

Perceptions of Adult Patients on Hemodialysis Concerning Choice Among Renal Replacement Therapies



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Currently, the United States ESRD program is the only national catastrophic Medicare program that offers access regardless of the patient's ability to pay (CMS, 2006). Prior to the ESRD program and the improved success rate of transplantation, the decision to dialyze a patient was based on a selection process and private insurance availability (Bevan, 2000). After this legislation was passed, minorities, women, and the economically disadvantaged were given equal access (Young & Gaston, 2000).

Medicare funding alleviates this large financial burden for the patient, yet the cost of the ESRD program is burdensome for the federal government. The treatment costs to the federal government are different among the therapies. The health care dollar cost to society for a kidney transplant is considerably less than the cost for 2 years on dialysis or a lifetime of dialysis (CMS, 2006; United Network of Organ Sharing [UNOS], 2006). According to the UNOS (2006), it is estimated that the cost of a kidney transplant pays for itself 2 years after surgery and the cost of dialysis keeps increasing year after year. Since the early 1980s, research has demonstrated that renal transplants have offered the possibility and probability of a return to life 'without kidney failure,' therefore greatly improving quality of life (Headley & Wall, 1999; Kutner Zhang, & McClellan, 2000; Lindqvist,

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Purpose: The aim of this study was to explore what patients on hemodialysis perceive concerning choice among three types of renal replacement therapies: transplantation, hemodialysis, and peritoneal dialysis.

Method: A qualitative phenomenological research design was employed in this exploratory, descriptive study. A convenience sample was recruited from two urban dialysis units in the southern part of the United States. The analysis was performed using Colaizzi's (1978) phenomenological technique.

Results: Two themes emerged from analysis: knowledge and choice. Participants perceived choice in their renal replacement therapies. The predominant theme reflected that most participants had knowledge about at least two of the three types of renal replacement therapies.

Conclusion: The areas of choice among renal replacement therapies, education about all renal replacement therapies, and other dynamics that impact choice, need to be studied. Inquiry needs to remain treatment specific and include all renal replacement treatments available to the patient. Future studies should continue to investigate perceptions of choice, and no assumption should be made about whether patients undergoing hemodialysis are receiving information or education on all the options for renal replacement therapy. Additional research within this area will validate needs and concerns of these patients.

Goal

Explore what patients on hemodialysis perceive concerning choice among three types of renal replacement therapies.

Objectives

1. State the three types of renal replacement therapies.
2. Discuss two themes which emerged from the study.
3. Formulate a statement about how a patient on hemodialysis could perceive their choice among renal replacement therapies.

Carlsson, & Sjoden, 2000). Currently, more than 450,000 people have ESRD, with less than 25% listed as candidates for transplant (CMS, 2006; UNOS, 2006).

Considerable attention has been given in reviews and research studies in the nursing science literature on renal replacement therapies for peo-

ple with ESRD (Bevan, 2000; Linqvist et al., 2000; Murray & Conrad, 1999; Rittman, Northsea, Hausauer, Green, & Swanson, 1993; Weil, 2000). Although there is a large amount of literature on different renal replacement therapies, most of the research has been conducted from the health care providers' perspectives (Gordon et al.,

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2000; Keogh et al., 1999; Starzomski et al., 2000). The literature reveals a division as to either the study of dialysis therapy or the study of transplant therapy. The perceptions of the choice of renal replacement therapy for patients on hemodialysis remains unknown.

To date, there is little or no data to allow us to better understand the question of why patients receive one renal replacement therapy versus another. No research has addressed patient perception of choice while considering all three available treatments: transplantation, peritoneal dialysis, and hemodialysis.

Study

Aim

The aim of this study was to explore what patients on hemodialysis perceive concerning choice among the three types of renal replacement therapies: transplantation, hemodialysis, and peritoneal dialysis.

Design

This study was an exploratory, descriptive study using a phenomenological approach (Husserl, 1913) to describe what patients on hemodialysis perceive about their choice among renal replacement therapies. Qualitative methods provided the means to “grasp and sense the lived experience” of patients on hemodialysis (Streubert & Carpenter, 1999, p. 1). Based on a review of literature and the lack of research examining perceptions about choice among all renal replacement therapies, the research question was refined to an open-ended guide.

Pilot Study

A pilot study with 2 patients on hemodialysis, 2 patients on peritoneal dialysis and 2 patients who had functioning kidney transplants was conducted to determine the feasibility and effectiveness of recruitment strategies, interview, and data analysis techniques. The strategies and methods successfully used in the pilot study

were again used in the larger study. Data from the pilot study were so broad in scope that the decision was made to limit the larger study to just one of the three groups. Because the patients on hemodialysis had the richest descriptions in the pilot study, the decision was made to focus on that population in the larger study (Landreneau & Ward-Smith, 2006).

Sample and Setting

A purposive, convenience sample was recruited from the population of patients on hemodialysis who dialyzed at 2 dialysis units in the southern part of the U.S. Participants were selected based on their experience with the phenomenon of choice among renal replacement therapies, and the ability to share that knowledge. This type of sampling was used to obtain information-rich cases for indepth analysis. Issues of central importance to the purpose of this research, such as individual patients' perceptions of their disease trajectories, were elucidated through purposive sampling.

The criteria for sample selection were: (a) diagnosis of ESRD; (b) over 18 years of age; (c) receiving hemodialysis therapy only for more than 1 week; (d) present at the study site for more than one hemodialysis treatment; and (e) able to converse and understand English. The criteria for exclusion were: (a) medical conditions that would make participation in this study a hardship on the individual; (b) absent during the usual hemodialysis treatment time; and (c) co-morbid psychiatric conditions.

Data Collection

With the approval of the university internal review board for the protection of human subjects, approval from the dialysis units' internal review board, and permission of both dialysis units, the researcher approached 190 patients on hemodialysis from the 2 dialysis units and invited them to participate in the current study. Of the 190 patients on hemodialysis, 175 (92%) verbally consented and 20 were randomly selected to begin the study.

Each participant consented to provide the researcher with his or her phone number and was phoned to discuss the study. A script was used to describe the study. Phone consent was obtained and the researcher scheduled a time to meet with the participant at the dialysis unit. The demographic data sheet was completed after written informed consent was obtained, and interviews were audiotaped. The interviews ranged from 30-45 minutes each. Each participant's consent form and audio-tape was encoded with a number designation (Participant #1, Participant #2, etc. rather than their name) and contained no identifying information. Data collection was completed over a 5-day period. All tapes were transcribed within 2 weeks following the interviews. A research assistant transcribed the tapes verbatim and the researcher proofread the content while listening to the audiotapes.

Sampling continued until saturation of data was achieved. Once repetition and confirmation of previously collected data were noted, recruitment was discontinued. After the 12th interview, no new information was shared by participants.

Table 1 describes the demographics of the sample. Demographic data were obtained from 11 of the participants, with one participant declining to complete the demographic sheet.

Concurrent medical conditions were also self-disclosed. Renal failure was identified by all of the participants, with 8 (66%) of them stating they had the condition for at least 2 years. Ten (83%) of the participants stated the cause of their renal failure: hypertension was identified by 11 (92%) as a comorbidity, and diabetes was identified by 4 (33%) as a comorbidity. One participant had no comorbidities stated on the demographic form.

An open-ended guide was used for the individual interview. The researcher told the participants “I am interested in knowing more about the choices that you thought about when you were deciding on which treatments were best for your kidney fail-

Table 1
Demographic Data (N = 12)

Participant	Age	Gender	Marital Status	Ethnicity	Education	Income	Medical Status	Years in ESRD
#1	21	Female	Missing	Caucasian	10	missing	Hypertension	5
#2	51	Female	Married	Caucasian	12	\$10,001+	Hypertension	2
#3	50	Male	Divorced	Caucasian	12	\$60,001+	Diabetes mellitus Hypertension	1
#4	40	Male	Single	African American	BA	0+	Hypertension	2
#5	32	Female	Single	African American	12	0+	Hypertension	5
#6	77	Male	Married	Caucasian	MS	\$30,001+	Diabetes mellitus Hypertension	1
#7	55	Male	Single	African American	6	0+	Hypertension	2
#8	44	Female	Married	Caucasian	GED	\$10,001+	Hypertension	2
#9	66	Male	Married	African American	12	0+	Diabetes mellitus Hypertension	2
#10	63	Female	Married	Caucasian	12	\$10,001+	Hypertension	4
#11	missing	Male	Missing	Missing	missing	missing	missing	missing
#12	58	Male	Single	African American	8	missing	Diabetes mellitus Hypertension	4

Note: BA = Bachelor of Arts; MS = Master of Science; GED = General Education Development

ure. Usually these choices are transplantation, hemodialysis, or peritoneal dialysis. Please tell me, in as much detail as possible, what perceptions you have concerning your choice among kidney failure treatments. Please share all your thoughts, feelings, and perceptions concerning your choices among kidney failure treatments.” All participants were encouraged to express as many of their thoughts as possible.

Validity and Reliability

Rigor refers to establishing the trustworthiness of data and was demonstrated through attention to, and confirmation of, information discovery (Denzin & Lincoln, 2000). Lincoln and Guba (1985) have outlined the current gold standard criteria for qualitative researchers by which to establish the trustworthiness of qualitative data. These criteria include credibility, dependability, confirmability, and transferability.

Several operational techniques

were used to increase the likelihood that credible findings would be produced (Streubert & Carpenter, 1999): (a) use of open-ended interviewing techniques: tape recordings and verbatim transcriptions increased the accuracy of describing each participant’s experience; (b) use of peer debriefings – there were no changes in coding descriptions; (c) use of member checks in which participants were asked to comment on the data themes and the researcher’s interpretations in a follow-up telephone call – no changes were suggested by any of the four validating member checks/participants; and (d) an extensive literature review.

The second criterion in assessing trustworthiness is dependability or stability of the data over time and over conditions (Denzin & Lincoln, 2000). The investigator interviewer had significant clinical background in renal replacement therapy, and, as such, had biases. Data collection over a short time frame was helpful by pro-

viding so much data in a concentrated period that these biases were largely minimized. Dependability was also established through the consistency of the data descriptions from each interview, through the reading of verbatim transcripts along with listening to the participant’s audiotape, and through the validation of the 4 participants/member checks concerning what was described. There was a time lapse between the interview and the transcription of the audiotapes. There was also a time lapse between the transcription and the 4 member checks. The stability of the data was seen throughout these time settings and conditions and contributes to the dependability of this study.

The third criterion is confirmability, or objectivity of the data (Denzin & Lincoln, 2000). Confirmability of this study was objectively grounded by the researcher’s use of bracketing along with the researcher’s reflexive journal, available audit trail, and peer debriefings.

Transferability is the fourth criterion and reveals how the findings have meaning to others in similar situations (Denzin & Lincoln, 2000). These descriptions and findings were read by an experienced nurse researcher who was familiar with chronic illness and with patients' perceptions of choice in medical treatments. Similarities and differences between these 2 groups were evident to the experienced nurse researcher. While the results of this study may be transferable to other patients with ESRD who are being treated in settings where transplantation is accessible, it is recognized that they may not be generalizable to all patients with ESRD.

Data Analysis

Data analysis began when data collection began. Data were analyzed using Colaizzi's (1978) framework for phenomenological analysis. Beliefs and assumptions were separated from the raw data throughout the investigation by the use of bracketing and intuiting. Following this reductive phenomenology approach, the researcher wrote down any ideas, feelings, and responses that emerged during data collection (Streubert & Carpenter, 1999). The researcher's own experiences were considered data and were examined within the context of the study.

As each interview was conducted, the researcher carefully listened to each participant's words to discover meanings. This questioning and verifying was part of the analysis. This researcher became immersed in the data, and listened multiple times to the audiotapes prior to transcription. Through this immersion, the researcher committed to fully understand what was spoken by each participant. Each transcript was read, analyzed, and synthesized in order to describe their meanings about the phenomenon of choice about renal replacement therapy.

The first extraction of meaning yielded 515 significant statements from the texts of the 12 interviews. Data analysis revealed 63 statements with the word "choice" or a synonym

of choice. Knowledge was identified in 263 significant statements. Formulated meanings were created from each statement, which were then validated in a collaborative method with both the researcher for this study and another nurse researcher with experience and knowledge of qualitative research and data analysis. These debriefings between the researcher and another nurse researcher were useful in validation of the themes. These statements then readily collapsed into three themes. Reflexive journal notes were maintained by the researcher throughout data collection and analysis.

Findings

Two themes emerged from the significant statements: knowledge and choice. Each of the statements relates to participants' perceptions concerning choice of renal replacement therapy. The two themes, knowledge and choice, came directly from all of the participants' responses to the research question/statement.

Theme One: Knowledge

Knowledge was a theme mentioned in 263 significant statements. Each participant mentioned knowledge regarding renal replacement therapies 10 to 36 times (mean = 22). All participants discussed at least 2 of the 3 replacement therapies. An example of knowledge was described as "hemodialysis cleans my blood," "peritoneal dialysis is sterile and can't be done at my home," and "I'm going to get a kidney transplant from a relative." Knowledge regarding renal replacement therapy was obtained from a variety of sources. The most frequent source mentioned was information received from health care professionals, specifically the physician. One participant stated:

I was being treated for uh, for high blood pressure and I asked him [doctor] about did he ever sign me up for a transplant and he said he couldn't cause my kidneys has hardened and there wasn't no use to try to go in with no transplant. Now what's his name, I don't know what he

had told me, I mean the doctor.

Another frequent source mentioned was the transplant surgeon. A participant noted:

[T]he day I found out that my kidneys had failed, uh, the doctors there told me that I would have to go on dialysis and uh, they asked me would you want a kidney transplant. And I said, yes I would, cause I didn't want to do this all my life. So, I told them to put me on the list.

The dialysis nurses were also mentioned as a source. One participant noted:

Some nurses told me. Just a few nurses. They just told me about the risks and it's like a 6-hour operation and it's just a risk between life and death. That's mostly what I know about it, you know, now. They were dialysis nurses.

Additional knowledge was obtained from a social worker and others with renal failure. Lastly, knowledge was obtained from family members and "street people." The knowledge acquired by patients was not always accurate. Much of the knowledge shared by participants revealed outdated and inaccurate medical information regarding renal replacement therapy. For example: *Hemodialysis is the best treatment of all, You have to have a sterile home to do peritoneal dialysis, and A kidney transplant is a risk of life and death.*

A final feature of the knowledge category was the timing of when renal replacement therapy choice was presented to participants. Each participant stated that they obtained knowledge regarding treatment choice, yet this knowledge was provided at inconsistent points of the illness trajectory. Some knowledge was obtained when hemodialysis treatment was initiated: *All I could do was dialysis. I am sick and cannot have a transplant and I did not want to do the peritoneal thing.*

Theme Two: Choice

The theme of choice was mentioned from 2 to 12 times (mean 5) by each participant. Choice was directly described by each participant and the word 'choice' was often used. When using the word 'choice,' the participants described the process of deciding which treatment among various

alternatives they selected. There were 63 significant statements regarding choice.

One participant described her choice of treatment by stating that:

My choice was to have hemodialysis. And I am on the list for a kidney transplant, and I've been on the list for, you know, several years.

Another participant spoke of his choice as:

I chose hemo because, I guess this is more, it's more sterile. I mean I'm more sterile, but if I was at home when you do the peritoneal you have to be real, well with this you have to be sterile too, but I don't know. This type was the best type for me. You know, come in 3 days a week and let them do it. The other way it was at home, I guess, I think you can do it when you get home. Peritoneal you do it when you want to.

Another aspect of the choice category was who made the choice:

My doctor says this is the treatment for me. I've heard of the other things but this works for me. I choose hemodialysis.

When considering choice, ethical issues must be considered. One must consider and incorporate the medically appropriate time to present the types of renal replacement therapies and the patient's option to choose among the renal replacement therapies. Several sources indicated that patients on hemodialysis are not given the knowledge necessary to make an informed treatment choice at the medical appropriate time (Alexander & Sehgal, 1998; Breckenridge, 1997; Gordon et al., 2000). Alexander and Sehgal (1998) noted that the timing of transplantation as a treatment choice was influenced by socio-demographic differences and access to the transplant waiting list rather than lack of interest in transplantation. Problems of timing the presentation of treatment options was also noted in this current study. Several participants stated they were told by the nephrologist that they must start dialysis treatment first, even though several were in chronic renal failure and had been treated for up to a year or longer before becoming end stage. It should be noted that these participants were treated by

other physicians before starting dialysis with their present physician. These participants also knew about transplantation after they started dialysis and talked with their 'dialysis doctor' about transplantation. This may be a factor of different physicians' opinions or philosophies concerning the promotion of different types of renal replacement therapies.

Discussion

Based on the findings of this study, these patients on hemodialysis perceived that they had a choice in renal replacement therapy even when they had limited participation in choosing their treatment. The predominant theme reflects that most participants had knowledge about renal replacement therapies even though their knowledge included extensive amount of misinformation regarding the current state-of-the-art of the treatments. The themes identified from the data support these conclusions and provided a forum for discussion. Access to all renal replacement therapies, and the ever-changing medical improvements in these therapies, has expanded the need for understanding health outcomes. In evaluating these therapies for risks and benefits, we see how the treatment affects the patient in her or his areas of choice and requires evaluation. Since this was the first study to explore perceptions concerning choice among all renal replacement therapy in patients on hemodialysis, findings should be viewed with caution. Concerns about participants' knowledge base, and participants' perceptions of choice were strengths of this research.

Knowledge was obtained from a variety of medical and nonmedical sources and at a variety of times. However, many of their statements were medically inaccurate. Published literature does not support knowledge-related statements made by the participants. At the time of this study, transplantation was considered the medically optimal and first choice therapy for ESRD and, more specifically, this population of patients on hemodialysis (CMS, 2006; UNOS,

2006). Just knowing about renal replacement therapies may not assist the patient to make the best personal choice. If the patient's knowledge is not current or accurate, then having a choice may prove to be personally satisfying, yet medically inappropriate.

The primary finding from this study was that these participants on hemodialysis perceived they did have a choice in renal replacement therapy even though they didn't discuss that they had limited participation in the choice, which was not an expected finding and not consistent with the pilot study themes.

In the pilot study, the findings were different. The pilot study themes from the 2 participants on hemodialysis, the 2 participants on peritoneal dialysis, and the 2 participants who had functioning renal transplants were consistent with 'no choice among renal replacement therapies' and the 'nephrologist chose' the renal replacement therapy (Landreneau & Ward-Smith, 2006). However, in this larger study, all of the participants stated they had a choice. This perception of choice was universal.

In reviewing the literature, only one study was found that addressed patients' perceptions concerning their choice, and this choice was only related to renal transplant (Gordon & Sehgal, 2000). This triangulated study explored discussions between patients and nephrologists regarding transplantation as a treatment option for ESRD. This pioneering study concluded that treatment options, and the order of the presentation of options, influenced renal transplantation as a choice. There was no mention of knowledge obtained from sources other than the nephrologists.

Making treatment choice is possible without accurate knowledge; yet, appropriate and timely information given would better prepare the patient for making a choice. Prior to choosing a treatment, the patient needs to know the potential impact of the treatment (Waitzkin, 1985). Waitzkin (1985) found that the desire for information regarding medical care and the time dedicated to providing this informa-

tion was underestimated by the physician. Thus, choice may occur prior to all information being disclosed to the patient. If a treatment leads to a decrease in one's risks and an increase in benefits, the patient may be concerned about the choice to be made. Therefore, without accurate and current medical information, neither the clinician nor the patient can make a fully informed choice about therapy.

Breckenridge (1997) discussed that treatment options were selected because of clinical or practical circumstances and some of the participants had no choice in the timing of the treatment or decision. Gordon and Sehgal (2000) stated that nephrologists provided information on treatment options over several weeks to months and they generally presented the option of dialysis first and transplant later. Each type of renal replacement therapy, its risks and benefits, physical changes, and survival statistics are different. The patient's perception concerning choice may carry an impact on the patient's long-term outcomes. The timing of treatment is important for the reduction in mortality and morbidity, with selecting transplantation to eliminate ESRD altogether. Thus, the impact of choice among each therapy has distinct levels of risks and benefits that can be ranked according to medical research, with transplantation as the first choice, peritoneal dialysis as the second, and hemodialysis the least optimal (CMS, 2006; ESRD Network, 2006; Gould & Wainwright, 1997; Gudex, 1995; Starzomski & Hilton, 2000). The medical appropriate time to discuss renal replacement therapy would be during the chronic renal failure phase while most renal failure patients have time to think and decide about their future therapy. Whether patients are receiving this information at the medically appropriate time requires additional research since the available literature does not speak to this important issue.

When discussing the issues of choice and knowledge among the participants of this study, the issue of education becomes apparent. Who best provides the education is unknown. A

review of the literature identified only one set of standards for education – those provided by the American Nephrology Nurses Association (ANNA). The ANNA's *Nephrology Nursing Standards of Practice and Guidelines for Care* include 2 patient outcomes in preparation for replacement therapy stating the patient will participate in the decision-making process for treatment modality selection and will have completed evaluation for a kidney transplant, if appropriate, along with a patient teaching plan for renal replacement therapies (Burrows-Hudson & Prowant, 2005). The data from this study suggest that the transference of research about education on all different types of renal replacement therapies to practice is not apparent. There was much misinformation regarding knowledge, among the participants, and standardized teaching outline. Standardized teaching outlines could be developed among the national organizations and should be a priority. Research that identifies what is being taught, and the educational knowledge of health care professionals providing the education to patients with ESRD, should be assessed as this information would provide a foundation for future studies.

Findings in this study support Waitkin's (1985) research on the impact of medical treatment and its effect on choice. Namely, risks and benefits are taken into account when making treatment choice. Data from the present study demonstrated that other treatments carry risks that participants perceived, often incorrectly, as too great and influenced their treatment choice.

Research with samples of patients choosing renal transplantation as a treatment indicated that the order of presentation impacts treatment choice (Gordon & Sehgal, 2000). When comparing the results of this study to the available research regarding treatment choice among patients with ESRD, several issues can be highlighted. The medically appropriate time to provide education, the practical circumstances that surround this timing of education,

and who provides this information have all been shown to affect treatment choice (Alexander & Sehgal, 1998; Breckenridge, 1997; Gordon & Sehgal, 2000). The present study did not aim to determine the order of presentation, thus, the impact this may have on treatment choice, within the population of patients on hemodialysis, remains unknown. Findings in this study begin to develop a new body of knowledge, which certainly requires additional research.

Conclusions

Future research with this population should focus on the areas of choice, education, and other dynamics that impact choice. Data obtained in this study provide a very important first step in the investigation of perceptions concerning choice of renal replacement therapy in patients on hemodialysis. More research is needed to understand each type of renal replacement therapy, not just hemodialysis. Choice and knowledge as essential features of the decision-making process for patients on hemodialysis would necessitate inquiry that is treatment specific and include all treatments available to the patient.

Increasing numbers of people are succumbing to ESRD. This is related to the increase in obesity and diabetes among the general population (CMS, 2006). In the last few years, diabetes has replaced hypertension as the number one cause of ESRD (White & Grenyer, 1999; ESRD Network, 2006; CMS, 2006). More nursing research is needed about the provision of education concerning choice among all renal replacement therapies during their chronic renal failure phase. Many of these patients are in chronic renal failure for more than 5 years (CMS, 2006). With the best medical option, renal transplantation, these patients may find greater opportunity for a living-related or non-related donor transplant. At the end of this equation is a person, a person with health needs requiring nursing professionals to step in and provide an

atmosphere in which every patient receives adequate, timely, and accurate information to make an informed choice for renal replacement therapies.

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ANSWER/EVALUATION FORM

Perceptions of Adult Patients on Hemodialysis Concerning Choice Among Renal Replacement Therapies

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- Enclose a check or money order payable to ANNA. Fees listed in payment section.
- If you receive a passing score of 70% or better, a certificate for the contact hours will be awarded by ANNA.
- Please allow 2-3 weeks for processing. You may submit multiple answer forms in one mailing, however, because of various processing procedures for each answer form, you may not receive all of your certificates returned in one mailing.

Submit
Online!

Online submissions through a partnership with HDCN.com are accepted on this posttest at \$20 for ANNA members and \$30 for nonmembers. CNE certificates will be available immediately upon successful completion of the posttest.

Note: If you wish to keep the journal intact, you may photocopy the answer sheet or access this posttest at www.annanurse.org/journal

1. What would be different in your practice if you applied what you have learned from this activity?

GOAL

Explore what patients on hemodialysis perceive concerning choice among three types of renal replacement therapies.

New Posttest Format

Please note that this continuing education activity does not contain multiple-choice questions. We have introduced a new type of posttest that substitutes the multiple-choice questions with an open-ended question. Simply answer the open-ended question(s) directly above the evaluation portion of the Answer/Evaluation Form and return the form, with payment, to the National Office as usual.

Evaluation

2. By completing this offering, I was able to meet the stated objectives
 - a. State the three types of renal replacement therapies.
 - b. Discuss two themes which emerged from the study.
 - c. Formulate a statement about how a patient on hemodialysis could perceive their choice among renal replacement therapies.
3. The content was current and relevant.
4. This was an effective method to learn this content.
5. Time required to complete reading assignment: _____ minutes.

Strongly disagree **Strongly agree**

	1	2	3	4	5
a.	1	2	3	4	5
b.	1	2	3	4	5
c.	1	2	3	4	5
3.	1	2	3	4	5
4.	1	2	3	4	5

I verify that I have completed this activity _____ (Signature)