / 120.00	70–425
Colorado						
20–31 hrs/wk	0	—— / ——	——	1	40.00 / 40.00	40–40
32–40 hrs/wk	7	83.57 / 70.00	14–160	25	90.48 / 88.00	33–140
40 hrs/wk	5	94.20 / 125.00	14–160	14	95.79 / 100.00	33–140

TABLE 5.
Caseload of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Connecticut						
20–31 hrs/wk	2	73.50 / 73.50	67–80	3	74.33 / 70.00	60–93
32–40 hrs/wk	12	116.67 / 120.00	80–150	10	110.90 / 112.50	90–130
40 hrs/wk	9	128.89 / 125.00	110–150	7	118.57 / 120.00	105–130
Delaware						
20–31 hrs/wk	0	—— / ——	——	0	——	——
32–40 hrs/wk	10	130.00 / 126.00	95–170	1	80.00 / 80.00	80–80
40 hrs/wk	8	138.12 / 131.00	110–170	1	80.00 / 80.00	80–80
District of Columbia						
20–31 hrs/wk	2	102.50 / 102.50	65–140	1	125.00 / 125.00	125–125
32–40 hrs/wk	6	129.50 / 131.00	100–150	3	98.33 / 90.00	80–125
40 hrs/wk	5	135.40 / 136.00	120–150	2	102.50 / 102.50	80–125
Florida						
20–31 hrs/wk	4	97.50 / 102.50	60–125	5	61.40 / 69.00	15–85
32–40 hrs/wk	54	127.44 / 129.50	66–175	57	120.65 / 120.00	50–220
40 hrs/wk	46	130.24 / 135.00	66–175	42	127.45 / 120.00	65–220
Georgia						
20–31 hrs/wk	8	89.00 / 81.00	50–140	3	76.33 / 40.00	34–155
32–40 hrs/wk	43	109.98 / 104.00	60–193	30	114.40 / 111.50	60–200
40 hrs/wk	27	120.89 / 124.00	69–193	26	113.15 / 113.50	60–167
Hawaii						
20–31 hrs/wk	0	—— / ——	——	3	94.00 / 86.00	81–115
32–40 hrs/wk	13	123.69 / 130.00	60–150	12	126.83 / 123.50	100–190
40 hrs/wk	12	125.33 / 130.00	60–150	12	126.83 / 123.50	100–190

TABLE 5.
Caseload of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Idaho & Wyoming						
20–31 hrs/wk	0	—— / ——	——	1	60.00 / 60.00	60–60
32–40 hrs/wk	7	91.14 / 100.00	58–115	9	77.56 / 85.00	30–125
40 hrs/wk	4	79.50 / 75.00	58–110	5	79.80 / 90.00	30–125
Illinois						
20–31 hrs/wk	8	78.50 / 83.00	40–105	13	77.85 / 80.00	53–110
32–40 hrs/wk	30	119.90 / 120.00	50–166	76	115.29 / 115.00	35–200
40 hrs/wk	23	129.65 / 125.00	70–166	66	116.39 / 120.00	35–200
Indiana						
20–31 hrs/wk	6	66.67 / 70.00	30–90	8	72.63 / 77.00	40–90
32–40 hrs/wk	38	118.92 / 125.00	1–175	49	108.71 / 115.00	25–156
40 hrs/wk	32	122.53 / 130.00	1–175	42	111.86 / 120.00	25–156
Iowa						
20–31 hrs/wk	4	62.25 / 56.00	37–100	6	83.83 / 85.00	43–135
32–40 hrs/wk	11	104.64 / 106.00	56–145	17	102.88 / 110.00	4–161
40 hrs/wk	6	115.50 / 116.50	80–145	10	108.60 / 122.50	4–161
Kansas						
20–31 hrs/wk	4	95.00 / 90.00	80–120	5	74.80 / 75.00	62–90
32–40 hrs/wk	7	103.14 / 100.00	85–125	13	103.77 / 115.00	16–135
40 hrs/wk	4	110.50 / 115.00	87–125	11	113.36 / 116.00	70–135
Kentucky						
20–31 hrs/wk	1	42.00 / 42.00	42–42	3	48.67 / 60.00	25–61
32–40 hrs/wk	14	133.00 / 137.50	84–190	20	126.90 / 125.50	80–200
40 hrs/wk	14	133.00 / 137.50	84–190	19	128.32 / 126.00	80–200

TABLE 5.
Caseload of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Louisiana						
20–31 hrs/wk	3	86.33 / 74.00	50–135	3	81.67 / 74.00	71–100
32–40 hrs/wk	16	130.56 / 135.00	80–160	30	115.23 / 122.50	40–300
40 hrs/wk	16	130.56 / 135.00	80–160	28	117.57 / 127.50	40–300
Maine						
20–31 hrs/wk	1	40.00 / 40.00	40–40	0	—— / ——	——
32–40 hrs/wk	6	99.67 / 100.00	53–130	4	122.50 / 122.50	75–170
40 hrs/wk	2	120.00 / 120.00	110–130	4	122.50 / 122.50	75–170
Maryland						
20–31 hrs/wk	5	72.20 / 79.00	39–98	8	67.25 / 65.00	45–96
32–40 hrs/wk	34	114.26 / 119.00	68–160	22	113.95 / 116.00	15–180
40 hrs/wk	19	122.58 / 125.00	80–150	16	127.94 / 122.50	95–180
Massachusetts						
20–31 hrs/wk	6	72.33 / 74.00	60–90	6	68.00 / 65.50	50–92
32–40 hrs/wk	19	112.74 / 110.00	70–150	8	109.50 / 107.50	80–132
40 hrs/wk	12	117.17 / 120.50	70–145	6	111.33 / 107.50	100–132
Michigan						
20–31 hrs/wk	13	80.77 / 82.00	43–120	13	82.77 / 90.00	50–100
32–40 hrs/wk	32	116.03 / 116.00	87–173	54	104.80 / 100.00	15–172
40 hrs/wk	23	118.43 / 120.00	87–173	34	110.44 / 110.00	15–172
Minnesota						
20–31 hrs/wk	2	75.00 / 75.00	58–92	4	60.75 / 56.50	20–110
32–40 hrs/wk	13	121.85 / 130.00	92–145	17	110.41 / 110.00	54–145
40 hrs/wk	8	129.00 / 132.50	92–145	10	121.00 / 125.00	100–145

TABLE 5.
Caseload of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Mississippi						
20–31 hrs/wk	1	102.00 / 102.00	102–102	0	—— / ——	——
32–40 hrs/wk	15	159.33 / 154.00	110–205	19	148.95 / 150.00	90–205
40 hrs/wk	14	157.86 / 154.00	110–205	19	148.95 / 150.00	90–205
Missouri						
20–31 hrs/wk	15	74.87 / 75.00	48–115	20	66.25 / 60.00	35–128
32–40 hrs/wk	41	107.76 / 110.00	50–150	48	111.23 / 105.00	69–250
40 hrs/wk	32	112.31 / 110.00	60–150	40	114.50 / 108.00	69–250
Nebraska						
20–31 hrs/wk	4	73.50 / 69.00	65–91	2	60.00 / 60.00	55–65
32–40 hrs/wk	10	127.40 / 114.00	89–232	7	95.86 / 90.00	58–130
40 hrs/wk	9	131.67 / 118.00	100–232	6	102.17 / 100.00	80–130
Nevada						
20–31 hrs/wk	0	—— / ——	——	1	30.00 / 30.00	30–30
32–40 hrs/wk	13	110.54 / 125.00	50–150	14	114.43 / 106.00	75–177
40 hrs/wk	7	125.29 / 132.00	50–150	10	126.90 / 122.50	90–177
New Hampshire & Vermont						
20–31 hrs/wk	3	83.67 / 84.00	80–87	0	—— / ——	——
32–40 hrs/wk	2	97.50 / 97.50	85–110	1	125.00 / 125.00	125–125
40 hrs/wk	1	110.00 / 110.00	110–110	1	125.00 / 125.00	125–125
New Jersey						
20–31 hrs/wk	14	97.71 / 95.00	43–167	4	62.00 / 59.50	54–75
32–40 hrs/wk	36	123.58 / 120.00	75–200	18	114.17 / 110.00	56–198
40 hrs/wk	24	127.37 / 120.00	80–200	17	117.59 / 110.00	85–198

TABLE 5.
Caseload of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
New Mexico						
20–31 hrs/wk	4	66.75 / 67.50	60–72	1	109.00 / 109.00	109–109
32–40 hrs/wk	10	113.10 / 112.50	90–135	7	111.57 / 125.00	40–140
40 hrs/wk	7	118.29 / 115.00	108–135	6	113.50 / 126.50	40–140
New York						
20–31 hrs/wk	8	83.50 / 83.50	64–117	16	64.88 / 59.50	45–124
32–40 hrs/wk	32	114.69 / 110.00	64–188	34	104.94 / 100.00	61–174
40 hrs/wk	25	117.04 / 110.00	64–188	27	105.41 / 100.00	61–174
North Carolina						
20–31 hrs/wk	3	70.33 / 75.00	57–79	5	95.60 / 100.00	48–130
32–40 hrs/wk	28	128.14 / 130.00	95–165	30	120.97 / 118.50	84–200
40 hrs/wk	26	129.04 / 130.00	95–165	28	121.79 / 118.50	84–200
North Dakota & South Dakota						
20–31 hrs/wk	1	54.00 / 54.00	54–54	3	55.00 / 50.00	45–70
32–40 hrs/wk	8	73.88 / 76.00	17–113	6	119.00 / 127.50	30–209
40 hrs/wk	5	77.00 / 82.00	17–113	5	128.80 / 135.00	30–209
Ohio						
20–31 hrs/wk	7	68.86 / 75.00	40–87	13	73.92 / 68.00	35–157
32–40 hrs/wk	37	119.19 / 120.00	70–180	59	112.81 / 115.00	6–190
40 hrs/wk	28	121.57 / 125.00	70–180	45	113.82 / 118.00	6–190
Oklahoma						
20–31 hrs/wk	0	—— / ——	——	0	—— / ——	——
32–40 hrs/wk	12	138.25 / 142.50	66–170	9	105.67 / 110.00	90–116
40 hrs/wk	12	138.25 / 142.50	66–170	9	105.67 / 110.00	90–116

TABLE 5.
Caseload of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Oregon						
20–31 hrs/wk	2	80.00 / 80.00	60–100	5	68.80 / 68.00	40–96
32–40 hrs/wk	10	109.50 / 121.50	9–165	10	114.90 / 114.50	100–126
40 hrs/wk	7	113.00 / 125.00	9–165	6	119.50 / 121.00	109–126
Pennsylvania						
20–31 hrs/wk	12	68.83 / 69.50	30–100	3	71.67 / 65.00	60–90
32–40 hrs/wk	45	123.91 / 120.00	25–262	31	109.00 / 100.00	20–165
40 hrs/wk	35	132.60 / 121.00	70–262	24	112.54 / 113.00	20–165
Rhode Island						
20–31 hrs/wk	0	—— / ——	——	0	—— / ——	——
32–40 hrs/wk	1	120.00 / 120.00	120–120	1	75.00 / 75.00	75–75
40 hrs/wk	1	120.00 / 120.00	120–120	1	75.00 / 75.00	75–75
South Carolina						
20–31 hrs/wk	5	83.60 / 80.00	65–112	1	80.00 / 80.00	80–80
32–40 hrs/wk	39	143.77 / 140.00	98–240	7	122.71 / 120.00	67–175
40 hrs/wk	36	147.36 / 145.50	105–240	5	127.20 / 134.00	67–175
Tennessee						
20–31 hrs/wk	3	79.33 / 90.00	54–94	2	121.50 / 121.50	64–179
32–40 hrs/wk	19	113.68 / 119.00	70–170	27	112.37 / 120.00	60–200
40 hrs/wk	19	113.68 / 119.00	70–170	22	111.36 / 120.00	60–200
Texas						
20–31 hrs/wk	14	86.29 / 80.00	47–210	9	61.89 / 60.00	45–75
32–40 hrs/wk	88	122.82 / 110.00	65–711	91	105.82 / 106.00	34–189
40 hrs/wk	81	124.72 / 110.00	65–711	79	108.59 / 110.00	34–189

TABLE 5.
Caseload of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
US Territory						
20–31 hrs/wk	0	—— / ——	——	1	100.00 / 100.00	100–100
32–40 hrs/wk	0	—— / ——	——	1	78.00 / 78.00	78–78
40 hrs/wk	0	—— / ——	——	1	78.00 / 78.00	78–78
Utah						
20–31 hrs/wk	2	30.00 / 30.00	25–35	0	—— / ——	——
32–40 hrs/wk	11	97.91 / 95.00	52–200	9	83.67 / 100.00	15–120
40 hrs/wk	10	97.70 / 92.50	52–200	9	83.97 / 100.00	15–120
Virginia						
20–31 hrs/wk	12	71.08 / 65.00	26–100	7	68.57 / 75.00	36–90
32–40 hrs/wk	32	120.34 / 120.00	72–157	39	119.28 / 112.00	50–218
40 hrs/wk	25	124.32 / 128.00	88–157	30	125.83 / 118.00	50–218
Washington						
20–31 hrs/wk	5	84.40 / 80.00	65–110	5	92.00 / 90.00	60–120
32–40 hrs/wk	17	123.35 / 112.00	85–180	18	120.67 / 120.00	75–140
40 hrs/wk	11	137.55 / 140.00	110–180	9	122.78 / 125.00	75–140
West Virginia						
20–31 hrs/wk	2	92.50 / 92.50	80–105	0	—— / ——	——
32–40 hrs/wk	3	150.00 / 150.00	100–200	2	184.00 / 184.00	170–198
40 hrs/wk	3	150.00 / 150.00	100–200	2	184.00 / 184.00	170–198
Wisconsin						
20–31 hrs/wk	4	59.25 / 56.00	48–77	4	51.25 / 58.00	26–63
32–40 hrs/wk	20	93.05 / 90.00	30–170	20	80.05 / 84.00	27–119
40 hrs/wk	11	88.82 / 90.00	30–135	12	82.67 / 85.00	27–110

TABLE 6.
Caseload of Social Workers in Outpatient Dialysis Settings by End Stage Renal Disease (ESRD) Network
(See Appendix A. Map of ESRD Networks)

ESRD Network	2010			2007		
	n	Mean / Median	Range	*n*	Mean / Median	Range
Network 1						
20–31 hrs/wk	12	72.67 / 75.00	40–90	9	70.11 / 70.00	50–93
32–40 hrs/wk	40	111.38 / 115.00	53–150	26	112.50 / 112.50	75–170
40 hrs/wk	25	121.44 / 120.00	70–150	19	115.16 / 120.00	75–170
Network 2						
20–31 hrs/wk	8	83.50 / 83.50	64–117	16	64.88 / 59.50	45–124
32–40 hrs/wk	32	114.69 / 110.00	64–188	34	104.94 / 100.00	61–174
40 hrs/wk	25	117.04 / 110.00	64–188	27	105.41 / 100.00	61–174
Network 3						
20–31 hrs/wk	14	97.71 / 95.00	43–167	4	62.00 / 59.50	54–75
32–40 hrs/wk	36	123.58 / 120.00	75–200	18	114.17 / 110.00	56–198
40 hrs/wk	24	127.37 / 120.00	80–200	17	117.59 / 110.00	85–198
Network 4						
20–31 hrs/wk	12	68.83 / 69.50	30–100	3	71.67 / 65.00	60–90
32–40 hrs/wk	55	125.02 / 120.00	25–262	32	108.09 / 100.00	20–165
40 hrs/wk	43	133.63 / 125.00	70–262	25	111.24 / 106.00	20–165
Network 5						
20–31 hrs/wk	21	76.38 / 79.00	26–140	16	71.44 / 70.00	36–125
32–40 hrs/wk	75	119.51 / 120.00	68–200	67	118.84 / 115.00	15–218
40 hrs/wk	52	126.23 / 127.50	80–200	51	128.14 / 125.00	50–218
Network 6						
20–31 hrs/wk	16	83.81 / 78.50	50–140	9	87.44 / 100.00	34–155
32–40 hrs/wk	110	126.58 / 130.00	60–240	67	118.21 / 115.00	60–200
40 hrs/wk	89	133.98 / 132.00	69–240	59	118.44 / 116.00	60–200

TABLE 6.
Caseload of Social Workers in Outpatient Dialysis Settings by End Stage Renal Disease (ESRD) Network
(See Appendix A. Map of ESRD Networks)

ESRD Network	2010			2007		
	n	Mean / Median	Range	*n*	Mean / Median	Range
Network 7						
20–31 hrs/wk	4	97.50 / 102.50	60–125	5	61.40 / 69.00	15–85
32–40 hrs/wk	54	127.44 / 129.50	66–175	59	121.47 / 120.00	50–220
40 hrs/wk	46	130.24 / 135.00	66–175	43	127.98 / 120.00	65–220
Network 8						
20–31 hrs/wk	4	85.00 / 92.00	54–102	4	97.00 / 72.50	64–179
32–40 hrs/wk	42	135.31 / 135.00	70–225	59	128.97 / 125.00	49–265
40 hrs/wk	41	134.22 / 135.00	70–225	50	132.86 / 130.00	60–265
Network 9						
20–31 hrs/wk	14	66.00 / 70.00	30–90	24	70.33 / 66.50	25–157
32–40 hrs/wk	89	121.25 / 125.00	1–190	128	113.45 / 119.00	6–200
40 hrs/wk	74	124.15 / 129.00	1–190	106	115.64 / 120.00	6–200
Network 10						
20–31 hrs/wk	8	78.50 / 83.00	40–105	13	77.85 / 80.00	53–100
32–40 hrs/wk	30	119.90 / 120.00	50–166	76	115.29 / 115.00	35–200
40 hrs/wk	23	129.65 / 125.00	70–166	66	116.39 / 120.00	35–200
Network 11						
20–31 hrs/wk	20	74.55 / 78.50	43–120	24	70.38 / 69.00	25–157
32–40 hrs/wk	73	106.15 / 105.00	17–173	97	101.56 / 100.00	15–209
40 hrs/wk	47	108.89 / 110.00	17–173	61	108.21 / 108.00	15–209
Network 12						
20–31 hrs/wk	27	75.78 / 75.00	37–120	33	70.36 / 65.00	35–135
32–40 hrs/wk	69	109.64 / 110.00	50–232	85	107.15 / 110.00	4–250
40 hrs/wk	51	115.96 / 110.00	60–232	67	112.33 / 110.00	4–250

TABLE 6.
Caseload of Social Workers in Outpatient Dialysis Settings by End Stage Renal Disease (ESRD) Network
(See Appendix A. Map of ESRD Networks)

ESRD Network	2010			2007		
	n	Mean / Median	Range	*n*	Mean / Median	Range
Network 13						
20–31 hrs/wk	4	76.50 / 62.00	47–135	5	123.40 / 100.00	71–267
32–40 hrs/wk	33	137.36 / 135.00	66–300	47	114.30 / 115.00	40–300
40 hrs/wk	31	139.61 / 135.00	66–300	42	115.55 / 115.00	40–300
Network 14						
20–31 hrs/wk	14	86.29 / 80.00	47–210	9	61.89 / 60.00	45–75
32–40 hrs/wk	88	122.82 / 110.00	65–711	91	105.82 / 106.00	34–189
40 hrs/wk	81	124.72 / 110.00	65–711	79	108.59 / 110.00	34–189
Network 15						
20–31 hrs/wk	11	55.45 / 65.00	15–75	9	68.22 / 60.00	30–110
32–40 hrs/wk	68	110.47 / 113.50	14–200	84	106.11 / 107.00	15–240
40 hrs/wk	54	115.52 / 122.50	14–200	64	110.89 / 112.50	15–240
Network 16						
20–31 hrs/wk	7	83.14 / 80.00	60–110	13	74.54 / 68.00	40–120
32–40 hrs/wk	37	108.68 / 110.00	9–180	38	108.39 / 115.00	30–140
40 hrs/wk	25	112.52 / 120.00	9–180	20	111.05 / 122.50	30–140
Network 17						
20–31 hrs/wk	8	79.50 / 81.50	53–100	19	76.37 / 78.00	20–115
32–40 hrs/wk	33	117.18 / 121.00	50–151	91	108.45 / 110.00	15–190
40 hrs/wk	27	121.89 / 125.00	60–151	70	113.29 / 115.50	70–190
Network 18						
20–31 hrs/wk	10	102.00 / 100.50	60–180	7	79.57 / 70.00	60–156
32–40 hrs/wk	68	136.62 / 127.50	61–500	61	138.10 / 125.00	75–425
40 hrs/wk	54	141.09 / 130.00	72–500	53	141.51 / 125.00	75–425

TABLE 7.
Caseload of Social Workers in Outpatient Dialysis Settings by National Kidney Foundation (NKF) Region
(See Appendix B. Map of NKF Regions)

	2010			2007		
NKF Region	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Region I						
20–31 hrs/wk	51	80.29 / 80.00	30–167	40	66.75 / 65.00	45–124
32–40 hrs/wk	197	118.45 / 120.00	25–262	130	109.72 / 110.00	15–198
40 hrs/wk	136	125.69 / 121.00	64–262	104	114.05 / 115.00	20–198
Region II						
20–31 hrs/wk	41	81.85 / 80.00	26–140	29	77.00 / 72.00	15–179
32–40 hrs/wk	261	128.08 / 130.00	60–240	247	122.51 / 120.00	49–265
40 hrs/wk	223	132.35 / 132.00	66–240	204	126.32 / 120.00	50–265
Region III						
20–31 hrs/wk	68	74.22 / 75.00	30–120	91	72.14 / 70.00	20–157
32–40 hrs/wk	247	112.71 / 110.00	1–232	366	108.48 / 110.00	4–250
40 hrs/wk	181	117.90 / 120.00	1–232	281	112.56 / 115.00	4–250
Region IV						
20–31 hrs/wk	22	80.95 / 73.00	47–210	15	85.53 / 71.00	45–267
32–40 hrs/wk	131	125.74 / 116.00	65–711	145	108.85 / 110.00	34–300
40 hrs/wk	119	128.22 / 120.00	65–711	127	111.13 / 110.00	34–300
Region V						
20–31 hrs/wk	32	80.66 / 75.00	15–180	46	73.52 / 70.00	20–156
32–40 hrs/wk	200	120.78 / 120.00	9–500	266	114.53 / 115.00	15–425
40 hrs/wk	156	125.76 / 125.00	9–500	200	119.94 / 120.00	15–425

TABLE 8.
Hourly Wage of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Alabama						
20–31 hrs/wk	0	—— / ——	——	2	24.75 / 24.75	23.50–26.00
32–40 hrs/wk	9	23.31 / 22.00	20.00–27.88	13	20.39 / 19.53	14.50–26.38
40 hrs/wk	9	23.31 / 22.00	20.00–27.88	9	21.06 / 21.00	14.50–26.38
Alaska & Montana						
20–31 hrs/wk	0	—— / ——	——	1	21.87 / 21.87	21.87–21.87
32–40 hrs/wk	3	26.21 / 27.00	19.12–32.50	1	24.00 / 24.00	24.00–24.00
40 hrs/wk	3	26.21 / 27.00	19.12–32.50	0	—— / ——	——
Arizona						
20–31 hrs/wk	5	27.99 / 27.00	24.00–35.00	8	22.60 / 22.95	18.00–27.56
32–40 hrs/wk	29	25.95 / 26.00	19.75–33.10	31	24.34 / 23.85	18.00–30.90
40 hrs/wk	27	25.78 / 25.90	19.75–33.10	26	23.90 / 23.25	18.00–30.90
Arkansas						
20–31 hrs/wk	1	27.61 / 27.61	27.61–27.61	2	26.25 / 26.25	20.49–32.00
32–40 hrs/wk	5	21.62 / 21.00	18.27–26.85	9	22.06 / 21.50	12.80–28.00
40 hrs/wk	3	22.37 / 22.00	18.27–26.85	6	24.65 / 25.75	20.50–28.00
California						
20–31 hrs/wk	21	35.41 / 35.50	28.60–45.00	23	31.83 / 31.30	24.00–38.60
32–40 hrs/wk	97	34.27 / 34.00	25.00–50.00	140	30.67 / 30.00	19.84–43.00
40 hrs/wk	76	34.05 / 34.00	25.00–47.00	110	30.72 / 30.00	19.84–40.29
Colorado						
20–31 hrs/wk	0	—— / ——	——	1	23.00 / 23.00	23.00–23.00
32–40 hrs/wk	7	27.99 / 29.50	20.80–35.70	25	23.31 / 23.75	18.72–28.10
40 hrs/wk	5	28.82 / 29.50	22.85–35.70	14	23.14 / 23.75	18.72–27.10

TABLE 8.
Hourly Wage of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Connecticut						
20–31 hrs/wk	2	32.10 / 32.10	29.60–34.59	3	28.58 / 28.60	27.00–30.15
32–40 hrs/wk	12	33.48 / 33.49	27.00–40.14	10	30.14 / 30.60	22.00–36.37
40 hrs/wk	9	33.58 / 34.00	27.00–40.14	6	31.37 / 31.59	26.78–36.37
Delaware						
20–31 hrs/wk	0	—— / ——	——	0	—— / ——	——
32–40 hrs/wk	9	24.77 / 24.35	18.50–29.50	0	—— / ——	——
40 hrs/wk	7	24.99 / 24.35	22.95–26.85	0	—— / ——	——
District of Columbia						
20–31 hrs/wk	2	31.75 / 31.75	30.50–33.00	1	34.00 / 34.00	34.00–34.00
32–40 hrs/wk	6	29.84 / 30.18	26.57–31.63	4	30.39 / 30.30	29.00–31.95
40 hrs/wk	5	29.81 / 30.35	26.57–31.63	3	30.85 / 30.60	30.00–31.95
Florida						
20–31 hrs/wk	6	26.66 / 25.76	23.50–31.45	5	24.98 / 24.47	22.66–27.69
32–40 hrs/wk	57	26.72 / 26.50	17.09–38.00	61	25.15 / 25.00	16.81–37.50
40 hrs/wk	48	26.74 / 26.50	17.09–38.00	46	23.90 / 24.04	16.81–31.00
Georgia						
20–31 hrs/wk	8	27.93 / 26.75	22.40–33.00	3	27.33 / 26.00	24.00–32.00
32–40 hrs/wk	42	25.81 / 25.32	16.38–35.00	30	22.73 / 23.50	15.30–33.00
40 hrs/wk	28	25.07 / 24.53	16.38–35.00	26	22.36 / 22.80	15.30–33.00
Hawaii						
20–31 hrs/wk	0	—— / ——	——	3	26.21 / 26.00	25.97–26.65
32–40 hrs/wk	15	29.32 / 29.47	25.00–31.98	12	26.39 / 26.50	20.85–29.00
40 hrs/wk	14	29.41 / 29.60	25.00–31.98	12	26.39 / 26.50	20.85–29.00

TABLE 8.
Hourly Wage of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Idaho & Wyoming						
20–31 hrs/wk	0	—— / ——	——	2	26.08 / 26.08	22.15–30.00
32–40 hrs/wk	7	25.23 / 24.50	22.00–31.59	9	25.30 / 24.50	22.41–29.06
40 hrs/wk	4	24.25 / 24.25	23.50–25.00	5	25.02 / 24.00	22.41–29.06
Illinois						
20–31 hrs/wk	10	26.85 / 26.98	20.00–35.00	15	23.29 / 23.37	19.00–30.00
32–40 hrs/wk	28	25.76 / 26.00	20.06–31.52	79	22.65 / 22.85	17.00–30.45
40 hrs/wk	23	26.18 / 26.00	20.63–31.52	68	22.81 / 23.00	17.00–30.45
Indiana						
20–31 hrs/wk	6	25.31 / 24.80	21.00–30.25	9	24.89 / 25.00	19.87–29.95
32–40 hrs/wk	38	24.61 / 24.80	19.23–31.75	49	22.90 / 22.77	17.50–27.50
40 hrs/wk	31	24.66 / 24.60	19.23–31.75	42	23.08 / 22.78	19.23–27.50
Iowa						
20–31 hrs/wk	4	28.07 / 26.98	20.32–38.00	6	23.17 / 23.31	18.30–29.00
32–40 hrs/wk	10	23.18 / 23.61	20.28–26.25	17	22.01 / 21.80	18.50–24.51
40 hrs/wk	6	21.91 / 21.35	20.28–24.00	11	21.87 / 21.80	18.50–24.51
Kansas						
20–31 hrs/wk	3	30.96 / 28.87	22.00–42.00	5	22.61 / 22.00	22.00–23.96
32–40 hrs/wk	8	26.18 / 25.26	20.00–33.00	12	21.94 / 22.00	17.00–27.65
40 hrs/wk	5	27.20 / 25.88	20.00–33.00	11	21.93 / 22.00	17.00–27.65
Kentucky						
20–31 hrs/wk	2	22.63 / 22.63	22.25–23.00	3	21.22 / 21.90	19.77–22.00
32–40 hrs/wk	14	24.98 / 24.47	18.94–34.50	23	23.52 / 23.75	19.40–32.00
40 hrs/wk	14	24.98 / 24.47	18.94–34.50	22	23.57 / 23.88	19.40–32.00

TABLE 8.
Hourly Wage of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Louisiana						
20–31 hrs/wk	3	24.22 / 27.80	16.00–28.85	3	21.23 / 21.85	20.00–21.85
32–40 hrs/wk	16	23.77 / 23.55	19.25–32.20	29	21.17 / 21.50	17.00–27.00
40 hrs/wk	16	23.77 / 23.55	19.25–32.20	27	20.76 / 21.00	17.00–25.80
Maine						
20–31 hrs/wk	1	28.00 / 28.00	28.00–28.00	0	—— / ——	——
32–40 hrs/wk	6	25.52 / 27.13	19.77–31.11	4	26.95 / 27.15	19.85–33.65
40 hrs/wk	2	27.38 / 27.38	27.26–27.50	4	26.95 / 27.16	19.85–33.65
Maryland						
20–31 hrs/wk	5	31.95 / 32.25	29.40–33.29	8	27.89 / 27.58	22.34–33.00
32–40 hrs/wk	34	29.10 / 29.69	20.43–34.00	22	27.99 / 28.09	22.00–34.74
40 hrs/wk	18	28.60 / 29.34	20.43–32.29	16	28.15 / 28.51	23.99–32.95
Massachusetts						
20–31 hrs/wk	6	28.40 / 28.53	27.00–29.30	6	27.59 / 28.01	21.00–32.00
32–40 hrs/wk	19	27.63 / 28.01	21.90–33.00	9	27.84 / 28.00	25.50–30.00
40 hrs/wk	12	26.50 / 25.30	21.90–33.00	6	28.02 / 28.40	25.50–30.00
Michigan						
20–31 hrs/wk	12	27.06 / 26.25	20.00–35.00	13	23.68 / 23.00	18.03–31.00
32–40 hrs/wk	33	27.76 / 27.35	21.57–40.00	59	24.34 / 24.15	19.21–31.30
40 hrs/wk	24	27.80 / 27.39	21.57–40.00	39	24.71 / 25.00	19.21–31.30
Minnesota						
20–31 hrs/wk	1	25.00 / 25.00	25.00–25.00	4	22.83 / 22.62	15.50–30.58
32–40 hrs/wk	15	25.91 / 26.44	22.00–30.05	19	23.71 / 23.50	19.00–28.53
40 hrs/wk	9	24.53 / 23.32	22.00–30.05	11	22.82 / 22.00	19.00–26.70

TABLE 8.
Hourly Wage of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Mississippi						
20–31 hrs/wk	1	24.00 / 24.00	24.00–24.00	0	—— / ——	——
32–40 hrs/wk	15	22.13 / 22.00	20.00–25.96	19	20.68 / 20.58	12.63–28.85
40 hrs/wk	14	22.12 / 21.97	20.00–25.96	19	20.68 / 20.58	12.63–28.85
Missouri						
20–31 hrs/wk	15	25.65 / 26.30	20.30–30.00	21	23.02 / 23.00	14.00–29.00
32–40 hrs/wk	42	25.01 / 24.56	17.30–35.00	49	23.10 / 23.00	15.60–36.51
40 hrs/wk	32	24.35 / 24.04	17.30–35.00	41	22.75 / 23.00	15.60–35.00
Nebraska						
20–31 hrs/wk	5	25.16 / 25.00	21.50–30.77	2	23.69 / 23.69	22.99–24.38
32–40 hrs/wk	10	30.19 / 28.51	23.08–39.07	7	24.60 / 24.15	21.00–29.00
40 hrs/wk	9	30.35 / 28.22	23.08–39.07	6	24.92 / 25.14	21.00–29.00
Nevada						
20–31 hrs/wk	0	—— / ——	——	1	23.96 / 23.96	23.96–23.96
32–40 hrs/wk	13	29.16 / 28.48	25.00–35.00	14	26.46 / 25.95	22.00–33.00
40 hrs/wk	8	29.54 / 28.49	27.00–35.00	10	25.75 / 24.67	22.00–33.00
New Hampshire & Vermont						
20–31 hrs/wk	4	23.83 / 23.75	21.43–26.39	1	24.25 / 24.25	24.25–24.25
32–40 hrs/wk	2	27.50 / 27.50	25.00–30.00	1	21.80 / 21.80	21.80–21.80
40 hrs/wk	1	25.00 / 25.00	25.00–25.00	1	21.80 / 21.80	21.80–21.80
New Jersey						
20–31 hrs/wk	15	30.86 / 31.00	26.26–36.00	5	26.34 / 26.00	23.00–29.70
32–40 hrs/wk	38	30.49 / 29.76	24.30–40.00	20	28.47 / 27.84	23.00–34.50
40 hrs/wk	25	30.80 / 29.71	24.68–40.00	19	28.69 / 28.12	23.00–34.50

TABLE 8.
Hourly Wage of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
New Mexico						
20–31 hrs/wk	4	25.95 / 24.90	24.38–29.60	1	22.89 / 22.89	22.89–22.89
32–40 hrs/wk	10	26.40 / 25.75	23.48–34.00	8	27.02 / 28.05	20.00–31.73
40 hrs/wk	7	27.25 / 26.10	24.75–34.00	7	26.96 / 28.67	20.00–31.73
New York						
20–31 hrs/wk	8	31.52 / 31.25	24.11–41.00	17	25.46 / 24.15	19.22–36.00
32–40 hrs/wk	31	29.79 / 30.56	22.50–39.90	33	24.74 / 24.10	18.00–33.34
40 hrs/wk	25	28.92 / 28.50	22.50–39.90	25	24.84 / 24.22	18.87–33.34
North Carolina						
20–31 hrs/wk	3	24.92 / 25.00	24.00–25.75	5	20.69 / 21.00	18.00–22.10
32–40 hrs/wk	28	24.56 / 24.95	18.50–29.70	31	21.29 / 21.33	17.31–25.93
40 hrs/wk	26	24.44 / 24.82	18.50–29.70	29	21.32 / 21.33	17.31–25.93
North Dakota & South Dakota						
20–31 hrs/wk	1	25.00 / 25.00	25.00–25.00	3	22.93 / 22.78	22.00–24.00
32–40 hrs/wk	8	23.64 / 23.06	19.36–29.35	9	23.62 / 21.02	18.49–34.00
40 hrs/wk	5	23.23 / 22.85	19.36–29.35	5	24.22 / 21.02	20.08–34.00
Ohio						
20–31 hrs/wk	8	24.26 / 24.17	20.40–30.00	16	23.05 / 23.12	14.50–28.21
32–40 hrs/wk	37	24.97 / 25.00	18.50–33.00	62	23.31 / 23.52	17.31–28.85
40 hrs/wk	28	24.95 / 24.70	18.50–33.00	47	23.26 / 23.13	19.25–28.85
Oklahoma						
20–31 hrs/wk	0	—— / ——	——	0	—— / ——	——
32–40 hrs/wk	12	26.05 / 25.74	21.80–30.40	8	23.65 / 23.88	21.08–25.71
40 hrs/wk	12	26.05 / 25.74	21.80–30.40	8	23.65 / 23.88	21.08–25.71

TABLE 8.
Hourly Wage of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Oregon						
20–31 hrs/wk	2	27.02 / 27.02	27.00–27.03	5	25.69 / 25.97	20.00–30.50
32–40 hrs/wk	9	29.96 / 28.93	25.98–33.57	13	25.42 / 24.00	20.00–32.00
40 hrs/wk	7	30.48 / 31.31	25.98–33.57	7	22.64 / 22.22	20.00–25.79
Pennsylvania						
20–31 hrs/wk	12	26.60 / 27.38	20.75–31.20	3	21.35 / 21.98	19.50–22.56
32–40 hrs/wk	47	26.53 / 26.00	18.26–34.60	36	23.30 / 22.90	16.35–33.00
40 hrs/wk	37	26.52 / 26.00	18.26–34.60	29	23.23 / 22.80	16.35–33.00
Rhode Island						
20–31 hrs/wk	0	—— / ——	——	0	—— / ——	——
32–40 hrs/wk	2	33.00 / 33.00	30.00–36.00	1	25.25 / 25.25	25.25–25.25
40 hrs/wk	2	33.00 / 33.00	30.00–36.00	1	25.25 / 25.25	25.25–25.25
South Carolina						
20–31 hrs/wk	7	24.79 / 25.60	18.28–32.00	1	21.78 / 21.78	21.78–21.78
32–40 hrs/wk	37	24.35 / 24.00	18.31–33.60	6	23.60 / 21.21	16.34–36.00
40 hrs/wk	34	24.36 / 23.95	18.31–33.60	5	23.78 / 19.75	16.34–36.00
Tennessee						
20–31 hrs/wk	3	24.93 / 26.75	21.20–26.84	2	22.42 / 22.42	21.84–23.00
32–40 hrs/wk	20	26.36 / 26.65	14.42–37.00	26	22.64 / 22.86	18.00–27.54
40 hrs/wk	20	26.36 / 26.65	14.42–37.00	21	22.55 / 22.80	18.00–25.97
Texas						
20–31 hrs/wk	14	26.61 / 26.75	23.60–29.50	8	23.88 / 23.75	18.00–30.00
32–40 hrs/wk	88	25.83 / 25.88	18.99–36.30	93	23.82 / 23.43	17.30–34.70
40 hrs/wk	81	25.80 / 25.95	18.99–36.30	80	23.76 / 23.51	17.30–34.70

TABLE 8.
Hourly Wage of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
US Territory						
20–31 hrs/wk	0	—— / ——	——	0	—— / ——	——
32–40 hrs/wk	0	—— / ——	——	1	9.90 / 9.90	9.90–9.90
40 hrs/wk	0	—— / ——	——	1	9.90 / 9.90	9.90–9.90
Utah						
20–31 hrs/wk	2	24.13 / 24.13	21.00–27.25	0	—— / ——	——
32–40 hrs/wk	11	25.21 / 25.96	19.00–30.00	9	23.31 / 24.44	18.75–26.00
40 hrs/wk	10	24.85 / 25.48	19.00–30.00	9	23.31 / 24.44	18.75–26.00
Virginia						
20–31 hrs/wk	11	30.15 / 29.35	24.00–38.48	8	26.06 / 26.21	23.36–28.25
32–40 hrs/wk	33	26.83 / 28.00	17.08–33.00	42	24.23 / 24.23	16.12–31.25
40 hrs/wk	26	26.27 / 26.12	17.08–33.00	29	24.39 / 24.57	19.57–31.25
Washington						
20–31 hrs/wk	5	29.12 / 29.00	24.00–36.50	5	29.26 / 28.85	26.00–36.00
32–40 hrs/wk	19	28.37 / 27.62	20.99–38.00	17	25.19 / 25.13	16.82–30.95
40 hrs/wk	12	28.05 / 27.56	22.20–38.00	8	25.25 / 25.92	16.82–30.95
West Virginia						
20–31 hrs/wk	2	26.02 / 26.02	22.00–30.03	0	—— / ——	——
32–40 hrs/wk	3	24.26 / 24.13	18.30–30.35	2	25.27 / 25.27	24.50–26.04
40 hrs/wk	3	24.26 / 24.13	18.30–30.35	2	25.27 / 25.27	24.50–26.04
Wisconsin						
20–31 hrs/wk	4	30.00 / 29.93	26.00–34.15	5	22.39 / 22.50	18.00–28.08
32–40 hrs/wk	21	25.10 / 26.12	19.00–31.00	22	24.53 / 25.32	18.90–30.98
40 hrs/wk	11	25.01 / 26.12	19.00–29.29	13	24.25 / 24.20	18.99–30.98

TABLE 9.
Hourly Wage of Social Workers in Outpatient Dialysis Settings by End Stage Renal Disease (ESRD) Network
(See Appendix A. Map of ESRD Networks)

	2010			2007		
ESRD Network	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Network 1						
20–31 hrs/wk	13	27.53 / 28.05	21.43–34.59	10	27.55 / 28.01	21.00–32.00
32–40 hrs/wk	41	29.29 / 30.00	19.77–40.14	27	28.43 / 28.54	19.85–36.37
40 hrs/wk	26	29.46 / 28.68	21.90–40.14	18	28.40 / 28.49	19.85–36.37
Network 2						
20–31 hrs/wk	8	31.52 / 31.25	24.11–41.00	17	25.46 / 24.15	19.22–36.00
32–40 hrs/wk	31	29.79 / 30.56	22.50–39.90	33	24.74 / 24.10	18.00–33.34
40 hrs/wk	25	28.92 / 28.50	22.50–39.90	25	24.84 / 24.22	18.87–33.34
Network 3						
20–31 hrs/wk	15	30.86 / 31.00	26.26–36.00	5	26.34 / 26.00	23.00–29.70
32–40 hrs/wk	38	30.49 / 29.76	24.30–40.00	20	28.47 / 27.84	23.00–34.50
40 hrs/wk	25	30.80 / 29.71	24.68–40.00	19	28.69 / 28.12	23.00–34.50
Network 4						
20–31 hrs/wk	12	26.60 / 27.38	20.75–31.20	3	21.35 / 21.98	19.50–22.56
32–40 hrs/wk	56	26.25 / 26.00	18.26–34.60	37	23.33 / 23.00	16.35–33.00
40 hrs/wk	44	26.27 / 25.80	18.26–34.60	30	23.28 / 22.90	16.35–33.00
Network 5						
20–31 hrs/wk	20	30.35 / 31.06	22.00–38.48	17	27.39 / 27.15	22.34–34.00
32–40 hrs/wk	76	27.98 / 29.03	17.08–34.00	71	25.77 / 26.24	16.12–34.74
40 hrs/wk	52	27.30 / 28.91	17.08–33.00	51	25.98 / 26.24	19.57–32.95
Network 6						
20–31 hrs/wk	18	26.20 / 25.70	18.28–33.00	9	23.02 / 21.78	18.00–32.00
32–40 hrs/wk	107	24.98 / 24.77	16.38–35.00	67	22.14 / 22.50	15.30–36.00
40 hrs/wk	88	24.61 / 24.50	16.38–35.00	60	21.98 / 21.87	15.30–36.00

TABLE 9.
Hourly Wage of Social Workers in Outpatient Dialysis Settings by End Stage Renal Disease (ESRD) Network
(See Appendix A. Map of ESRD Networks)

	2010			2007		
ESRD Network	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Network 7						
20–31 hrs/wk	6	26.66 / 25.76	23.50–31.45	5	29.98 / 24.47	22.66–27.69
32–40 hrs/wk	57	26.72 / 26.50	17.09–38.00	63	25.24 / 25.00	16.81–37.50
40 hrs/wk	48	26.74 / 26.50	17.09–38.00	47	24.06 / 24.04	16.81–31.67
Network 8						
20–31 hrs/wk	4	24.70 / 25.38	21.20–26.84	4	23.59 / 23.25	21.84–26.00
32–40 hrs/wk	44	24.29 / 22.63	14.42–37.00	58	21.49 / 21.63	12.63–28.85
40 hrs/wk	43	24.34 / 22.73	14.42–37.00	49	21.55 / 21.63	12.63–28.85
Network 9						
20–31 hrs/wk	16	24.45 / 24.05	20.40–30.25	28	23.44 / 23.00	14.50–29.95
32–40 hrs/wk	89	24.82 / 25.00	18.50–34.50	134	23.20 / 23.19	17.31–32.00
40 hrs/wk	73	24.83 / 24.60	18.50–34.50	111	23.26 / 23.13	19.23–32.00
Network 10						
20–31 hrs/wk	10	26.85 / 26.98	20.00–35.00	15	23.29 / 23.37	19.00–30.00
32–40 hrs/wk	28	25.76 / 26.00	20.06–31.52	79	22.65 / 22.85	17.00–30.45
40 hrs/wk	23	26.18 / 26.00	20.63–31.52	68	22.81 / 23.00	17.00–30.45
Network 11						
20–31 hrs/wk	18	27.49 / 26.25	20.00–35.00	25	23.20 / 23.00	15.50–31.00
32–40 hrs/wk	77	26.25 / 26.39	19.00–40.00	109	24.21 / 24.20	18.49–34.00
40 hrs/wk	49	26.11 / 26.12	19.00–40.00	68	24.28 / 24.64	18.99–34.00
Network 12						
20–31 hrs/wk	27	26.51 / 26.00	20.30–42.00	34	23.02 / 23.00	14.00–29.00
32–40 hrs/wk	70	26.63 / 24.70	17.30–39.07	85	22.84 / 22.60	15.60–36.51
40 hrs/wk	52	25.38 / 24.47	17.30–39.07	69	22.67 / 22.00	15.60–35.00

TABLE 9.
Hourly Wage of Social Workers in Outpatient Dialysis Settings by End Stage Renal Disease (ESRD) Network
(See Appendix A. Map of ESRD Networks)

	2010			2007		
ESRD Network	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Network 13						
20–31 hrs/wk	4	25.07 / 27.71	16.00–28.85	5	23.24 / 21.85	20.00–32.00
32–40 hrs/wk	33	24.27 / 24.03	18.27–32.20	46	21.78 / 21.78	12.80–28.00
40 hrs/wk	31	24.51 / 24.43	18.27–32.20	41	21.90 / 22.00	17.00–28.00
Network 14						
20–31 hrs/wk	14	26.61 / 26.75	23.60–29.50	8	23.88 / 23.75	18.00–30.00
32–40 hrs/wk	88	25.83 / 25.88	18.99–36.30	93	23.82 / 23.43	17.30–34.70
40 hrs/wk	81	25.80 / 25.95	18.99–36.30	80	23.76 / 23.51	17.30–34.70
Network 15						
20–31 hrs/wk	11	26.54 / 25.20	21.00–35.00	11	22.78 / 22.95	18.00–27.56
32–40 hrs/wk	70	26.70 / 26.05	19.00–35.70	87	24.53 / 24.50	18.00–33.00
40 hrs/wk	57	26.59 / 26.00	19.00–35.70	66	24.26 / 24.20	18.00–33.00
Network 16						
20–31 hrs/wk	7	28.52 / 27.03	24.00–36.50	13	26.83 / 26.46	20.00–36.00
32–40 hrs/wk	38	28.00 / 27.80	19.12–38.00	40	25.26 / 24.69	16.82–32.00
40 hrs/wk	26	27.91 / 27.56	19.12–38.00	20	24.28 / 23.92	16.82–30.95
Network 17						
20–31 hrs/wk	8	38.39 / 39.13	30.50–45.00	19	31.24 / 31.34	24.00–37.85
32–40 hrs/wk	36	33.76 / 32.30	25.00–50.00	92	30.50 / 29.23	9.90–43.00
40 hrs/wk	29	33.13 / 31.98	25.00–47.00	70	30.37 / 29.23	9.90–40.29
Network 18						
20–31 hrs/wk	12	33.91 / 34.75	28.60–38.63	7	31.01 / 30.00	28.10–38.60
32–40 hrs/wk	71	33.64 / 33.69	25.00–43.00	61	29.74 / 28.75	19.88–39.02
40 hrs/wk	57	33.55 / 33.28	25.00–43.00	53	29.81 / 28.84	19.88–39.02

TABLE 10.
Hourly Wage of Social Workers in Outpatient Dialysis Settings by National Kidney Foundation (NKF) Region
(See Appendix B. Map of NKF Regions)

	2010			2007		
NKF Region	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Region I						
20–31 hrs/wk	53	29.28 / 29.30	20.75–41.00	43	26.22 / 26.00	19.22–36.00
32–40 hrs/wk	200	28.71 / 28.77	18.26–40.14	136	26.08 / 25.98	16.35–36.37
40 hrs/wk	138	28.48 / 28.33	18.26–40.14	107	26.18 / 26.00	16.35–36.37
Region II						
20–31 hrs/wk	45	27.17 / 26.16	18.28–38.48	30	24.42 / 23.75	18.00–34.00
32–40 hrs/wk	264	25.57 / 25.25	14.42–38.00	257	23.33 / 23.00	12.63–37.50
40 hrs/wk	227	25.33 / 25.00	14.42–38.00	211	22.95 / 22.78	12.63–36.00
Region III						
20–31 hrs/wk	69	26.45 / 26.00	20.00–42.00	99	23.28 / 23.00	14.00–31.00
32–40 hrs/wk	250	25.58 / 25.00	17.30–40.00	384	23.28 / 23.09	15.60–36.51
40 hrs/wk	183	25.49 / 25.00	17.30–40.00	294	23.23 / 23.00	15.60–35.00
Region IV						
20–31 hrs/wk	22	26.21 / 26.75	16.00–29.60	14	23.58 / 22.45	18.00–32.00
32–40 hrs/wk	131	25.48 / 25.40	18.27–36.30	147	23.35 / 23.08	12.80–34.70
40 hrs/wk	119	25.55 / 25.50	18.27–36.30	128	23.34 / 23.00	17.00–34.70
Region V						
20–31 hrs/wk	35	32.33 / 30.65	21.00–45.00	49	28.31 / 28.40	18.00–38.60
32–40 hrs/wk	210	30.63 / 30.00	19.00–50.00	271	27.82 / 27.04	16.82–43.00
40 hrs/wk	166	30.42 / 30.00	19.00–47.00	201	27.83 / 27.00	16.82–40.29

TABLE 11.
Annual Salary of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Alabama						
32–40 hrs/wk	9	48,478 / 45,760	41,600–57,990	13	40,904 / 39,499	30,160–54,870
40 hrs/wk	9	48,478 / 45,760	41,600–57,990	9	43,812 / 43,680	30,160–54,870
Alaska & Montana						
32–40 hrs/wk	3	54,510 / 56,160	39,770–67,600	1	39,936 / 39,936	39,936–39,936
40 hrs/wk	3	54,510 / 56,160	39,770–67,600	0	—— / ——	——
Arizona						
32–40 hrs/wk	29	53,382 / 53,872	41,080–68,848	31	49,337 / 48,797	37,440–64,272
40 hrs/wk	27	53,625 / 53,872	41,080–68,848	26	49,709 / 48,350	37,440–64,272
Arkansas						
32–40 hrs/wk	5	41,567 / 38,002	33,280–55,848	9	43,834 / 43,514	21,299–58,240
40 hrs/wk	3	46,537 / 45,760	38,002–55,848	6	51,279 / 53,560	42,640–58,240
California						
32–40 hrs/wk	97	68,587 / 68,224	47,424–97,760	140	61,541 / 59,698	41,184–83,795
40 hrs/wk	76	70,825 / 70,709	52,000–97,760	110	63,894 / 62,400	41,267–83,795
Colorado						
32–40 hrs/wk	7	55,132 / 54,080	34,611–74,256	25	44,681 / 42,994	33,280–56,368
40 hrs/wk	5	59,946 / 61,360	47,528–74,256	14	48,121 / 49,400	38,938–56,368
Connecticut						
32–40 hrs/wk	12	66,187 / 67,787	53,248–83,491	10	59,579 / 60,250	36,608–75,650
40 hrs/wk	9	69,853 / 70,720	56,160–83,491	6	65,246 / 65,707	55,702–75,650
Delaware						
32–40 hrs/wk	9	49,626 / 50,544	33,670–55,848	0	—— / ——	——
40 hrs/wk	7	51,982 / 50,648	47,736–55,848	0	—— / ——	——

TABLE 11.
Annual Salary of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
District of Columbia						
32–40 hrs/wk	6	59,991 / 49,920	49,920–65,790	4	60,567 / 63,024	49,764–66,456
40 hrs/wk	5	62,005 / 63,128	55,266–65,790	3	64,168 / 63,648	62,400–66,456
Florida						
32–40 hrs/wk	57	54,146 / 54,101	35,547–79,040	61	49,903 / 49,982	34,965–70,200
40 hrs/wk	48	55,611 / 55,120	35,547–79,040	46	49,711 / 49,993	34,965–64,480
Georgia						
32–40 hrs/wk	42	50,447 / 49,746	34,070–72,800	30	46,023 / 46,904	31,824–68,640
40 hrs/wk	28	52,154 / 51,012	34,070–72,800	26	46,509 / 47,424	31,824–68,640
Hawaii						
32–40 hrs/wk	15	60,216 / 61,298	46,742–66,518	12	54,898 / 55,120	43,368–60,320
40 hrs/wk	14	61,179 / 61,558	52,000–66,518	12	54,898 / 55,120	43,368–60,320
Idaho & Wyoming						
32–40 hrs/wk	7	49,630 / 49,920	38,896–60,779	9	49,407 / 48,412	38,738–60,445
40 hrs/wk	4	50,440 / 50,440	48,880–52,000	5	52,042 / 49,920	46,613–60,445
Illinois						
32–40 hrs/wk	28	51,903 / 52,021	33,380–65,562	79	45,924 / 45,760	31,117–63,336
40 hrs/wk	23	54,445 / 54,080	42,910–65,562	68	47,439 / 47,830	35,360–63,336
Indiana						
32–40 hrs/wk	38	49,567 / 48,942	35,210–66,040	49	46,505 / 45,760	29,120–57,200
40 hrs/wk	31	51,289 / 51,168	39,998–66,040	42	48,009 / 47,372	39,998–57,200
Iowa						
32–40 hrs/wk	10	45,617 / 44,760	41,018–49,920	17	43,610 / 44,909	34,278–50,981
40 hrs/wk	6	45,576 / 44,398	42,182–49,920	11	45,490 / 45,344	38,480–50,981

TABLE 11.
Annual Salary of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Kansas						
32–40 hrs/wk	8	50,938 / 48,079	39,437–68,640	12	45,254 / 43,680	35,360–57,512
40 hrs/wk	5	56,580 / 53,830	41,600–68,640	11	45,624 / 45,760	35,360–57,512
Kentucky						
32–40 hrs/wk	14	51,954 / 50,887	39,395–71,760	23	48,518 / 49,400	37,440–66,560
40 hrs/wk	14	51,954 / 50,887	39,395–71,760	22	49,022 / 49,660	40,352–66,560
Louisiana						
32–40 hrs/wk	16	49,439 / 48,984	40,040–66,976	29	43,270 / 43,763	35,360–53,664
40 hrs/wk	16	49,439 / 48,984	40,040–66,976	27	43,191 / 43,680	35,360–53,664
Maine						
32–40 hrs/wk	6	46,939 / 48,348	34,029–57,200	4	56,061 / 56,482	41,288–69,992
40 hrs/wk	2	56,950 / 56,950	56,701–57,200	4	56,061 / 56,482	41,288–69,992
Maryland						
32–40 hrs/wk	34	55,598 / 56,499	39,753–67,163	22	56,446 / 57,200	36,608–68,536
40 hrs/wk	18	59,495 / 61,017	42,494–67,163	16	58,523 / 59,301	49,899–68,536
Massachusetts						
32–40 hrs/wk	19	53,729 / 52,208	45,552–68,640	9	54,728 / 54,080	44,928–62,400
40 hrs/wk	12	55,118 / 52,624	45,552–68,640	6	58,278 / 59,072	53,040–62,400
Michigan						
32–40 hrs/wk	33	55,283 / 54,080	42,432–83,200	59	47,658 / 47,216	33,280–65,104
40 hrs/wk	24	57,834 / 56,971	44,866–83,200	39	51,388 / 52,000	39,957–65,104
Minnesota						
32–40 hrs/wk	15	51,176 / 48,672	45,760–62,504	19	45,737 / 44,396	28,804–55,536
40 hrs/wk	9	51,015 / 48,506	45,760–62,504	11	47,466 / 45,760	39,520–55,536

TABLE 11.
Annual Salary of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Mississippi						
32–40 hrs/wk	15	45,404 / 45,635	37,024–53,997	19	43,006 / 42,806	26,270–60,008
40 hrs/wk	14	46,003 / 45,698	41,600–53,997	19	43,006 / 42,806	26,270–60,008
Missouri						
32–40 hrs/wk	42	50,282 / 50,326	35,984–72,800	49	46,564 / 44,990	29,736–72,800
40 hrs/wk	32	50,656 / 50,003	35,984–72,800	41	47,312 / 47,840	32,448–72,800
Nebraska						
32–40 hrs/wk	10	62,065 / 57,356	48,006–81,266	7	49,824 / 50,232	37,806–60,320
40 hrs/wk	9	63,137 / 58,698	48,006–81,266	6	51,827 / 52,281	43,680–60,320
Nevada						
32–40 hrs/wk	13	56,091 / 57,387	41,600–72,800	14	51,684 / 50,378	36,608–68,640
40 hrs/wk	8	61,446 / 59,259	56,160–72,800	10	53,554 / 51,303	45,760–68,640
New Hampshire & Vermont						
32–40 hrs/wk	2	54,080 / 54,080	52,000–56,160	1	45,344 / 45,344	45,344–45,344
40 hrs/wk	1	52,000 / 52,000	52,000–52,000	1	45,344 / 45,344	45,344–45,344
New Jersey						
32–40 hrs/wk	38	60,881 / 60,008	45,920–83,200	20	59,024 / 57,897	46,619–71,760
40 hrs/wk	25	64,065 / 61,797	51,334–83,200	19	59,677 / 58,490	47,840–71,760
New Mexico						
32–40 hrs/wk	10	53,246 / 53,560	42,266–70,720	8	55,483 / 56,191	41,600–65,998
40 hrs/wk	7	56,680 / 54,288	51,480–70,720	7	56,074 / 59,634	41,600–65,998
New York						
32–40 hrs/wk	31	60,934 / 60,624	45,544–82,992	33	50,000 / 49,920	29,952–69,347
40 hrs/wk	25	60,146 / 59,280	46,800–82,992	25	51,676 / 50,378	39,250–69,347

TABLE 11.
Annual Salary of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
North Carolina						
32–40 hrs/wk	28	50,781 / 51,272	38,480–61,776	31	43,936 / 44,200	32,284–53,934
40 hrs/wk	26	50,830 / 51,626	38,480–61,776	29	44,349 / 44,366	36,005–53,934
North Dakota & South Dakota						
32–40 hrs/wk	8	46,104 / 45,916	34,728–61,048	9	46,544 / 43,722	34,362–70,720
40 hrs/wk	5	48,306 / 47,528	40,269–61,048	5	50,378 / 43,722	41,766–70,720
Ohio						
32–40 hrs/wk	37	49,843 / 50,070	36,244–68,640	62	46,744 / 46,538	31,999–60,008
40 hrs/wk	28	51,889 / 51,366	38,480–68,640	47	48,391 / 48,110	40,040–60,008
Oklahoma						
32–40 hrs/wk	12	54,174 / 53,529	45,344–63,232	8	49,187 / 49,670	43,846–53,477
40 hrs/wk	12	54,174 / 53,529	45,344–63,232	8	49,187 / 49,670	43,846–53,477
Oregon						
32–40 hrs/wk	9	61,022 / 60,174	52,379–69,826	13	49,128 / 49,920	41,600–56,576
40 hrs/wk	7	63,398 / 65,125	54,038–69,826	7	47,100 / 46,218	41,600–53,643
Pennsylvania						
32–40 hrs/wk	47	53,570 / 52,416	37,981–71,968	36	46,701 / 46,904	32,465–68,640
40 hrs/wk	37	55,153 / 54,080	37,981–71,968	29	48,328 / 47,424	34,008–68,640
Rhode Island						
32–40 hrs/wk	2	68,640 / 68,640	62,400–74,880	1	52,520 / 52,520	52,520–52,520
40 hrs/wk	2	68,640 / 68,640	62,400–74,880	1	52,520 / 52,520	52,520–52,520
South Carolina						
32–40 hrs/wk	37	49,931 / 49,462	38,056–69,888	6	48,099 / 41,161	33,987–74,880
40 hrs/wk	34	50,668 / 49,816	38,085–69,888	5	49,471 / 41,080	33,987–74,880

TABLE 11.
Annual Salary of Social Workers in Outpatient Dialysis Settings by State

	2010			2007		
State	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Tennessee						
32–40 hrs/wk	20	54,819 / 55,422	29,994–76,960	26	45,615 / 45,928	30,784–54,018
40 hrs/wk	20	54,819 / 55,422	29,994–76,960	21	46,907 / 47,424	37,440–54,018
Texas						
32–40 hrs/wk	88	53,077 / 52,853	39,499–75,504	93	48,547 / 46,800	35,984–72,176
40 hrs/wk	81	53,663 / 53,976	39,499–75,504	80	49,421 / 48,901	35,984–72,176
US Territory						
32–40 hrs/wk	—	—— / ——	——	1	20,592 / 20,592	20,592–20,592
40 hrs/wk	0	—— / ——	——	1	20,592 / 20,592	20,592–20,592
Utah						
32–40 hrs/wk	11	52,173 / 53,997	39,520–62,400	9	48,489 / 50,835	39,000–54,080
40 hrs/wk	10	51,690 / 52,998	39,520–62,400	9	48,489 / 50,835	39,000–54,080
Virginia						
32–40 hrs/wk	33	53,761 / 53,040	35,526–68,640	42	47,800 / 45,760	26,824–65,000
40 hrs/wk	26	54,639 / 54,319	35,526–68,640	29	50,738 / 51,106	40,706–65,000
Washington						
32–40 hrs/wk	19	55,444 / 57,200	36,019–79,040	17	49,095 / 47,043	34,986–64,376
40 hrs/wk	12	58,335 / 57,325	46,176–79,040	8	52,515 / 51,834	34,986–64,376
West Virginia						
32–40 hrs/wk	3	50,461 / 50,190	38,064–63,128	2	52,562 / 52,562	50,960–54,163
40 hrs/wk	3	50,461 / 50,190	38,064–63,128	2	52,562 / 52,562	50,960–54,163
Wisconsin						
32–40 hrs/wk	21	48,792 / 50,544	35,809–60,923	22	48,077 / 48,582	33,596–64,438
40 hrs/wk	11	52,017 / 54,330	39,520–60,923	13	50,430 / 50,336	39,499–64,438

TABLE 12.
Annual Salary of Social Workers in Outpatient Dialysis Settings by End Stage Renal Disease (ESRD) Network
(See Appendix A: Map of ESRD Networks)

	2010			2007		
ESRD Network	***n***	**Mean / Median**	**Range**	***n***	**Mean/Median**	**Range**
Network 1						
32–40 hrs/wk	41	57,126 / 56,160	34,029–83,491	27	56,311 / 56,647	36,608–75,650
40 hrs/wk	26	61,280 / 59,644	45,552–86,491	18	59,070 / 59,259	41,288–75,650
Network 2						
32–40 hrs/wk	31	60,934 / 60,624	45,544–82,992	33	50,000 / 49,920	29,952–69,347
40 hrs/wk	25	60,146 / 59,280	46,800–82,992	25	51,676 / 50,378	39,250–69,347
Network 3						
32–40 hrs/wk	38	60,881 / 60,008	45,920–83,200	20	59,024 / 57,897	46,619–71,760
40 hrs/wk	25	64,065 / 61,797	51,334–83,200	19	59,677 / 58,490	47,840–71,760
Network 4						
32–40 hrs/wk	56	52,936 / 52,000	33,670–71,968	37	46,817 / 47,320	32,465–68,640
40 hrs/wk	44	54,648 / 53,664	37,981–71,968	30	48,417 / 47,632	34,008–68,640
Network 5						
32–40 hrs/wk	76	54,944 / 55,026	35,526–68,640	71	51,363 / 51,418	26,824–68,536
40 hrs/wk	52	56,787 / 60,133	35,526–68,640	51	54,033 / 54,579	40,706–68,536
Network 6						
32–40 hrs/wk	107	50,356 / 50,294	34,070–72,800	67	45,243 / 44,720	31,824–74,880
40 hrs/wk	88	51,188 / 50,960	34,070–72,800	60	45,712 / 45,479	31,824–74,880
Network 7						
32–40 hrs/wk	57	54,146 / 54,101	35,547–79,040	63	50,092 / 49,982	34,965–70,200
40 hrs/wk	48	55,611 / 55,120	35,547–79,040	47	50,055 / 50,003	34,965–65,874

TABLE 12.
Annual Salary of Social Workers in Outpatient Dialysis Settings by End Stage Renal Disease (ESRD) Network
(See Appendix A: Map of ESRD Networks)

	2010			2007		
ESRD Network	***n***	**Mean / Median**	**Range**	***n***	**Mean/Median**	**Range**
Network 8						
32–40 hrs/wk	44	50,313 / 47,070	29,994–76,960	58	43,704 / 44,564	26,270–60,008
40 hrs/wk	43	50,622 / 47,278	29,994–76,960	49	44,826 / 44,990	26,270–60,008
Network 9						
32–40 hrs/wk	89	50,057 / 49,608	35,210–71,760	134	46,961 / 46,540	29,120–66,560
40 hrs/wk	73	51,647 / 51,168	38,480–71,760	111	48,372 / 48,110	39,998–66,560
Network 10						
32–40 hrs/wk	28	51,903 / 52,021	33,380–65,562	79	45,924 / 45,760	31,117–63,336
40 hrs/wk	23	54,445 / 54,080	42,910–65,562	68	47,439 / 47,830	35,360–63,336
Network 11						
32–40 hrs/wk	77	51,759 / 51,480	34,728–83,200	109	47,316 / 46,800	33,280–70,720
40 hrs/wk	49	54,303 / 54,330	39,520–83,200	68	50,496 / 51,251	39,499–70,720
Network 12						
32–40 hrs/wk	70	51,374 / 50,003	35,984–81,266	85	46,056 / 44,990	29,736–72,800
40 hrs/wk	52	52,800 / 50,898	35,984–81,266	69	47,145 / 45,760	32,448–72,800
Network 13						
32–40 hrs/wk	33	49,968 / 49,982	33,280–66,976	46	44,410 / 44,782	21,299–58,240
40 hrs/wk	31	50,991 / 50,814	38,002–66,976	41	45,544 / 45,760	35,360–58,240
Network 14						
32–40 hrs/wk	88	53,077 / 52,853	39,499–75,504	93	48,547 / 46,800	35,984–72,176
40 hrs/wk	81	53,663 / 53,976	39,499–75,504	80	49,421 / 48,901	35,984–72,176

TABLE 12.
Annual Salary of Social Workers in Outpatient Dialysis Settings by End Stage Renal Disease (ESRD) Network
(See Appendix A: Map of ESRD Networks)

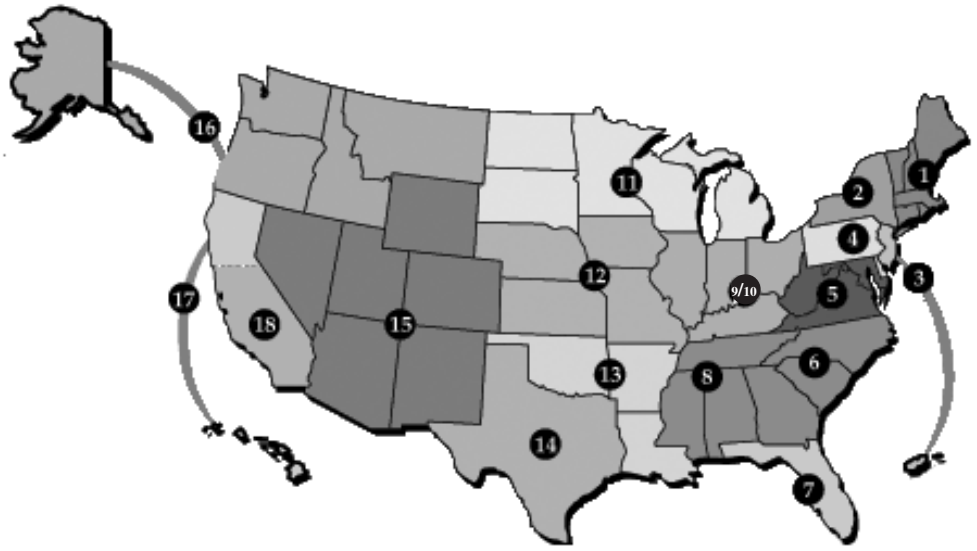
	2010			2007		
ESRD Network	***n***	**Mean / Median**	**Range**	***n***	**Mean/Median**	**Range**
Network 15						
32–40 hrs/wk	70	53,851 / 54,080	34,611–74,256	87	48,854 / 48,797	33,280–68,640
40 hrs/wk	57	55,313 / 54,080	39,520–74,256	66	50,464 / 50,336	37,440–68,640
Network 16						
32–40 hrs/wk	38	55,620 / 55,661	36,019–79,040	40	48,947 / 48,126	34,986–64,376
40 hrs/wk	26	58,042 / 57,325	39,770–79,040	20	50,501 / 49,754	34,986–64,376
Network 17						
32–40 hrs/wk	36	68,011 / 66,279	46,742–97,760	92	60,953 / 59,280	20,592–83,795
40 hrs/wk	29	68,903 / 66,518	52,000–97,760	70	63,164 / 60,790	20,592–83,795
Network 18						
32–40 hrs/wk	71	67,445 / 68,998	47,424–89,440	61	60,449 / 57,720	41,184–81,162
40 hrs/wk	57	69,781 / 69,222	52,000–89,440	53	62,005 / 59,987	41,350–81,162

TABLE 13.
Annual Salary of Social Workers in Outpatient Dialysis Settings by National Kidney Foundation (NKF) Region
(See Appendix B: Map of NKF Regions)

	2010			2007		
NKF Region	***n***	**Mean / Median**	**Range**	***n***	**Mean / Median**	**Range**
Region 1						
32–40 hrs/wk	200	56,997 / 56,085	33,670–83,491	136	52,676 / 52,208	29,952–75,650
40 hrs/wk	138	59,232 / 58,926	37,981–83,491	107	54,460 / 54,080	34,008–75,650
Region 2						
32–40 hrs/wk	264	51,897 / 51,168	29,994–79,040	257	47,008 / 46,800	26,270–74,880
40 hrs/wk	227	52,687 / 52,000	29,994–79,040	211	47,741 / 47,382	26,270–74,880
Region 3						
32–40 hrs/wk	250	51,050 / 50,586	33,380–83,200	384	46,555 / 45,874	29,120–72,800
40 hrs/wk	183	53,014 / 52,000	35,984–83,200	294	48,311 / 47,840	32,448–72,800
Region 4						
32–40 hrs/wk	131	52,307 / 52,000	33,280–75,504	147	47,630 / 46,738	21,299–72,176
40 hrs/wk	119	53,145 / 53,040	38,002–75,504	128	48,543 / 47,840	35,360–72,176
Region 5						
32–40 hrs/wk	210	61,461 / 60,320	34,611–97,760	271	55,494 / 54,018	33,280–83,795
40 hrs/wk	166	63,279 / 62,400	39,520–97,760	201	57,887 / 56,160	34,986–83,795

APPENDIX A.

Map of End-Stage Renal Disease (ESRD) Networks
(As of October 2010)



ESRD Network 1
Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island

ESRD Network 2
New York

ESRD Network 3
New Jersey, Puerto Rico, U.S. Virgin Islands

ESRD Network 4
Pennsylvania, Delaware

ESRD Network 5
District of Columbia, Maryland, Virginia, West Virginia

ESRD Network 6
Georgia, North Carolina, South Carolina

ESRD Network 7
Florida

ESRD Network 8
Alabama, Mississippi, Tennessee

ESRD Network 9
Kentucky, Indiana, Ohio

ESRD Network 10
Illinois

ESRD Network 11
Michigan, Minnesota, Wisconsin, North Dakota, South Dakota

ESRD Network 12
Missouri, Iowa, Nebraska, Kansas

ESRD Network 13
Arkansas, Louisiana, Oklahoma

ESRD Network 14
Texas

ESRD Network 15
New Mexico, Colorado, Wyoming, Utah, Arizona, Nevada

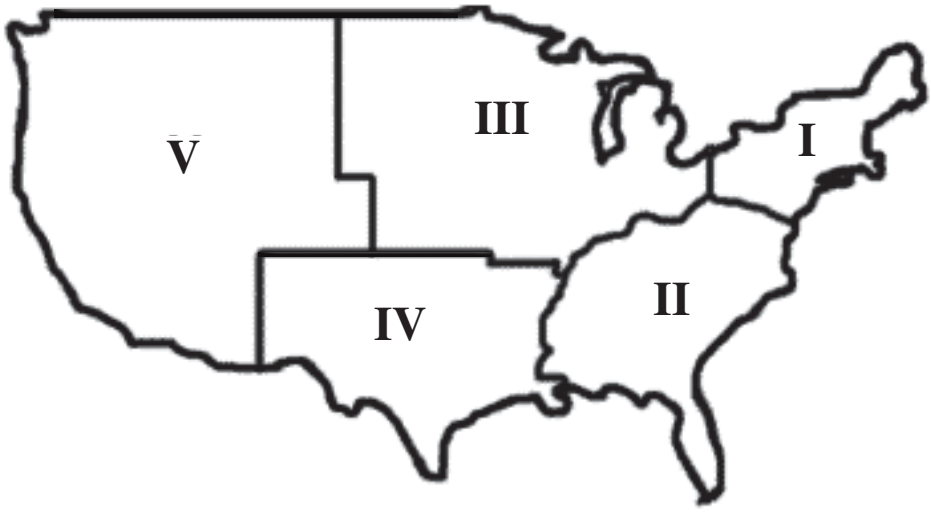
ESRD Network 16
Alaska, Idaho, Montana, Oregon, Washington

ESRD Network 17
Northern California, Hawaii, Mariana Islands, Guam, American Samoa

ESRD Network 18
Southern California

APPENDIX B.

Map of National Kidney Foundation Regions (As of October 2010)



Region I includes: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, *Africa, Canada (New Brunswick, Newfoundland, Nova Scotia, Ontario, Prince Edward Island, Quebec)*

Region II includes: Alabama, District of Columbia, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia, *Bahamas, Caribbean, Europe, Puerto Rico*

Region III includes: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin, *Canada (Manitoba, Saskatchewan)*

Region IV includes: Arkansas, Louisiana, New Mexico, Oklahoma, Texas, *Mexico, Central America, South America*

Region V includes: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming, *Asia, Australia, Canada (Alberta, British Columbia, Yukon Territory), Middle East*

Kidney Transplant Patient Employment: Vocational Training and Intervention by Use of an Impairment Rather Than Disability Model—The Job Club

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The present study is an attempt to test an intervention model that evaluates the impairment assessment model. N=342 kidney patients followed at a major Southwestern transplant program who had been transplanted from 2005–2009 were contacted. A total of N=27 unemployed kidney transplant recipients volunteered to participate in the Job Club Vocational Rehabilitation Program that was especially developed in a psychoeducational model in conjunction with local representatives of the state department of vocational rehabilitation services to address the needs of kidney transplant recipients. From pre- to post-Job Club there was significant ($p<0.05$) improvement in their knowledge gain with minimal changes in their social support and self-esteem. Quality of life improved in all areas, but saw significant improvement in role-physical and general health. Patients were able to secure a significant number of jobs in a vocational program done in a psychoeducational group setting that had the ability to both get patients back to work and do so without major life disruptions to their self-esteem or increased anxiety. There has also been an ongoing interest among patients and staff about vocational rehabilitation services.

INTRODUCTION

Previous research has produced innumerable articles addressing whether or not patients return to work post-transplant. This has been true for patients with kidney as well as other organ transplants. As early as the 1970s, some of the first attention to "rehabilitation" (i.e., employment) of kidney recipients was seen (Shapiro & Schwalbach, 1973; Chyatte, 1979; Naish, 1979). To this day, there has been continuing interest in employment of kidney patients and attempts to develop new evaluation paradigms and intervention methodologies (Callahan & Paris, 2009). However, regardless of the time frame, approach used, or the efforts of transplant teams, there has been consistent mention of less-than-ideal posttransplant employment rates (Cardinal et al. The Elderly Recipients Transplant Group, 2005; Callahan, 2005; Cooper & Paris, 1993; Evans, 1990; Flechner, Novick, Braun, Popowniak, & Steinmuller, 1983; Gross, Limwattananon, Matthees, Zehrer, & Savik, 2000; Griva et al., 2002; Hathaway et al., 1998; Mei et al., 2007; Niu & Li, 2005; Paris, 2006; Paris et al., 1998; Paris, Tebow, Dahr, & Cooper, 1997; Raiz & Monroe, 2007). Without fail, clinical research has reported higher numbers of patients *able* to return to work, than those who actually do. However, posttransplant employment remains an important measurement of surgical success.

The most obvious and important reasons given for this criterion for "success" are that employment is a significant indicator of functional benefit to the recipient and social benefit to the community (Callahan & Paris, 2009). Another reason has been cost-benefit analysis (Paris, 2006). The logic is that, given the high cost of the transplant procedure and drug maintenance regimen, do the benefits to society outweigh their costs? In this way, either the transplant recipient returns to work or the procedure merely prolongs the period of disability, coupled with increased costs to society. The reasoning goes that, through work, the patient again becomes a productive, contributing member of society. In other words, the individual patient then becomes a value to society rather than an ongoing burden. Although a rather cynical viewpoint, and lacking viable numbers supporting the argument, some outside of transplant medicine, have attempted to apply this logic to question the justification of the ongoing expense required to maintain transplant patients (Paris, 2006).

Areas virtually ignored in the discussion about the importance of employment have been psychological or philosophical rationales, which suggest an even greater justification—the person's mental health. For example, an authority no less than Sigmund Freud addressed employment: "No other technique for the conduct of life attached the individual so firmly to reality as laying emphasis on work; for his work at least gives him a secure place in a portion of reality, in the human community." (Packham, 2010). Although somewhat different in his view, Oscar Wilde reported work as the "curse of the drinking classes" (Chandler, 2010). Albert Camus suggested that "without work all life goes rotten" (Chandler, 2010). Probably one of the strongest arguments in favor of employment from the transplant literature was from Callahan (2005), who indicated that it was an important component in the reestablishment of a transplant recipient's identity and self-esteem. Whatever the logic, from the psychological to the humorous, it is universally agreed upon that work is important for the individual's attachment to and being considered as part of the larger community.

Why then, given the importance of employment, has there been so little improvement in the overall post-transplant patient work rates? Recent research conducted by the authors suggests that this may be due, in part, to the continued use of "disability status" as the standard by which patient physical capacity is measured (Callahan & Paris, 2009). In a study

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of 111 kidney recipients, it was found that employment decisions and perceptions may have been influenced by very subtle physical (including medication-induced) and emotional factors that were previously not quantifiable with standardized assessment criteria. This was first suggested by Paris (2006) in the study of heart and liver transplant recipients, where it was found that patients who did not meet Social Security disability criteria and had been determined by their physician as "not being disabled" were influenced in their employment and perception of employment by multiple mechanisms, which limited their ability in ways that had not been previously quantifiable, e.g., heat, sun exposure, medication reactions, etc.

When identified physical limitations were assessed using the American Medical Association's *Guides to the Evaluation of Permanent Impairment* (AMAGPI) (4th ed.) (1993), the picture as to why some patients did and did not go back to work became more evident (Paris, 2006). Though most patients were not disabled in the classic sense, as defined by Social Security criteria, individual patients continued to suffer impairment which, at the very least, complicated their work options, and although not reaching "disability" status, still helped to better explain patient employment decisions. In other words, as the percentage of physical impairment increased, the individual patient's perception of employability declined. This suggests that disability may be too narrowly defined by just organ function when the transplant patient's physical ability is also impacted by multiple underlying medical problems [i.e., level of impairment].

Further complicating a patient's employment options are the limitations imposed by disability status and its impact on the availability of Vocational Rehabilitation Services. Seldom will a patient be accepted for vocational training or education in the absence of documented disability. Given that most kidney patients have "impairments" which do not rise to full disability status, their potential for qualifying for job training is significantly lessened. In cases where patients may be motivated to work, their having been out of the workforce has resulted in the lessening of their employability because of decreasing job skills. Only through their involvement with vocational rehabilitation retraining and education can this problem be ameliorated.

Thus, the double-bind of disability as the primary measure of the kidney patient's physical status is that on the one hand it may be necessary to document the overall benefit to the patient of no longer being disabled; but in doing so, this process may give the impression that they are absent limitations which may limit the availability of vocational retraining and educational services. Services which may be the key to the patients regaining the skills necessary to become competitive in the job market and for any real chance for employability may become harder to obtain as physical limitations to employment decrease.

The current work is an attempt to overcome these inherent difficulties. It was designed and conducted on the basis of the assumptions that impairment, not disability, is the best measure of employability, and that the providing of and participation in vocational rehabilitation services are key to improving post-kidney transplant employment rates.

METHODOLOGY

The participants in this study were patients at Dallas Transplant Institute. Dallas Transplant Institute is a subsidiary of Dallas Nephrology Associates, employing over 60 nephrologists, and has a sufficient patient base to provide the number of participants required for statistical analysis. The proposed work is psychoeducational in nature and used a pretest/posttest design with nonequivalent groups following guidelines reported by Rubin and Babbie (2008). Due to the nature of the project, only a small segment of the patient base was appropriate for this study (those who remained unemployed post-tx (transplant)), thus, the proposed study would use a systematic sampling design.

After approval by the appropriate institutional review board (IRB), adult kidney transplant patients between the ages of 18 and 55 who met Texas Department of Assistive and Rehabilitative Services (TDARS) requirements for acceptance and who had been transplanted at least 3 months were invited to come to Job Club. After exclusion criteria were reviewed, information was sent to 342 people who had transplants from 2005 to March 2009. It was not known if these patients were currently employed. Additionally, as other patients saw the signs in the lobby of DTI or were referred by physicians or nurses in the clinic, they were invited to future Job Club sessions, if they met criteria.

The group size was kept to below 8 participants so that discussion was easily achievable. There were four Job Club sessions offered. Each session consisted of 4 sequential meetings that contained sequential content. The same group was asked to attend each 4-meeting session.

Prior to the beginning of the sessions, the Principal Investigator met with representatives from the TDARS counselors and an Area Work Incentives Coordinator to explain Job Club and the desired outcomes. All were very motivated and supportive.

It was hoped that a minimum of 20 recipients who met the selection criteria would agree to participate and complete the series of four training sessions. Given a response of 27 who agreed to participate, and given that there was a limit of less than 8 participants per group, this necessitated that each of the training sessions be conducted on four separate occasions. Each of the sessions included the same content per Job Club protocols and was led by the same individuals.

At the time of initial contact, letters of invitation and informed consent were given to candidates, which described the proposed study, its aims, and patients' right of refusal to participate without jeopardizing their medical care at the

Dallas Transplant Institute (see *Addendum 1*). Those who agreed to participate were asked to complete the consent form and return it to the PI. Following this, the patient was contacted by the PI and randomly assigned to a group.

At the initial and final meetings, demographic information was gathered, including age, gender, marital status, education level, how long since tx, number of txs, pre- and post-tx employment status, type of pre- and post-tx employment, and their perception of employability. After completion this was included with medical test results and physician or physician assistant assessment per the American Medical Association's *Guides to the Evaluation of Physical Impairmen*t (6th ed.) guidelines (2008). This allowed for comparison of the results with the existing literature to help determine the effectiveness of the Job Club intervention model. Additional standardized surveys were completed which measure quality of life, social support, and self-esteem (i.e., MOS SF-36, MOS Social Support Scale, and Self-Esteem Rating Scale, respectively).

Quality of life was measured by use of MOS Short-Form Health Survey (SF-36), a measure of health perceptions and functioning (Ware & Sherbourne, 1992). It consists of 36 items measuring perceived physical and mental health with eight domains: physical functioning, role-physical, bodily pain, general health, vitality, social functioning, role-emotional, and mental health. Adequate convergent and discriminant construct validity and internal consistency was documented.

The MOS: Social Support Scale is a 19-item multidimensional scale which measures social support in patients with severe medical illnesses (Sherbourne & Stewart, 1991). It consists of four subscales: emotional/informational, tangible, affection, and, social interaction. It is highly correlated with other measures of social support, mental distress, and use of health services. It also has excellent internal consistency and factorial validity.

The Self-Esteem Rating Scale (SERS) is a 40-item instrument that was developed to provide a clinical measure of self-esteem that can indicate not only problems in self-esteem but also positive or non-problematic levels (Nugent, 2004). It also has excellent internal consistency and factorial validity.

The Job Club consisted of four regularly scheduled meetings:

The goals of Meeting 1 were to: (a) take the Pre-Test and surveys; (b) create a safe place to share and learn; (c) establish common ground and make a connection with one another; and, (d) prepare each participant to receive the information prepared for them in the coming sessions.

Meeting 2 was designed to reduce the patients' anxiety about returning to work by introducing and discussing the many work incentives that are offered by Social Security. This meeting included an Area Work Incentives Coordinator (AWIC) coming to speak with the group to discuss work incentives from Social Security. She explained work incentives for Supplemental Security Income (SSI) and Social Security Disability Insurance (SSDI). She clarified the difference in Social Security benefits, identified problems people had, and then explained various incentives appropriate for them individually.

Meeting 3 was designed to provide support to patients, and to help them understand that they do not have to search for employment or training on their own. Social workers at DTI have developed collaboration with specific TDARS counselors who understand transplant patients' needs. Two of these counselors attended Meeting 3 of each group. They discussed the services offered by TDARS and how the referral and intake process worked. The assessment process was discussed in detail and how this differed with each individual.

Meeting 4 included discussion of what was learned in Meetings 1 through 3. This meeting allowed participants an opportunity to make notes, ask for further information, discuss what they were most interested in from the meetings, and share their future plans. When possible, a previous user of TDARS services was present so that they could relate their experience using DARS. Each patient was asked to complete standardized posttests.

All data was formatted and analyzed using of the most recent version of SPSS statistical software. All tests of statistical significance had a margin of error of 5%. The limited number of bivariate significance tests further limited the risk of Type 1 error.

RESULTS

The profile of those who chose to participate in the Job Club program could best be described as middle-aged, married, Caucasian males with a high school diploma (see Table 1).

Table 1

Job Club Participants' Demographic Profiles

Mean Age (SD)	44.6 (9)
Mean Education (SD)	12.4 (3)
Gender	
Male	17 (63%)
Female	10 (37%)
Ethnicity*	
Caucasian	14 (56%)
African American	7 (28%)
Hispanic	3 (12%)
Native American	1 (4%)
Marital status	
Married	19 (70%)
Single	7 (26%)
Divorced	1 (4%)

* (*n*=1 missing)

At the time of Job Club, none of the 27 participants were employed full time. However, 19% (5/27) had secured some form of temporary employment posttransplant prior to Job Club. The posttransplant medical status for those who attended Job Club was primarily disabled per Social Security guidelines (48%; 13/27), with most believing they were physically able to work prior to program attendance (63%; 17/27) (see Table 2).

Table 2

*Posttransplant Employment Status by Employment Perception Prior to Job Club Attendance**

	Employed	Students/ Homemakers	Disabled
Physically Able	4	3	10
Not Physically Able	1	0	3

*(*n*=2 missing)

Of the 27 Job Club participants, at the time of their initial meeting: 20% (5/25) had 0–14% impairment; 12% (3/25) had 15–34% impairment; 28% (7/25) had 35–59% impairment; and 28% (7/25) had 60–95% impairment per physician assessment of AMAGPI guidelines (see Table 3).

Table 3

*Posttransplant Patient Evaluation by Most Recent Physician Assessment of AMA Impairment Level Prior to Job Club Participation**

	Class 1 0–14% Impairment	Class 2 15–34% Impairment	Class 3 35–59% Impairment	Class 4 60–95% Impairment
Number of Patients	5	3	7	7

*(*n*=2 missing)

Those who attended all the Job Club sessions saw significant improvement in their knowledge levels of the rules and regulations regarding trial work period, keeping Medicare while employed; their return to work options, services available through the TDARS, and the work incentives available to them (see Table 4).

Table 4

Pre- and Post-Job Club Knowledge Level

	Trial Work Period	Keeping Medicare	Return-to-Work Options	Rehabilitation Services Available	Anxiety	Work Incentives
Prescore (mean)	2.1*	1.6*	1.5*	1.5*	2.9	1.9*
Postscore (mean)	4.2	4.0	4.0	4.1	2.8	4.6

*(sig <p 0.05)

When considered on the basis of their perception of social support, those who attended the Job Club found improved or similar social support in most areas, but reported significant improvement in the area of emotional/informational support (see Table 5).

Table 5

Pre- and Post-Job Club MOS Social Support Scale

	Emotional/ Informational	Tangible	Affection	Social Interaction
Prescore (mean)	3.6 *	4.2	4.6	4.1
Postscore (mean)	4.1	4.2	4.5	4.3

*(sig p< 0.05)

There were no significant differences found with regards to reported self-esteem pre- to post-Job Club attendance (see Table 6).

Table 6

Pre- and Post-Job Club Self-Esteem Rating Scale

Prescore (mean)	61.2
Postscore (mean)	61.9

When measuring their quality of life as it related to the period of time during Job Club, attendees reported improvement in all areas except physical functioning. There was, however, a significant improvement in their perception of their ability to fulfill their responsibilities associated with employment, and improved general health functioning (see Table 7).

Table 7

Pre- and Post-Job Club MOS SF-36 Quality of Life Scores

	Prescore Mean	Postscore Mean
Physical Functioning	64.6	62
Role-Physical	32.5	41.3*
Bodily Pain	56.7	65
General Health	40.1	48.5*
Vitality	67.7	73.4
Social Functioning	60.9	66.5
Role-Emotional	60.3	65.3
Mental Health	40.3	44.6
Overall	198	207

*(sig p<0.05)

For those who participated in Job Club, 4 used individual services of AWIC, and 11 were referred to TDARS. The employment results from the Job Club showed that, after collapsing Classes 1 through 3 there was significant improvement in employment, per Chi-Square statistical analysis (see Table 8).

Table 8

*Post-TX Patient Employment Post-Job Club Attendance by Most Recent Physician Assessment of AMA Impairment Level**

	Class 1 0–14% Impairment *n*=6	Class 2 15–34% Impairment *n*=4	Class 3 35–59% Impairment *n*=8	Class 4 60–95% Impairment *n*=7
Employed	1	2	2	0
Unemployed	5	2	6	7

*(*n*=2 missing)

DISCUSSION

The primary purpose of kidney transplantation is patient rehabilitation (Manninen, Evans, & Dugan, 1991). That was true in the early 1990s, and possibly more so today, given the dramatic medical improvements in the past 20+ years since that research was published. One aspect that has changed has been the criteria by which one measures "rehabilitation" success. No longer is it simply the removal or absence of medical disability.

In 2004, the AMA adopted a policy statement on patient employment which stated:

> The AMA encourages physicians everywhere to advise their patients to return to work at the earliest date compatible with health and safety and recognizes that physicians can, through their care, facilitate patients' return to work.

In response, Talmage and Melhorn (2005) asked, somewhat rhetorically, that if the *Physicians Desk Reference* (PDR, 2004) had a warning that stated, "'This drug is detrimental to your patients' mental, physical, and social well-being,' would physicians prescribe it?" They went on to ask an even more important question: "Is it really true that being out of work is hazardous to one's health?" (p. 3). After a very exhaustive review of the scientific literature, Talmadge and Melhorn (2005) concluded that there was overwhelming evidence to support the idea that unemployment was, in fact, hazardous to one's health.

The transplant literature has documented that recipients who do not return to work will rate more poorly on almost every psychosocial measure for which they have been evaluated. As laudable as patient employment is, however, it remains an elusive goal.

The current work was an attempt to test an alternative approach to patient employment education and treatment, based on discrete and incremental limitations [i.e., impairment] they may be experiencing, rather than the more traditional categorical method of disabled/not disabled approach. Given the current findings, there is some support for the idea that there may be merit in the argument that when the patients' vocational programs look at discrete and incremental limitations, they may be more successful in getting patients back to work.

With the current cohort, five participants were employed post-Job Club and 3 out of the 27 were in the process of job placement following referrals from Job Club. However, it is important to recognize, as Life Options has noted (1993), that creating an atmosphere of empowerment and encouragement promotes rehabilitation. Therefore, Job Club continues to promote rehabilitation at Dallas Transplant Institute.

Literature suggests that 30–50% of patients go back to work without assistance from vocational rehabilitation (Paris et al., 1992; Paris et al., 1993; Paris, Tebow, Dahr, & Cooper, 1997). This has been true with lung recipients as well, regardless of their nationality [i.e., American vs. Canadian] (Paris et al., 1998).

This research focused on concern about how other psychosocial areas would be impacted by such an intensive program. An equally important component was the potential psychosocial harm and/or benefit that could have occurred as measured by social support, education, self-esteem, and quality of life.

The reason why this was an important question is related to some suggestion from previous research which reported that an aggressive employment program could, and in fact, had resulted in patients feeling less supported by their families and suffering increased stress (Paris et al., 1997; Paris, 2006). Unlike previous research, there was not a reduction in perceived social support by the patients' attendance at Job Club. One area, emotional/informational, saw a significant improvement. This may be potentially explained by the significant educational component as well as group attendance which supported a stronger positive emotional reaction. From a practical standpoint, the Job Club approach differs dramatically from other employment programs where the patient may simply be told to seek out vocational rehabilitation services, that the program would no longer support their disability claims, etc. The Job Club approach is based on an acknowledgment that the individual patient needs information provided in various formats, as well as significant support in working through the process of rehabilitation.

In that sense, education may have been one of the key components that contributed to the program's success. It was found that when patients were asked, they found that their knowledge level had increased significantly in the areas of trial work period, keeping Medicare, return to work options, rehabilitation services available, and work incentives. This was accomplished with no significant increase in their anxiety level from pre- to post-Job Club attendance.

Somewhat surprisingly, Job Club saw only marginal improvement in patient self-esteem. Looking at individuals who found employment and those who did not, there was not any clear trend that could be identified as having any influence on self-esteem, either in a positive or negative direction. One factor could be that self-esteem would have improved if the scale had been given after the person found a job rather than after the classes. It was hoped that the peer support from the group would increase self-esteem. Although this was a very small cohort of patients, regrettably, there is no data to clearly explain this occurrence, and all the rationales are pure speculation at this point in time.

The quality of life responses were of particular interest. Overall, patients reported improved functioning in the areas of having less bodily pain, more vitality, better social functioning, improved emotional state, and better mental health. They reported significant improvement ($p<0.05$) in their perceived ability to work (i.e., role-physical), and general health. The only area that was reported as having declined was their physical functioning. Since creatinine clearance and AMAGPI impairment level were the only measures of physical ability, and those were assessed on only one

occasion, this limits any real explanation of these results beyond conjecture or speculation. It is certainly encouraging to have found a potential way to get patients involved in a fairly intensive educational program, given that so many of them made major changes by beginning work with vocational rehabilitation services and that some secured employment. The quality of life survey was given twice within a 4-week time span, at the beginning and end of the program. A more accurate measurement of quality of life improvement for those participants who became employed may have been to provide another survey at the time of employment. However, due to protocol, that was not possible. The current group of patients did see improvement in the quality of their lives, but it was limited in scope to two significant areas in the time frame given (perception of ability to fulfill responsibilities associated with employment, and improved general health functioning).

What, then, can be said about the importance of Job Club? As interesting and encouraging as these findings may be, they should be approached rather cautiously. First, this was a small cohort of patients from one transplant program. Second, the type of job, benefits secured, etc. were not tracked or reported. Third, there is no way to guarantee that this group of participants were demographically similar to their fellow patients, or whether they were a self-selected group who may have gone back to work anyway. Fourth, in the absence of replication, this program should still be considered as experimental.

CONCLUSION

So what, then, can be taken away from this work? The most important finding here is not necessarily that patients were able to secure jobs, but rather that a vocational program done in a group setting, has the potential to both get patients back to work and do so without being associated with major life disruptions to their self-esteem, increased anxiety, or poorer quality of life. Patient reports also suggest the importance of psychoeducation. From a clinical perspective, this suggests that what we know as social workers is really true, that the key element in client treatment is psychoeducation. Having a group format with multiple meetings certainly provides the forum for the greatest opportunity to learn and gain social support from peers experiencing similar life situations.

Certainly the results are encouraging, but there are still many unanswered questions. The authors hope that the current work will help to provide some guidance on how to better prepare transplant recipients in their attempts to secure employment. This program needs further refinement and replication to clarify exactly what occurred; however, a new and easily achievable format in transplant rehabilitation seems possible.

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ADDENDUM 1

DTI

Dallas Transplant Institute

3604 Live Oak, Dallas, Texas 75204 (214) 358-2300; Fax (214) 579-6976

May 21, 2009

In an effort to provide better *return to work services* for interested patients, we will be offering a "Job Club" at Dallas Transplant Institute during the months of July, August, September, and October. The ***Job Club*** will consist of 4 classes focused on returning to work. The classes will include information on

1. Support from DTI social workers and other ***Job Club*** participants
2. Work incentives from Social Security
3. Rehabilitation services from the Texas Division of Assistive and Rehabilitation Services
4. The opportunity to speak with other patients who have been through this experience.

Since this will be the first time ***Job Club*** will be offered at DTI, we are doing this as part of a project grant called: "Kidney Transplant Patient Employment: Vocational Training and Intervention by Use of an Impairment Rather than Disability Model." As such, we will be asking those who join us to complete 3–5 surveys so that we can measure the usefulness of what we are doing and make needed changes to improve ***Job Club***. The surveys you complete will be coded with a number so that your name will not be associated with the surveys. The surveys will then be kept within the social work department at DTI and will be under lock and key and password protected.

Once ***Job Club*** is completed, the coded information will be provided by me in a confidential manner to my co-Principal Investigator, Dr. Wayne Paris at Southern Illinois University at Carbondale, School of Social Work for data entry and analysis. Once analyzed, the data will be used by us for professional presentations, publications, and future grant proposals. This study will be funded in part by the National Kidney Foundation Council of Nephrology Social Workers and the Society of Transplant Social Workers.

Your participation is entirely voluntary and refusal to participate will not affect your ongoing care at DTI. If interested, please print your name, sign and return the form in the enclosed envelope and someone will be in contact with you within a month.

___Yes, I wish to participate. My name is

_____ (Print)

Date _____Signature _____

Thank you.

Mary Beth Callahan, ACSW/LCSW (214) 358-2300, ext. 6290

Using the MATCH-D to Document the CMS Requirement to Offer All Modalities

Dori Schatell, MS, and Beth Witten MSW, ACSW, LSCSW

The CMS Conditions for Coverage for dialysis facilities that took effect on October 15, 2008, require that patients:

> *Be informed of all treatment modalities and settings, including but not limited to, transplantation, home dialysis modalities (home HD, IPD, CAPD, CCPD), and in-facility HD. The patient has the right to receive resource information for dialysis modalities not offered by the facility, including information about alternative scheduling options for working patients.*

The Method to Assess Treatment Choices for Home Dialysis (MATCH-D) can help you and your interdisciplinary team with the process of assessing patients for home modalities and documenting this in the plan of care for the patient record.

The MATCH-D was developed by a multidisciplinary and international group of home dialysis experts. It is a free downloadable tool available from the Home Dialysis Central website**: www.homedialysis.org/match-d**.

The five-page tool includes how and why the MATCH-D was developed, brief user instructions, a list of tool reviewers, one page with suitability criteria for self-peritoneal dialysis, one page for *self*-home hemodialysis, and a notes page for each. Suitability criteria are divided into three categories: "strongly encourage" (green column with green header for GO), "encourage after assessing and eliminating barriers," (green column with yellow header for CAUTION) and, finally, "may not be able to do (or will require a helper)" (red column with red header for STOP). Each criterion has a check box next to it for documentation purposes.

Educating About All Modalities

CMS added the requirement to inform patients about all modalities *and where to get them* explicitly to encourage increased use of home modalities. Currently, the eight treatment choices include:

- Transplant (living or deceased donor)
- Peritoneal dialysis (PD—manual or using a cycler machine at night)
- Standard in-center hemodialysis (HD—3–4 hours, 3 days a week)
- Nocturnal in-center hemodialysis (8 hours, 3 nights a week)
- Nocturnal home hemodialysis (8 hours, 3–6 nights a week)
- Short daily home hemodialysis (2–3 hours, 5–6 days a week)
- Standard home hemodialysis (4–5 hours, 3–4 days a week)
- No treatment

Of these, the most recent *United States Renal Data System Annual Data Report* (2009) reveals that of 527,283 people with ESRD, 158,739 (30.1%) had a functioning transplant. Among the 368,544 people doing some form of dialysis, 338,109—***91.7%***—were doing standard in-center HD. Given that eight different studies from around the world have consistently found that when patients receive education about their dialysis options, 45–60% will choose a home treatment, (Schreiber et al., 2000; Groovaerts, Jadoul, & Goffin, 2005; Mehrotra, Marsh, Vonesh, Peters, & Nissenson, 2005; Prichard, 1996; Marron et al. Spanish Group for CKD, 2006; Wuerth, 2002; Gomez, Valido, Celadilla, Bernaldo de Quieros, & Mojon, 1999; Manns et al., 2005) this badly-skewed U.S. distribution is akin to 92% of cancer patients using only radiation (not surgery or chemotherapy) and clearly demonstrates a failure to properly educate this chronic disease population. In fact, this 45–60% figure should serve as a benchmark for our own modality education efforts.

Given the profound impact of an ESRD modality on the patient's lifestyle, it is vital that the renal community move beyond the "default" setting of standard in-center HD for all. Transplant is, of course, 100% portable kidney replacement, with the potential downsides of surgery, nonfunction or failure, and devastating potential side effects from the immunosuppressant medications, such as diabetes or cancer. Survival with a transplant is typically reported to be far superior to standard HD—with triple or more life expectancy.

Compared to standard in-center HD, PD offers near-continuous renal replacement. This allows patients to avoid the "ups and downs" of thrice-weekly fluid removal, protects the heart, and nearly eliminates the unpleasant (and hazardous) symptoms of hypotension, such as painful muscle cramps, vomiting, headaches, etc. At the same time, PD allows far more schedule control, easier travel, and a more normal diet and fluid intake than standard HD, with fewer medications. Downsides include the need for a catheter in the abdomen or chest (presternal PD catheter), associated body image concerns, potential weight gain, and the need to store a month's worth of bulky supplies. While most studies show about equivalent survival between standard HD and PD, a recent abstract presented at the 2010 National Kidney Foundation Spring Clinical Meetings in Orlando, FL, reported "consistent survival superiority" for PD—even among patients who also had diabetes (Hechter et al., 2010).

Nocturnal HD offers patients 2 (if done 3 nights a week) to 4 (if done 6 nights a week) times as much renal replacement therapy as standard HD, while taking minimal time out of the day. In contrast to harsh, rapid, standard treatments, nocturnal HD is very slow and gentle, and does a far more effective job of removing fluid and cleaning the blood, which protects the heart in the short-term, and may protect the nerves, bones, and joints in the long-term. Most people who begin nocturnal treatment are able to stop taking blood pressure medications and phosphate binders—home nocturnal HD patients may even need phosphate *supplements*. They can eat a normal diet and drink normal amounts of fluid, with few limits. They report more energy (Bugeja et al., 2009), better sleep (Beecroft et al., 2009), and better sexual function, though this has not yet been formally studied. Studies have found that survival on nocturnal HD is about equivalent to that of deceased donor transplant—about triple what would be expected of the same patients on standard HD (Pauly et al., 2009; Johansen et al., 2009). Downsides include the challenge of sleeping while blood is outside the body (bedwetting alarms can help alleviate the fear of bleeding incidents), the need for a partner if the clinic requires one, or perhaps the inconvenient schedule of in-center nocturnal HD, typically about 9 p.m. to about 5 a.m.

Short daily HD treatments may be easier to fit into busy lives. It has also been associated with survival that approximates deceased donor transplant (Kjellstrand et al., 2008). A portable machine that weighs 75 lbs and can be put in the trunk of a car or taken on an airplane can make travel easier (nocturnal treatments may also use the smaller NxStage machine). Downsides include the need for a partner if your clinic requires one, and time taken out of the day for set-up, treatments, and cleanup.

Standard home HD would seem to have all of the disadvantages of standard in-center HD *and* home HD. However, one well-done study found that the survival of conventional home HD patients vastly exceeded that of standard in-center patients matched for age, comorbidities, hypertension, smoking habits, and vascular disease: 5, 10, and 20-year survival rates were 93%, 72%, and 34% with standard home HD—vs. 64%, 48%, and 23% with standard treatments (Saner, Nitsch, Descoeudres, Frey, & Uehlinger, 2005).

If standard in-center HD was a superior treatment, it would be less essential for us to educate patients about all of their options. However, it is arguably the *least* effective treatment option for patient survival, the one with the most barriers to work, and it comes at the *greatest* possible cost. Therefore, it is in the best interests of patients, providers, and payers to encourage increased use of transplant and the various home therapies.

Using the MATCH-D in Patient Assessment and the Patient Plan of Care

Use the MATCH-D as a guide for the interdisciplinary team to review the chart and talk with the patient to identify factors that may help predict likely home success or alert them to challenges that need to be addressed.

First, look to the green column with the green heading. Point out lifestyle advantages of home therapies that seem to be a good fit for a patient's desires. Many patients fear the unknown (home dialysis) and feel secure in the clinic with staff on hand. A "neutral" presentation of options will not help patients understand how their day-to-day lives can be improved with longer, more frequent, or more continuously delivered therapy. This is likely the reason that many programs are not reaching the 45–60% home treatment choice rate found in studies. Focus patient education on *lifestyle* considerations that are priorities for your individual patients: work, travel, caring for loved ones, fear of needles, a love of good food, sexuality and fertility, regaining a sense of personal control, etc. The most important factor in any patient's choice of a home therapy is motivation. A patient who *wants* to succeed will overcome barriers and find a way.

Next, address any barriers identified in the second column. Assist devices for the blind, visual alarms for the hearing impaired, low-literacy training materials, and other solutions are suggested for both PD and home HD. Your interdisciplinary team may be able to identify additional solutions for individual patient challenges. If a patient truly wants to go home, it is rewarding for the entire team to help make that happen.

Finally, end with the red column. Some patients may not be able to independently perform any type of home therapy. In this case, think "outside the box." In our experience answering phone calls and e-mails from the Home Dialysis Central website (www.homedialysis.org), we find that there are two main groups of people who do home dialysis:

1. Relatively healthy, mobile, independent sorts who want to work or travel.
2. Frail or morbidly obese patients with multiple comorbidities whose families prefer to care for them at home rather than transport them to and from a center three times a week. This includes patients who require ventilator support or have tracheotomies who may be refused admittance to dialysis clinics, but whose families would be willing to learn home dialysis if training can be offered in the home (as allowed by CMS). Or, families may hire a trained helper to treat their loved one at home if the resources are available.

Some of the patients in this latter group may well do better at home than in a center getting standard treatments, if psychosocial support is available. The red column will serve to rule patients out as independent home candidates or as home candidates at all if other supportive factors are not in place and cannot be arranged.

Use the check boxes in each column and the notes pages to document your findings and your discussions with the patient. Sign and date the document and have the patient (or a family member if the patient is unable) sign as well. Keep this document in the patient's chart. CMS surveyors will recognize your educational efforts when you have proof that a conversation occurred. Once is not enough, though; adults require repetition to learn. If a patient's circumstances change and his or her current modality is no longer a good fit, it's time to revisit the treatment options choices, provide education, and repeat the MATCH-D discussion.

Using the MATCH-D for Quality Assessment and Performance Improvement (QAPI)

If an analysis of modality choices at your clinic post-education is much lower than 45–60%, you may want to bring this disparity to the attention of your QAPI program. This should promote a team discussion of root cause analysis, including such topics as what education is provided, how education is provided, how patient understanding is assessed during and after education, and even whether there is an unidentified bias toward standard in-center hemodialysis among physicians, clinic personnel, or patients. Based on the results of this analysis, the interdisciplinary team can brainstorm ways to improve education for patients and promote home dialysis for patients who are good candidates.

CONCLUSION

The Medicare ESRD program was established on the promise that if funds were allocated to make dialysis available to those who needed it, those with kidney failure could be rehabilitated to self-sufficiency. To date, the ESRD program has failed to live up to that promise. Today, the renal community can provide more opportunities to those needing dialysis by providing fact-based education about *all* options for treatment, including their relative impact on lifestyle and survival. The MATCH-D is a user-friendly tool designed to help dialysis clinic staff dispel their own and their patients' commonly held myths, to identify patients for home dialysis who may not have been considered or considered themselves candidates before, and to document this discussion and planning. Considering patients for home dialysis first could benefit our patients, our clinics, and society.

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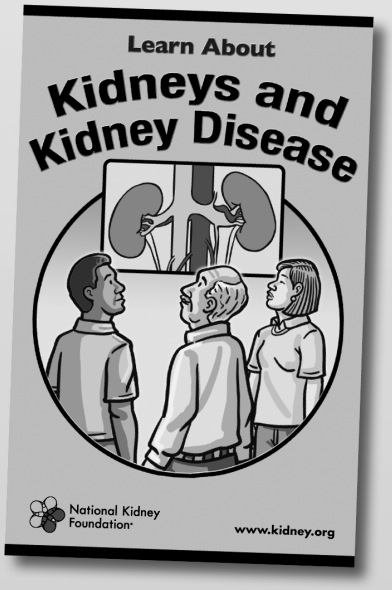

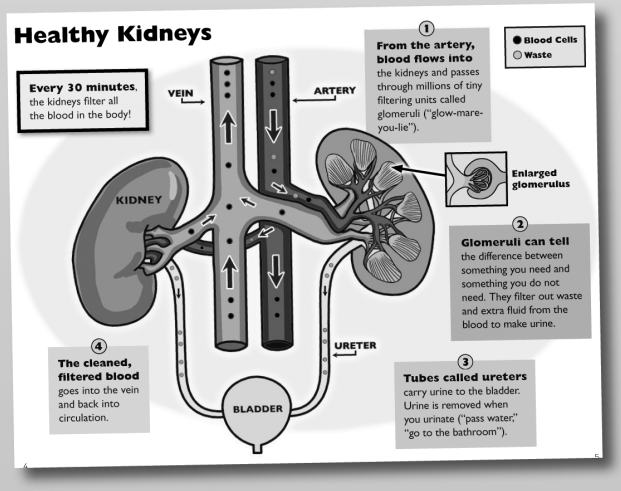

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Clinical Case Review: Returning to Dialysis after Transplant: A Nearly Silent Matter

Lara Tushla, MSW, LCSW, NSW-C, Rush University Medical Center, Chicago IL

While looking for resources for patients and healthcare providers to assist when a transplanted kidney has failed, I found a significant lack of literature. This article will review transplant survival statistics which underscore the scope of the subject and coping strategies identified in the literature. There is also a call to professionals for more attention to this matter.

In 2009, the National Kidney Foundation staff requested resources for dialysis patients and staff who are dealing with a person with kidney transplant failure. As I understood it, this was in response to a request from a dialysis unit about a specific patient situation. An internet search yielded no results and a Medline search did not turn up much either. The references I found were about the timing of resuming treatment, whether to continue immunosuppressant medications, and when a transplant nephrectomy was warranted. To meet the immediate need for this and other possible requests, I wrote an article geared for patients which was published in the Summer 2009 issue of the *Transplant Chronicles*, "When a Transplant Fails," based on my experiences with the kidney transplant team at Rush University Medical Center, Chicago, IL.

I was intrigued at the apparent paucity of information about this common occurrence. After being asked to present on this topic at 2010 National Kidney Foundation Spring Clinical Meetings, I did more research on the matter through MEDLINE, PsychINFO, and Google.

Scope of the Subject

The truth is, if a transplant recipient lives long enough, every transplanted kidney will fail and most recipients will return to dialysis sooner than they had hoped. According to the *USRDS 2009 Annual Data Report: Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the United States*, the conditional half-life of a kidney transplant from a deceased donor is 13 years. The conditional half-life of a kidney transplant from a living donor is 23 years. However, Meier-Kreische, Schold, and Kaplan (2004) indicate that for transplants performed in 1995, the half-life was actually 8 years. Whether the kidney lasts 8 years or 13 years or 20 years, the transplant will probably not last as long as the patient would like.

Adjusted Graft Survival, Deceased Donor, Non-ECD Kidney Transplants Survival at 3 Months, 1 Year, 5 Years, and 10 Years

	3 months	1 year	5 years	10 years
	Tx 2006–2007	Tx 2006–2007	Tx 2002–2007	Tx. 1997–2007
Total transplants (% grafts working)	20,298 (95.4%)	20,298 (91.2%)	55,513 (69.1%)	94,990 (41.8%)

Note: From U.S. Department of Health and Human Services, Health Resources and Services Administration, Healthcare Systems Bureau, Division of Transplantation (2009). *2009 Annual Report of the U.S. Organ Procurement and Transplantation Network and the Scientific Registry of Transplant Recipients: Transplant Data 1999–2008*. Rockville, MD: Author. From **http://www.ustransplant.org/annual_reports/current/default.htm**

Adjusted Graft Survival, Living Donor Kidney Transplants Survival at 3 Months, 1 Year, 5 Years, and 10 Years

	3 months	1 year	5 years	10 years
	Tx 2006–2007	Tx 2006–2007	Tx 2002–2007	Tx. 1997–2007
Total transplants (% grafts working)	12,462 (98.1%)	12,462 (96.4%)	38,350 (81.4%)	62,864 (58.9%)

Note: From U.S. Department of Health and Human Services, Health Resources and Services Administration, Healthcare Systems Bureau, Division of Transplantation (2009). *2009 Annual Report of the U.S. Organ Procurement and Transplantation Network and the Scientific Registry of Transplant Recipients: Transplant Data 1999–2008.* Rockville, MD: Author. From **http://www.ustransplant.org/annual_reports/current/default.htm**

Tx = transplant

These are good odds. Transplant centers share their survival statistics (graft and patient) with patients and how those compare nationally but, in my opinion, most of the focus is on the successes. Based on these charts, there are nearly 2,000 transplanted kidneys which fail in the first year and by 10 years over 75,000 transplanted kidneys have failed.

That is a lot of people starting dialysis after a failed transplant.

Patient-Focused Article

A Google search found only one reference specifically for patients about starting dialysis after transplant. The article from *aakpRENALIFE* (Bodziak, March 2002), was entitled "I Have to Begin Dialysis Again after Several Years as a Transplant Patient. Are There Any Issues or Concerns I Should be Aware of Before I Start Dialysis?" The doctor responded to the question by discussing the timing of resuming therapy, lifestyle changes (diet and fluid adjustments), medication management (resumption of dialysis medications and discontinuation of immunosuppressants), and the possible need for transplant nephrectomy and getting listed for another transplant.

Professional Literature Search

Most of the articles I found on the MEDLINE database were related to medical management of a person starting dialysis after a failed transplant. There were some articles on PsychINFO that had a psychological or psychosocial focus, however many of them were quite dated.

The range of emotional responses noted in the articles included: shock, depression, guilt, grief, recognition that the organ wasn't going to last forever (not shocked), relief, gratitude, and desire for re-transplantation. These seem consistent with what I have seen in my patient population.

Also not surprising are the factors which impact the emotional response: length of time the transplant functioned, type of donor (deceased or living), complications after transplant, episodes of rejection, sense of "fault," support system, and coping style.

Challenges to the Renal Community

In 2008, Messa, Ponticelli, and Bernardinelli said, "A great number of uncertainties are still present, including the handling of these patients. This is mainly due to the fact that during the transition from transplant to dialysis, the patient with a failed graft enters a no-man's land, where all and none of the physicians involved (transplant nephrologists, transplant surgeons, dialysis nephrologists) feel to have the primary clinical charge of the patient. For this reason, very scattered data and no trials at all have been produced on the topics…" He goes on to say that some of this is attributable to "…the reluctance of both patient and doctor to accept the irreversible failure of the graft."

Depression

One area of primary concern among nephrology social workers is the factors which can make a person more susceptible to depression. Would starting dialysis after failed transplants increase the rates of depression?

Akman, Ozdemir, Sezer, Micozkadioglu, and Haberal (2004) focused on rates of depression before and after transplant, including a group of patients who had failed transplants. Of their 88 participants, 31 had failed transplants. Dialysis patients who had failed transplants had the highest rates of moderate or severe depression. Of particular note, the shorter the kidney worked, the higher the stage of depression. Their explanation was that people who had their kidney for a long time, likely had more complications and had time to adjust to the idea of needing dialysis. They indicated that people who had early transplant failures had more depression due to the unexpected nature of the loss. This study also showed that having a strong support system seemed to decrease the rates of depression.

Gill and Lowes (2009) reported that depression associated with graft failure is usually temporary and generally improves as the physical health improves. The primary source of depression was the "loss of imagined future."

Factors Which May Impact the Transition to Dialysis

- **Sense of Vulnerability:** A sense that the kidney may not work "forever" can come from early or serious episodes of rejection, multiple hospitalizations, frequent infections, etc. Nadel and Clark (1986) showed that "…living through one or more rejections may impart an undeniable experience of vulnerability." These episodes of illness or rejection may serve to warn the person that the kidney may not have a long life expectancy. As above, Akman et al. (2004) connect a shorter period of kidney function with higher rates of depression because of the unexpected nature of the loss.
- **Type of Donor:** In two of the articles and in my experience as a transplant social worker, the type of donor may impact a person's transition to dialysis. Two of the articles offer case presentations of people who had difficult transitions to dialysis after transplant failure. In both cases, the donors were family members. One recipient reported that he did not feel comfortable around his family because his lifestyle led to the loss of the kidney. The other case was a woman who had gotten a kidney from her husband. She noted that it was difficult because her husband had always been her source of support. She stated that she did not want to burden him with her depressed feeling after the failed transplant. In these situations, the fact that the kidney came from a known living donor seemed to complicate the emotional response to the transplant failure.

- **Sense of Fault or Guilt:** While it is important to take accountability for one's actions, getting stuck in a place of self-blame may make it difficult to successfully transition back to dialysis or in moving forward in other parts of the person's life. Recently I met with a young man who had been transplanted as a child, receiving his brother's kidney. Per his report, as a teenager he began to miss medications and skip followup appointments. Eventually his kidney failed and he returned to dialysis. He has been back on dialysis for 6 years, but still talks about feeling guilty about losing his transplant and confirmed that he feels dialysis is a punishment for not taking care of the kidney.
- **Relief:** In my work, I have worked with people who described their reactions upon learning that they needed to start dialysis as "a relief." Anecdotally, this seems to be the reaction of people who have had multiple complications after transplant including: infections, rejections, hospitalizations, procedures, difficult side effects to the medicines. Some people had a better sense of well-being when they were on dialysis and were looking forward to regaining that.

Coping Strategies

In the literature search, I found three articles that focused on coping strategies used by people whose kidney transplants have failed and had started dialysis.

Grievers Versus Deniers

Stretzler, Moe, Yanagidy, and Siemsen (1983) identified two coping strategies that patients used as they started dialysis after transplant.

- *Grievers* are those "…who described going through a grief reaction during the rejection process including such feelings as depression, guilt, irritability, anger, sadness, and a preoccupation with the loss of the kidney and its implications for their future lifestyle."
- *Deniers* are those "…who described no or minimal depression and the notable absence of anger, guilt, discouragement or concern about the impact on their lifestyle."

Stretzler et al. looked at 25 dialysis patients who had had a previous transplant. Of the group, 14 fell into the "griever" coping style and 11 were "deniers." They noted that 24 of the 25 had a "good psychological readjustment to chronic dialysis." The one who did not was a young man who didn't take care of himself and lost his brother's kidney (the case referenced earlier).

Grievers:

- Less frequently reported feeling well prepared for rejection.
- 36% reported feeling thankful for returning to dialysis, 43% felt resignation to the need, and 21% felt it was a step backward.

Deniers:

- Reported having a more positive reaction to returning to dialysis.
- 80% reported being thankful for returning to dialysis, 20% were resigned to the need, and none felt it was a step backward

Stretzler et al. state that it is important to understand which category a person falls into. Grievers should be allowed, perhaps encouraged, to express their grief. Deniers should be supported in their denial and "not forced to vent their feelings."

Cognitive Dissonance

In this model of coping, patients seem to "rewrite history" to make it fit the current circumstances. Wagener and Taylor (1986) interviewed 29 people; 16 had started dialysis after transplant and 13 still had functioning kidney transplants. They were all transplanted in the early 1980s at a particular center. At the time of transplant, all recipients were told that there was an expected success rate of 60% for deceased donor kidney transplants. People with failed transplants recounted being told that the success rate was lower. They also agreed that they would have taken the kidney no matter what the odds. Those patients with working kidneys did not quote lower odds. The transplant failure group was less likely to state that they seriously considered staying on dialysis and more likely to say that dialysis wasn't working well for them.

"The results of this study suggest that failed renal transplant patients were more likely than successful transplant patients to see the transplant as their only course of action." No decision was actually made, because there was no choice. This suggests that cognitive dissonance can be protective from negative outcomes.

Meaning Making

Ouellette, Achille, and Paquet (2009) interviewed 15 people with failed transplants. Their goal was to find out how people develop constructive meaning from the transplant loss and return to dialysis; essentially, what "story" did they tell themselves? She found that the stories fell into a few categories.

- Transplant failure was due to a medical problem, e.g. it was a marginal kidney to begin with.
- Recipient went back to work too soon and didn't allow the body to fully recover first.
- Perceived benefits of the graft failure, including new appreciation of life, family, and friends, or that this is an opportunity to take on new challenges.

"By shattering their assumptive world, kidney graft failure eroded participants' meaning of life." When a person gets a transplant, they develop stories about what he/she will be doing with their life now that they have a new kidney. When the kidney fails—now what? The implication is that it could be protective if people with failed transplants are able to develop a positive understanding of their need to start dialysis.

Call to Professionals

Based on these articles, it may benefit transplant and dialysis professionals to be attentive to these items when assessing a person coming to dialysis after a failed transplant:

- Attentive to signs of depressed feelings.
- Patients with limited support systems may need more support from the dialysis team.
- People who were not following up regularly with a transplant team or nephrologist may not have had as much warning of the upcoming need for dialysis. Starting dialysis may be a bigger shock to them.
- Impact on quality of life: Bremer, McCauley, Wrona, and Johnson (1989) identified people with failed transplants as having "…the greatest losses in both objective and subjective quality of life."

"Would you do it again?"

I have asked many people as their kidneys are failing if they would do it again, knowing what they know now. Most say they would. The literature points in the same direction.

Nadel and Clark (1986) noted that two-thirds of patients want another kidney transplant. So, having firsthand experience of transplant failure is not a deterrent to re-transplant for most people. Holley, McCauley, Doherty, Stackiewicz, and Johnson (1996) reported that people who had a failed transplant were not less likely to be on the transplant list than people who have never been transplanted.

CONCLUSION

Below are some opportunities for the renal community to do further study, based on the search of the literature.

Professional Opportunities:

- Increased understanding of what patients experience when they lose a kidney transplant and need to start dialysis.
- For patients, how is the loss of a transplanted kidney similar/different from the loss of their native kidneys?
- When are social workers (dialysis or transplant) informed that patients are returning to dialysis?
- What kind of support from the various healthcare teams would be the most effective and when?
- Encouraging articles from patients about their experiences with losing a transplant.
- What preparation can be offered to help ease loss and transition?
- What can the transplant team do so the patient doesn't feel abandoned when the kidney fails?
- How can communication improve between the transplant centers and the dialysis units?
- With the gathering of KDQOL information, there may be opportunities to look at large groups of people who are starting dialysis after transplant.
- Do people have a different experience starting dialysis if they are re-listed before beginning treatment?

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SOCIAL WORK ABSTRACTS FROM THE NATIONAL KIDNEY FOUNDATION 2011 SPRING CLINICAL MEETINGS

Chronic Kidney Disease

1 Dialysis Clinic: A Valuable Field Experience to Teach MSW Interns Advanced Generalist Practice
Steve Bogatz, FMS-Central Connecticut Dialysis Center, Meriden, CT, USA

2. Video Education Increases Patient Attainment of Target Phosphorus Levels
Shaun Boyd, T. Christopher Bond, Tonya Zimmerman, Kathy Parker, Karen Spach, Duane Dunn
DaVita Inc., Denver, CO, USA

Hemodialysis: Other

3 Has Anything Changed Since the Implementation of the 2008 Conditions for Coverage? 2010 Nephrology Social Work Caseloads, Salaries and Implications for CKD Care in the United States
Teri Browne[1], Joseph Merighi[2], Kathleen Bruder[2]
[1]University of South Carolina, Columbia, SC, USA
[2]Boston University, Boston, MA, USA

Home Hemodialysis

6 Psychosocial Barriers to Home Dialysis: A Literature Review
Julie Regimbald, Cindy Gill
The Ottawa Hospital, Ottawa, Ontario, Canada

Other

4 Transition: Navigating the Journey from Pediatric to Adult Renal Care
Angela Degnan, Cherie Burroughs Scanlon, JoLynn Grimes, Diana Hurley, Linda Jones, Angie Knackstedt, J. Tyson Moore, Rachel Nadon, Amy Nau, Leah Oladitan, Cheryl Orr, Bradley Warady
The Children's Mercy Hospital, Kansas City, MO, USA

5 Perceptions of Hemodialysis Patients and Renal Providers Regarding Advanced Care Planning in a Single Nonprofit Dialysis Unit
Shiloh Erdley, Ion D. Bucaloiu, Evan R. Norfolk
Danville, PA, USA

1. DIALYSIS CLINIC: A VALUABLE FIELD EXPERIENCE TO TEACH MSW INTERNS ADVANCED GENERALIST PRACTICE.

Steve Bogatz, FMS- Central Connecticut Dialysis Center, Meriden, CT

In recent years, some graduate social work programs have embraced the tenets of advanced generalist practice: the ethical and cross-culturally competent application of interventions at the micro, mezzo, and macro levels. The dialysis clinic presents rich educational opportunities for MSW interns to learn and practice these skills.

On the micro level, the intern learns the fundamentals of psychosocial assessment and counseling to improve patient and familial adjustment. Useful practice theories include Hepworth and Larson's Five Stages of Empathy, Prochaska and colleagues' Stages of Change Model, and evidence based practice with the Kidney Disease and Quality of Life tool. Connecting the client with concrete resources usually enhances the therapeutic relationship. The result illustrates how concrete and clinical services together may be necessary for client's total well-being. Also, the student can hone communication skills working with varied interdisciplinary-team personalities. Since kidney disease affects all races, genders, classes, and sexual orientations, work with diversity is ever present.

On the mezzo level, dialysis clinics are heavily regulated with most employers worried about tight margins. The cost of supplies and services is strictly monitored along with patients' clinical indicators. This dynamic can help build a student's ethical reasoning and create advocacy opportunities. The intern can interact with insurance companies, drug manufacturers, transplant centers and the home agency to ensure patients receive access to care. One learns to navigate complex systems and formulate effective arguments based on data.

On the macro level, dialysis patients depend on federal institutions. Assisting patients with Medicaid and Medicare means contact with state and federal agencies. Organizations like the NKF and American Kidney Fund lobby for research dollars and social justice for their constituency. Interns can observe and/or participate in the political process that these national organizations employ to achieve their goals.

Over the course of 9 years, the author supervised 6 MSW interns using an advanced generalist philosophy. Four have gone on to have successful careers in medical social work.

3. HAS ANYTHING CHANGED SINCE THE IMPLEMENTATION OF THE 2008 CONDITIONS FOR COVERAGE? 2010 NEPHROLOGY SOCIAL WORK CASELOADS, SALARIES AND IMPLICATIONS FOR CKD CARE IN THE UNITED STATES

Teri Browne[1], Joseph Merighi[2], Kathleen Bruder[2]
[1] University of South Carolina, Columbia, SC, U.S.
[2] Boston University, Boston, MA, U.S.

In 2010, The Council of Nephrology Social Workers conducted a confidential online survey of United States social workers in all settings, i.e., chronic kidney disease (CKD), dialysis, transplantation and administration. The study findings explicate the current salaries, benefits, licensure status, education level, number of dialysis units covered, scope of social work services provided and caseloads of nephrology social workers, and provide important guidance to improve CKD patient care. The 2010 study outcomes are compared to the results of a similar 2007 survey to examine trends with regard to work roles and responsibilities. Each wave of the survey had more than 1,000 respondents. In 2010, annual full-time salaries ranged from $29,994–97,760 (median $54,829) for dialysis social workers and $44,658–84,864 (median $61,006) for transplant social workers. Caseloads for full-time dialysis social workers in 2010 were as high as 711 patients (median 125), which represents an 8% increase since 2007. We conclude that caseloads for social workers have increased since the implementation of the 2008 Conditions for Coverage for End-Stage Renal Disease Facilities. We posit that social workers who have high caseloads, cover more than one dialysis unit, and have to drive great distances to their workplaces are less able to provide adequate assistance to CKD patients and their families in ameliorating psychosocial barriers to optimal care and outcomes.

2. VIDEO EDUCATION INCREASES PATIENT ATTAINMENT OF TARGET PHOSPHORUS LEVELS

Shaun Boyd[1], T. Christopher Bond[1], Tonya Zimmerman[1], Kathy Parker[1], Karen Spach[1], Duane Dunn[1]
(1) DaVita Inc., Denver, CO, USA

The value of video education in the dialysis setting has not been reported in the literature. We assessed the acceptance of a video education project and its effectiveness in improving the percent of patients with phosphorous (P) levels within the recommended range (≤ 5.5 mg/dL).

Eleven of 13 dialysis centers in one region of a large dialysis organization (LDO) participated in the video education project. Center census ranged from 13 to 141 patients. A mixed linear model was employed to assess changes in percent of patients who had P levels within range (≤ 5.5 mg/dL) before and after the program.

The percent of patients within P range is shown.

Center-level mean	Mean pts/center	Before program 08/09-01/10	After program 04/-06/10
Participating (11)	49	69.9	72.8

Of the over 300 patients who completed a post-video questionnaire, 79% indicated videos increased their overall knowledge of dialysis and 80% want more video education in the future.

The 2.9% increase in the % of patients within range for P after a video education program was marginally significant (p=0.059), indicating a larger controlled evaluation might provide useful information.

4. TRANSITION: NAVIGATING THE JOURNEY FROM PEDIATRIC TO ADULT RENAL CARE

Angela Degnan, Cherie BurroughsScanlon, JoLynn Grimes, Diana Hurley, Linda Jones, Angie Knackstedt, J. Tyson Moore, Rachel Nadon, Amy Nau, Leah Oladitan, Cheryl Orr and Bradley Warady
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Transition and transfer of care from pediatric to adult renal providers is not well researched and best practice methods are not well defined. This results in less than optimal outcomes for patients with chronic kidney disease (CKD) who reach this developmental milestone. To address this important issue, a multidisciplinary group of pediatric and adult renal care providers from multiple institutions came together to identify barriers and solutions to a more successful process. Objectives for the day were: (1) review the stages of young adult development, including the impact of chronic illness on development; (2) describe transition strategies based on published research (3) describe the components of a pediatric transition education program; (4) discuss needs and expectations for successful transition to adult care; and (5) identify barriers and solutions to effective transition of young adults to adult care. The day consisted of a morning education program including lectures titled: *Trials & Tribulations of Working with Teens with Chronic Illness*, *Empowering Young Adults with Chronic Kidney Failure and Barriers to Adherence*. Presentations were also made by recently transitioned young adults. In the afternoon, collaborative roundtable discussions were held to explore the barriers and solutions to the transition/transfer process. There was unanimous consensus that to improve the process, a city wide transition steering committee should be established. In addition, a need for subcommittees to address solutions to specific issues was identified. The issues consisted of the need to create/nurture independence among pediatric patients, to integrate adult care concepts into the pediatric setting, to provide adult provider information to pediatric patients prior to the transfer of care, and to procure funding to support these efforts. The plan going forward is to populate these groups with both pediatric and adult renal care providers and to actively pursue solutions during the next 12 months. The entire group will reconvene in 1 year's time to evaluate outcomes, monitor success and further modify and improve the transition process.

5. **PERCEPTIONS OF HEMODIALYSIS PATIENTS AND RENAL PROVIDERS REGARDING ADVANCED CARE PLANNING IN A SINGLE NONPROFIT DIALYSIS UNIT**

Shiloh Erdley, Ion D. Bucaloiu, Evan R. Norfolk, Danville PA, USA

The low prevalence of end of life and advanced care planning in end stage renal disease (ESRD) patients is surprising considering the high mortality rates in this population. We simultaneously explored patient and nephrologist attitudes towards advanced care planning and end of life issues in a rural, nonprofit dialysis unit affiliated with a tertiary care center.

Prevalent ESRD patients (68) and their nephrologist (10) were asked to complete separate questionnaires exploring generic knowledge and perceptions of physician–patient communication regarding advanced care planning. We then retrospectively explored the relationship between pre ESRD education and completed advanced directives among the patients in our cohort.

Results indicated that the vast majority (67%) of patients lacked a basic understanding of end of life planning including the meaning and purpose of advanced directives and code status. 58% of patients reported minimal to any communication with their renal provider about end of life planning. 81% of patients and 100% of the renal providers indicate a desire to have an open communication to discuss advanced care planning. The providers unanimously felt that this topic should be incorporated into a multidisciplinary process involving a social worker, dialysis nurse and dietitian. 37% (24 of 65) of patients in the cohort attended a pre-dialysis options dialysis education class. Advanced directives completion rate was higher in the group that attended the class compared with those who did not [9/24 (37.5%), vs. 5/24 (14%) respectively].

Our results suggest that the low rate of advanced directives completion is multifactorial. Pre-ESRD education on advanced care planning may have an important role in increasing advanced directives completion rates. Improving patient and physician education regarding advanced care planning in addition to creating reliable processes of communication between patients and their renal care team are important priorities in order to improve the quality of care delivered to ESRD patients.

6. **PSYCHOSOCIAL BARRIERS TO HOME DIALYSIS: A LITERATURE REVIEW**

Julie Regimbald, Cindy Gill
The Ottawa Hospital, Ottawa, Ontario, Canada

Home dialysis has been a viable treatment option for ERSD since the 1960's for hemodialysis and the mid-70's for peritoneal dialysis. The current rate of home dialysis is 12.9% in Canada, whereas worldwide rates reach as high as 40%. In Ontario, Canada, the goal is to increase the use of peritoneal dialysis to 30%. The psychosocial barriers facing home dialysis patients can easily be taken for granted. Social work has a key role to play in supporting the success of home dialysis programs.

This review explores the challenges and successes of home dialysis. The literature identified multiple psychosocial barriers: physical and cognitive ability, mental health, patient attitudes and personality, emotional impact on the patient and family, presence of helper for treatments, patient's adherence with procedures, cultural issues, suitability of patient's home, support from the medical team, time constraints, cost to patient, patient education on the benefits of home dialysis, staff support for expanding home dialysis, learned helplessness of in-centre dialysis patients, and loss of relationships with peers.

Assessment tools addressing potential barriers to home dialysis already exist (MATCH-D, JPat). However, the need for a more comprehensive tool assessing both practical and social issues is indicated. To this end, the authors have developed and are testing a new tool; the PATH-D (Psychosocial Assessment Tool for Home Dialysis).

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 typically 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 may 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 typically 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. 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. Due dates for letters of intent and grant proposals, in addition to the review schedule, will be posted on the CNSW website.

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.

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

Stewart.Stephanie@MAYO.EDU

www.kidney.org/professionals/CNSW

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WHAT CAN YOU DO?

GET TESTED

If you have diabetes, high blood pressure, or a family history of these conditions or kidney disease, you are at risk. See your doctor and get screened. The National Kidney Foundation offers frequent free kidney health screenings across the country.

VOLUNTEER

The Foundation welcomes volunteers of all ages and interests. Contact your local NKF office to sign up.

JOIN NKF

Thousands of healthcare professionals, patients, donors, recipients and their families benefit from the educational information, guidance, support and advocacy opportunities provided by membership in the National Kidney Foundation and participation in the NKF "People Like Us" Take Action Network.

SUPPORT NKF

You can help by making a direct or memorial gift, participating in a Kidney Walk or NKF Cadillac Golf Classic Tournament in your community, donating a vehicle to Kidney Cars, attending a fundraising event, or making the NKF a beneficiary of a planned gift.

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