Roles of Counseling Psychologists in Nephrology Services

James R. Springer
Western Michigan University

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ROLES OF COUNSELING
PSYCHOLOGISTS IN
NEPHROLOGY SERVICES

by

James R. Springer

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment
of the
Degree of Doctor of Education

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James R. Springer
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# TABLE OF CONTENTS

**LIST OF TABLES.** ................................................................. vi

Chapter

I  **THE PROBLEM AND ITS BACKGROUND.** .............................. 1

II  **EMOTIONAL PROBLEMS OF DIALYSIS AND RENAL TRANSPLANT PATIENTS: A REVIEW OF THE LITERATURE.** ........................................ 6

   Early reports ................................................................. 7
   A shift to the more positive ........................................... 10
   Intense stresses of living ............................................. 12

   Emotional Problems of Renal Transplant Patients: A Selected Review of the Literature .... 33

III **ROLES OF MENTAL HEALTH WORKERS IN DIALYSIS UNITS: THE RESULTS OF A NATIONAL SURVEY BY QUESTIONNAIRE.** 42

   Method ...................................................................... 45
   Results ........................................................................ 46
   Discussion .................................................................... 69
   Conclusions .................................................................. 73

IV **COUNSELING PSYCHOLOGISTS AS PSYCHOTHERAPISTS IN NEPHROLOGY SERVICES** ............. 75

   A Selected Review of the Literature Pertaining to Psychotherapy With Dialysis and Renal Transplant Patients ................. 75

   Psychotherapy and Counseling in a Nephrology Service ........................................ 85
   Crisis intervention ....................................................... 85
   Supportive and preventive psychotherapy and counseling ............................ 90
   Marital counseling ......................................................... 93
   Counseling and psychotherapy with dying patients and their families ............... 96

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<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group counseling and psychotherapy.</td>
<td>99</td>
</tr>
<tr>
<td>The use of psychiatric consultative services.</td>
<td>102</td>
</tr>
<tr>
<td>Resistances to psychotherapy.</td>
<td>104</td>
</tr>
<tr>
<td>V COUNSELING PSYCHOLOGISTS AS PSYCHODIAGNOSTICIANS IN NEPHROLOGY SERVICES.</td>
<td>109</td>
</tr>
<tr>
<td>A Selected Review of the Literature Regarding the Use of Psychodiagnostic Techniques With Dialysis and Transplant Patients.</td>
<td>109</td>
</tr>
<tr>
<td>Psychodiagnostic Evaluations as Selection Criteria for Patients With Chronic Renal Failure.</td>
<td>122</td>
</tr>
<tr>
<td>Psychodiagnostic Evaluations as Aids in Training and Counseling for Nephrology Patients.</td>
<td>132</td>
</tr>
<tr>
<td>Psychodiagnostic Evaluations of Nephrology Patients for Research Usage.</td>
<td>140</td>
</tr>
<tr>
<td>VI COUNSELING PSYCHOLOGISTS AS REHABILITATION COUNSELORS IN NEPHROLOGY SERVICES.</td>
<td>143</td>
</tr>
<tr>
<td>Rehabilitation of Dialysis Patients: A Selected Review of the Literature.</td>
<td>143</td>
</tr>
<tr>
<td>The Vocational Adjustment of a Selected Group of Home Dialysis Patients.</td>
<td>149</td>
</tr>
<tr>
<td>Method.</td>
<td>149</td>
</tr>
<tr>
<td>Results.</td>
<td>150</td>
</tr>
<tr>
<td>Discussion.</td>
<td>152</td>
</tr>
<tr>
<td>Vocational Rehabilitation of Dialysis and Transplant Patients: Guidelines for Counseling Psychologists.</td>
<td>154</td>
</tr>
<tr>
<td>VII A PREVENTIVE MENTAL HEALTH PROGRAM FOR DIALYSIS PATIENTS.</td>
<td>164</td>
</tr>
<tr>
<td>Introduction.</td>
<td>164</td>
</tr>
<tr>
<td>Method.</td>
<td>167</td>
</tr>
<tr>
<td>Chapter</td>
<td>Page</td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
</tr>
<tr>
<td>Subjects</td>
<td>167</td>
</tr>
<tr>
<td>Procedure</td>
<td>168</td>
</tr>
<tr>
<td>Instrument</td>
<td>169</td>
</tr>
<tr>
<td>Results</td>
<td>170</td>
</tr>
<tr>
<td>Discussion</td>
<td>173</td>
</tr>
<tr>
<td>VIII</td>
<td>SUMMARY, RECOMMENDATIONS, RESISTANCES, AND CONCLUSIONS RELATED TO THE ROLES OF COUNSELING PSYCHOLOGISTS IN NEPHROLOGY SERVICES</td>
</tr>
<tr>
<td>Summary</td>
<td>183</td>
</tr>
<tr>
<td>Counseling psychologists as psychotherapists in nephrology services</td>
<td>185</td>
</tr>
<tr>
<td>Counseling psychologists as psychodiagnosticians in nephrology services</td>
<td>188</td>
</tr>
<tr>
<td>Counseling psychologists as rehabilitation counselors in nephrology services</td>
<td>190</td>
</tr>
<tr>
<td>Counseling psychologists as psychological consultants for nephrology staffs</td>
<td>192</td>
</tr>
<tr>
<td>Counseling psychologists as teachers in nephrology services</td>
<td>193</td>
</tr>
<tr>
<td>Counseling psychologists as researchers in nephrology services</td>
<td>194</td>
</tr>
<tr>
<td>Recommendations for Training Programs for Counseling Psychologists in Nephrology Services</td>
<td>194</td>
</tr>
<tr>
<td>Resistances to the Development of Roles for Counseling Psychologists in Nephrology Services</td>
<td>198</td>
</tr>
<tr>
<td>Conclusions</td>
<td>203</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>205</td>
</tr>
<tr>
<td>APPENDICES</td>
<td>214</td>
</tr>
</tbody>
</table>
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Respondents to questionnaires on the roles of mental health workers in dialysis units</td>
<td>47</td>
</tr>
<tr>
<td>3.2</td>
<td>Respondents to questionnaires on the roles of mental health workers in dialysis units by type of dialysis facility</td>
<td>47</td>
</tr>
<tr>
<td>3.3</td>
<td>Distribution of population and respondents to questionnaires on the roles of mental health workers in dialysis units by type of dialysis facility</td>
<td>49</td>
</tr>
<tr>
<td>3.4</td>
<td>Respondents to questionnaires on the roles of mental health workers in dialysis units by geographical area</td>
<td>50</td>
</tr>
<tr>
<td>3.5</td>
<td>Size and scope of dialysis programs among respondents to the questionnaires on the roles of mental health workers in dialysis units</td>
<td>52</td>
</tr>
<tr>
<td>3.6</td>
<td>Number of respondents to the questionnaires utilizing the services of mental health workers in dialysis units</td>
<td>53</td>
</tr>
<tr>
<td>3.7</td>
<td>Types of dialysis facilities employing mental health workers</td>
<td>54</td>
</tr>
<tr>
<td>3.8</td>
<td>Types of nephrology programs utilizing mental health workers</td>
<td>55</td>
</tr>
<tr>
<td>3.9</td>
<td>Rank order of frequency of services provided by psychiatrists in dialysis units</td>
<td>56</td>
</tr>
<tr>
<td>3.10</td>
<td>Rank order of frequency of services provided by psychologists in dialysis units</td>
<td>58</td>
</tr>
<tr>
<td>3.11</td>
<td>Rank order of frequency of services provided by social workers in dialysis units</td>
<td>59</td>
</tr>
<tr>
<td>3.12</td>
<td>Rank order of psychiatrists' priority of services in dialysis units</td>
<td>61</td>
</tr>
<tr>
<td>3.13</td>
<td>Rank order of psychologists' priority of services in dialysis units</td>
<td>64</td>
</tr>
</tbody>
</table>

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Table

3.14 Rank order of social workers' priority of services in dialysis units....................................... 65
3.15 Respondents' reasons for not employing psychiatrists........................................... 66
3.16 Respondents' reasons for not employing psychologists....................................... 67
3.17 Respondents' reasons for not employing social workers......................................... 68

7.1 Peritoneal dialysis patients' self evaluation scores on the preventive mental health program questionnaire.......................................... 171
7.2 Peritoneal dialysis staff evaluation scores on the preventive mental health program questionnaire.............................. 172
7.3 Hemodialysis patients' self evaluation scores on the preventive mental health program questionnaire................... 174
7.4 Hemodialysis staff evaluation scores on the preventive mental health program questionnaire......................... 175
7.5 Rank orders of staffs' and patients' evaluations on the preventive mental health program questionnaire................................. 176

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CHAPTER I
THE PROBLEM AND ITS BACKGROUND

People who developed chronic progressive renal failure (also called chronic kidney disease, terminal renal failure, and terminal uremia) were doomed to die until an efficient means of extracorporeal dialysis was developed in 1960. At that time Scribner, Hegstrom and Buri (1960) demonstrated that patients with chronic kidney disease could not only be kept alive, but could return to useful and profitable lives. Since 1960 chronic dialysis has been successful to the point that at the present time over 11,500 patients are living with the assistance of artificial kidney machines and over 9000 people have had their lives sustained due to renal transplantation (National Dialysis Registry, 1974).

Despite the life sustaining contributions made by hemodialysis, renal transplantation, and, more recently, chronic peritoneal dialysis, complex medical and psychological problems make these artificial means of life difficult. Although some of the problems experienced by kidney patients have been identified, relatively little has been said about providing services to meet the psychological and rehabilitation needs of this spectrum of patients. What has been written has concentrated more on psychiatric contributions to nephrology services with little attention paid to the development of ongoing counseling programs for patients with a wide range of kidney related problems. Because of the shortage of interested psychiatrists available to work...
with renal patients and, because of the wide range of kidney related problems experienced by dialysis and kidney transplant patients which require the attention of mental health professionals with sufficient expertise to deal with these problems, counseling psychologists can offer valuable services to this population. It is the purpose of this dissertation to explore and describe the roles of counseling psychologists in nephrology or renal services. It is intended that this study will serve as a guide to the development of counseling programs in nephrology services and hemodialysis units on a more wide scale basis than now exists. Hopefully this study will be useful to directors of nephrology services, hospital administrators, and nephrology staffs in planning similar types of counseling programs. It is also hoped that it will be of benefit to counseling psychologists who are already working with renal patients as well as to those who are in the early stages of implementing counseling related services.

The psychological aspects of chronic hemodialysis have been explored by many investigators. The conclusions drawn range at one extreme from describing hemodialysis patients' adaptation and adjustment to their treatments as poor (Shea, Bogdan, & Schreiner, 1965) with psychotic reactions (Cooper, 1967) and other adjustment problems related to under-control of aggression, hostility, depression, and overdependency (Burford, 1972) to, at the other extreme, remarkably good (Johnson, Wagoner, Hunt, Mueller, & Hallenbeck, 1966), "surprisingly well adjusted," and "psychiatrically normal individuals who are not psychotic but who uniformly show a high degree of concern about their bodies and internal processes" (Pierce, Freeman, Lawton, &
The general consensus of opinion appears to be that hemodialysis patients experience a wide array of intense life stresses and adjustment problems that are directly related to their dependency upon artificial kidney machines as a means of maintaining life (Springer, 1975). These life stresses are typically related to depression and anxiety, independency and dependency need conflicts, marital and family discontent, sexual impotence or inadequacy, financial problems, unemployment or vocational maladjustment, and loss of self-concept, as well as innumerable medical and physical problems.

Initially the emotional problems faced by renal transplant patients are much the same as those of chronic hemodialysis patients in that potential transplant recipients typically are maintained on artificial kidney machines for periods of time ranging from a few weeks to several months. The surgical procedure of the transplant has proved to have been a traumatic psychological experience for many patients. Postoperative functional psychoses and psychotic organic brain syndromes have been reported in a small percentage of patients (Penn, Bunch, Olenik, & Abouma, 1971). Many patients experience extreme anxiety immediately following the surgery. This anxiety is related to the hoped for output of urine from the new kidney. If the output is immediate and substantial the patients are relieved; if the output is delayed and minimal, the anxiety increases.

After lengthy stays in the hospital the transplant patients are allowed to return home but must return to hospitals or clinics for frequent laboratory studies and medical examinations. The patients live with fear that laboratory results will indicate necessary
increases in medication and possible rejection of the transplanted organs. They also struggle to cope with the common physiological changes—increased appetites, loss of hair, cushinoid appearances, acne, and in some cases, sexual impotence—that are secondary to the immunosuppressive drugs used to combat the chronic rejection. The patients may also discover that their "new lives" will not allow them to be as full of vigor, stamina, and drive as did their premorbid lives. Role reversals in the family structure, dependency-independency conflicts, vocational upheaval or unemployment, and a pervasive awareness of the disease itself create new problems for the patients.

Because of the newness of chronic peritoneal dialysis programs, written reports describing the psychological problems of chronic peritoneal dialysis patients are not available. It is expected that these patients may experience many of the same types of problems as do hemodialysis patients.

The need for emotional support and psychological assistance for these patients is apparent. It is proposed that counseling psychologists can provide a wide variety of counseling related services to assist these patients in their adjustment to lives dependent upon machines and transplanted organs made available through the advances of modern medicine.

In order for counseling psychologists to effectively assist chronic renal disease patients, it is necessary that they have some understanding of the function of the kidneys, the diseases which cause the kidneys to cease to function, and the treatment modalities
which are available for these patients. Brief synopses of these three areas may be found in Appendix A, p. 214.

With this section as a preface to the overall problem of kidney disease, the psychological reactions to treatment of this chronic disease are now presented. The review of literature pertaining to the psychological problems of the patient being treated for chronic uremia is presented in chronological order so that the reader may see not only how the identification of emotional problems evolved, but also how wide and varied the reports have been.
CHAPTER II

EMOTIONAL PROBLEMS OF DIALYSIS AND RENAL TRANSPLANT PATIENTS:
A REVIEW OF THE LITERATURE

Emotional Problems of Hemodialysis Patients:
A Review of the Literature

In addition to the medical complications of dialysis and transplantation, many emotional problems of patients maintained by these means have been explored. Even in the early days of dialysis—before many of the emotional problems had been identified—leaders in the field of hemodialysis hypothesized that emotional problems rather than physical ones would become dominant. Belding H. Scribner (1974), often referred to as the "father of modern hemodialysis," made the following comments regarding the emotional factors related to hemodialysis:

Today psycho-social problems represent the major cause of disability among patients that depend for their survival on the artificial kidney; but it was not always that way. As I pointed out in the Presidential Address to the American Society for Artificial Internal Organs in 1964, the day-to-day life of a dialysis patient (in the early 1960's) was a continual battle for survival and no one knew from one day to the next what lay ahead. Because patients and physicians were allies in a continual fight for survival, there was no time to worry about much else. Patients were basically "happy" and the dire predictions of emotional breakdowns and suicide—made so easy because of the ever present arterio venous shunt, usually did not materialize. As long as the struggle for survival was the main issue, emotional problems were suppressed.

In that same address I predicted that as technical and medical improvements in hemodialysis technique resulted in healthier patients and the threat of death
dropped into the background, that emotional rather than medical problems would then become dominant and the suicide rate would rise. These predictions have proven reasonably accurate — and therein lies the challenge to the medical profession and the importance of this book. (p. XI)

**Early reports**

A review of the literature related to the emotional problems faced by hemodialysis patients reveals that little was written prior to Scribner's introductory address in 1964. The first reports described dialysis patients as having multiple emotional problems related to their treatments. Brown, Maher, Lapierre, Bledsoe, and Schreiner (1962) reported that a varied spectrum of psychiatric disturbances had been observed in each of their three patients studied with an acute paranoid psychosis, severe mental depression, and hostility toward dialysis being evident. Kolff, Nakamoto, and Scudder (1962) noted that only one of six patients studied did not adapt well to chronic dialysis. Gonzalez, Pabico, Brown, Maher and Schreiner (1963) reported that the psychological stress related to hemodialysis caused the termination of treatment in one patient who developed a paranoid psychosis after one month of treatment. Two other patients were reported to have developed severe depressive reactions. The remaining patient in the study was seen as seemingly well adjusted, cheerful, and tolerant.

Reports related to the emotional problems faced by dialysis patients begin to appear more frequently in the mid-1960's. Gombos, Lee, Harton, and Cummings (1964) used case studies to report that two
of their four patients did rather poorly on dialysis due to dietary indiscretions resulting in edema and hyperkalemia. They reported self-destructive thoughts in one patient. Shea et al. (1965) reported that each of the nine patients in their study "manifested significant psychological reactions while on the dialysis program" (p. 558). They characterized the emotional adjustment to the basic disease process as being generally poor. They concluded that "the additional stress of hemodialysis seemed to precipitate schizophrenic-like episodes in two patients, a psychotic depressive reaction in one patient, and a number of severe neurotic depressive reactions in all but one of the other patients" (p. 562). The authors described the AV shunts as being constant reminders to patients of their conditions and their dependence on the dialyzers. They reported that "a few patients, either as an attempt to deny their illness or as an expression or a gesture of suicide, frequently subjected their cannulated arm to unnecessary trauma" (p. 560).

The treatment of eight patients who were selected for hemodialysis on the basis of a "first come first serve" selection procedure were described by Retan and Lewis (1966). They described three of the patients as having experienced severe emotional difficulties related to hemodialysis. Five of the patients were reported to express thoughts of suicide and other symptoms of depression as well as showing a lack of cooperation in shunt care and dietary programs. The authors concluded that:

To be done properly, chronic dialysis requires a substantial investment in equipment, supplies and,
perhaps above all, time and supporting personnel.
Patient selection for motivation, intelligence, emotional stability, and rehabilitation potential appears to be necessary to obtain the degree of cooperation required for long term success. (p. 292)

Wright, Sand, and Livingston (1966) discussed the psychological stresses associated with hemodialysis using a definition of psychological stress which outlined psychological stress into categories of actual or threatened losses, injury or threat of injuries, and frustration in drives or derivatives. Wright et al. subdivided actual or threatened losses into the following categories: parts of body or body function, loss of membership in groups, failure of plans or ventures, changes in the way of life and living, loss of home, possessions, or financial status, and loss of job or occupation. They described anxiety regarding the AV shunt as being the dominant factor in the injury or threat of injury category. Intolerance of pain was also noted. Dietary restrictions and decrease or loss of sexual potency were noted as being of primary significance in relation to frustration in drives or derivatives. The authors found that each of their patients experienced some, but not all, of the above stresses. Wright and associates concluded that denial and projection were reactions to multiple examples of psychological stress that seemed to be characteristic to their population of patients. They commented that when denial and other defense mechanisms are not effective, depression may be seen. They found the critical stresses to be more related to job changes or marital problems rather than to the physical experience of dialysis. They suggested that in order to understand
an individual patient's response to psychological stress it is necessary to have adequate knowledge of the life history and current life situation.

Brand and Komorita (1966) reported that "the nature of chronic renal failure, the restrictions and modifications imposed, and the necessary repetition of treatment suggest that these patients may have difficulty in maintaining emotional and physical equilibrium" (p. 1778). The authors identified denial as a major defense mechanism to control anxiety and found that identification of the patients' needs could not be based only upon the complaints that were voiced by the patients.

A shift to the more positive

Following these initial reports which painted a rather bleak emotional picture of dialysis patients, a number of much more positive reports were published. Findings contradictory to previous studies were reported by Johnson et al. (1966) in their study of ten Mayo Clinic patients. The authors reported that:

In general, these patients made a remarkably good adjustment to this restrictive and stressful mode of existence. None have required psychotherapy or drugs to alleviate anxiety or depression. On the contrary, they have seemed to be unusually cheerful and have made minimal demands on the physicians. (p. 91-92)

These patients were reported to observe dietary restrictions satisfactorily with only infrequent problems arising with three patients. Johnson et al. concluded that "Our experiences have reinforced the impression that an emotionally stable home environment and a high degree of motivation toward a specific goal are essential prerequisites for successful adaptation to long-term dialysis therapy" (p. 93).
Sand, Livingston, and Wright (1966) reported findings similar to those of Johnson with their patient population. They found that a majority of the patients made at least adequate adaptation to chronic dialysis with few patients having significant emotional difficulties or lapses in self-care. The authors concluded that the patients within their sample who were the most successfully adjusted could be differentiated from the less adaptive patients by showing the following characteristics:

1. Higher intelligence,
2. A less defensive attitude about admitting to anxiety or emotional difficulty,
3. Less reliance on emotional defenses that involve the use of physical symptoms, (for example, hypochondriasis and hysteria), and
4. More satisfactory emotional support from family members. (p. 609)

Only two of 22 patients in the study were regarded to have poor emotional adjustment.

Basically optimistic views about patients' emotional adaptations to chronic hemodialysis were also reported by Norton (1966). He reported that, "Even careful psychiatric observation fails to bring up more than occasional or scattered evidence for hidden depressions in this group" (p. 1268). Norton concluded that:

In general what one observes is a group of people going about their lives in a relatively routine and ordinary way. They have incorporated the new procedures into their schedule, and although this schedule may be somewhat different than it used to be, one does not get the feeling that their spirit or attitude toward life is much different than it ever was.

Most of the patients are quite aware that without treatment they would now be dead. Any discomfort and inconvenience they must now endure is weighed against the advantages of still being alive. Since the procedure itself is quite painless, and since, for the most part, family and work relationships are relatively little disturbed, the burden to be born is largely one...
of future uncertainty and recurrent and variable physiological upsets and imbalances. Most patients appear to become rather philosophical about these latter annoyances. (p. 1268)

Cooper (1967), in a case study report, described a 35-year-old woman who developed a hypomanic psychosis associated with chronic hemodialysis. Cooper assessed the illness as being functional rather than metabolic with the content of the psychosis being related to the patient's contemporary conflicts. Treatment with Chlorpromazine resulted in a remission in 16 days. Psychotherapy, consisting of encouragement to the patient to freely discuss her conflict, was used as an adjunct to the chemotherapy. Cooper suggested that psychiatric decompensation complicating hemodialysis may be treatable and need not result in the termination of the dialysis program for the patient.

Eschbach, Barnett, Daly, Cole, and Scribner (1967) reported that all the patients in their home dialysis population developed definite anxiety during periods when there was cannula, medical, or technical problems, but that the anxiety decreased with time as the patients gained more competence in the dialysis procedures. Cramond, Knight, Lawrence, Higgins, Court, MacNamara, Clarkson, and Miller (1968) reported that on several occasions patients had become psychotic for brief periods of time. The authors urged that close attention be paid to the complex emotional and social needs of the patients.

Intense stresses of living

After the two extremes of emotional reactions to hemodialysis had been described, reports then shifted to describing common problems and
stresses experienced by dialysis patients. Abram and Wadlington (1968) commented that the problems of rehabilitation and adjustment to chronic hemodialysis, the arousal of dependency-independency conflicts with the patient, and the meaning of prolongation of life require attention and understanding of personnel associated with dialysis programs.

Kaplan De-Nour, Shaltiel, and Czaczkes (1968), in a preliminary study, reported that on a surface level, their patients were content, functioned much as they had prior to dialysis, and were nearly free of any psychiatric symptoms. They noted that uniform and often identical defense mechanisms of denial, displacement, isolation, projection, and reaction formation, while adaptive in one sense, led to marked ego restriction, however. The authors hypothesized that the similarity of the defenses suggested that the patients were really under extreme stress directed toward the forced dependency on the artificial kidney machine and on the staff, and the aggression resulting from this dependency. The authors also reported clinical manifestations, psychological test findings, and electroencephalogram results which suggested brain dysfunction.

Findings similar to those of Kaplan De-Nour et al. (1968) were reported by Short and Wilson (1969). Their studies suggested that dialysis patients, when faced with recurrent physical and psychological stresses, utilize the mechanism of denial. Using the Minnesota Multiphasic Personality Inventory (MMPI) as an instrument to support their hypothesis of denial as a uniformly used defense mechanism, Short and Wilson concluded that the capacity for denial among hemodialysis patients is phenomenal, and the denial is not that of the
illness itself but that the illness is present now. They described the situation in the following manner:

When their bones become bowed from osteomalacia, and they go from a cane to a walker, and then to a wheelchair, they continue to expect and hope that this process will be reversed. When clotting, bleeding, or infection occur at the cannula site, they accept this as a regular occurrence, only to have it happen again. (p. 435)

They suggested that increasing denial may be an evitable consequence of chronic hemodialysis but that this denial may be necessary in order to allow the patients to cope with their life situations.

Daly (1969) reported that there is a wide range in hemodialysis patients' hostility as it is perceived clinically. He suggested that dialysis patients lack the ability to deal with this hostility in adaptive ways but instead displace it by complaining about the hospital, the kidney machine, or dietary requirements rather than dealing directly with their hostility toward their illness, their treatment, their relatives, and God and Fate.

A high incidence of passive-dependency among patients with chronic renal failure was observed by Short and Alexander (1969). They reported that regression and dependency, seen most frequently during the early stages of dialysis, may lead, when not identified and confronted, to be self-perpetuating with patients adapting to permanent dependent roles and being unable to regain their motivation and self-esteem which would allow them to become independent again. Short and Alexander concluded that successful adjustment to long-term hemodialysis is in part dependent upon the number and quality of premorbid assets experienced and endowed by the individual. The authors also

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placed importance on the quality of support and acceptance given by the significant family and community members as relates to overall adjustment and rehabilitation potential.

Beard (1969) found that 79% of the patients in his study utilized denial as a mechanism for defense against the fear of death that accompanied learning of the diagnosis of renal failure. Beard reported that his patients found that fears of living the unsatisfactory lives of the chronically ill to be almost as intolerant as the fears of imminent deaths. His conclusion was that in all of the patients in his study:

The chronic stress, the fears, the conflicts, and the dissatisfaction that characterizes the life of the patient with chronic renal failure were severe, and prolonging life by hemodialysis and renal transplantation did not resolve those problems for these patients. The fear of dying and the fear of living were an integral part of the whole problem of renal failure and its treatment. (p. 380)

Some observations on the psychological significance of the process of urination were made by Kaplan De-Nour (1969) as a result of her psychotherapy with 11 patients on chronic hemodialysis. She hypothesized that all adults place some emotional importance on urination and that the gradual loss of this function enhances its importance. The threat of total urination loss was found to be extremely distressful to chronic dialysis patients. Kaplan De-Nour reported that:

The denial of the nearly complete loss of urination led to manifestations such as exaggeration of the remaining function. The denial was further increased in the patients who underwent bilateral nephrectomy and it resulted in phantom phenomena, which included urgency and the desire to urinate as well as "phantom urination." (p. 615)

She further suggested that potency problems observed in chronic hemodialysis patients were not due to underdialysis as had been expected,
but to this regression to pregenital stages of development related to the loss or threat of loss of urination.

Information received in a survey of hemodialysis patients in the United States was reported by Katz (1970). He found that a large percentage of patients reported that they were able to overcome initial apprehensions and become relaxed with the routine of dialysis. His survey results also indicated that, in general, patients were content with the dialysis centers' staffs and procedures, as well as with their own family lives. Only 25% of patients surveyed reported themselves as being moody, depressed, or lonely. The most frequent life dissatisfactions were found in the areas of social and recreational activities, reduced job performance or employment status, and financial worries. Katz concluded that the majority of the patients in the study were making a relatively good adjustment to hemodialysis, although he made note of the possible influence of denial as a defense mechanism.

Abram (1969) described phases in adaptation to hemodialysis. Phase I, the uremic syndrome, was described as occurring shortly before the patients begin hemodialysis. Psychological testing revealed some degree of organicity in most patients, with difficulties with visual-motor coordination, nonverbal abstraction, and attention-concentration. In spite of these difficulties, Abram found that most patients were active and working up to the time that hospitalization became necessary. Phase II: the shift to physiological equilibrium, was reported to occur during the first to third weeks of dialysis and was referred to by Abram as a "return from the dead" (p. 45).
Shifts in various physiological and psychological experiences were noted. The first dialyses, usually taking place when the patients were experiencing central nervous system depression, anemia, hypertension, severe electrolyte imbalance, and, frequently, congestive heart failure, may result in apathy or feeling "washed out." This apathy may quickly shift to euphoria, or as one of Abram's patients described as a "return from the dead" (p. 45). The patient realized that death was not imminent and became more aware of the environment.

Anxiety may also be present at this stage, but may be transient.

Phase III: Convalescence—"return to the living" was reported to occur at the third or fourth week when patients had reached a phase of equilibrium and faced the realities of their situations. Abram described this phase as follows:

He is physically weak, often still anxious, and bothered by lingering headaches and bouts of vomiting. However, he has returned to the living and looks ahead. Depression often shows itself as the problems of living with dialysis become apparent. It will require approximately two months to reach the point physically and psychologically for him to return to work. He will soon leave the hospital and must give up his regressed and dependent position. Conflicts of dependency versus independency become particularly strong at this time.

To some extent the patient must be pushed into the outside world and "reborn." The process is a gradual one, but it becomes necessary to decrease the secondary gain of his illness and allow his "healthy" independence to become dominant. Our experience has been that one cannot force these patients back to work or to accept responsibilities of life without letting them "work through," as it were, their depression, regression, and dependency-independency conflicts. (p. 46)
Abram's Phase IV: the struggle for normalcy, was described as the problem with living rather than dying. This phase, lasting from the third to the 12th month, occurred when the patients had returned to work, and had, in general, adjusted to the routine of dialysis. Physical complications occurred and exacerbated anxiety or depression. By six months to a year most patients reached the level of adequate adaptation to dialysis, although problems of living rather than dying continued. Patients asked themselves the question, "Is it worth living?" Abram reported that this phase resulted in feelings of depression and despair with suicidal threats.

In a six year study of 52 home dialysis patients, Blagg, Hickman, Eschbach and Scribner (1970) found that home dialysis was potentially stressful with most patients having had occasional stressful episodes due to medical, technical, or cannula problems. The authors found continued severe stress with maladjustment to dialysis in 19% of the patients. They concluded that "the ability to adjust to such problems depends on emotional stability, their frequency of occurrence and the emotional support provided by family, friends and physicians" (p. 1128).

Abram (1970) described chronic hemodialysis as "an example of medical progress in which the patient faces new, and at times overwhelming, psychological stresses" (p. 41). He observed that patients dying of renal failure face death shortly before they begin dialysis and may be expected to react with euphoria after a few dialyses. He observed that once the euphoric stage had diminished and the patients...
were more mentally alert, the dialysis created temporary anxiety related to fear of the machine and fear of death. Abram explained that the patient for the remaining of his life "wrestles at both conscious and unconscious levels recurrently with the question which he asks himself in one form or another, "Is life on dialysis worth living?" (p. 41). Abram (1970) cited several psychological situations unique to chronic dialysis. He reported that dependency-independency conflicts placed dialysis patients in a type of double bind. The patients must cooperate with the program of treatment (that is be able to accept their dependency on it), and at the same time be independent (lead a normal life by keeping up their work and family relations). This dual message leads to a double bind conflict which patients may handle in a variety of ways. Abram gave the following explanation:

The patient may react through accepting the dependency and independency requirements. He follows the treatment program and is able to return to society as an active citizen. If, however, he is threatened by the dialysis situation and has unresolved dependency needs, he reacts either by becoming excessively dependent and unable to give up the "sick role" or rebels against the program and refuses to accept the regimen. With excessive dependency the patient becomes demanding during dialysis and has difficulties outside of the unit with his work and family. It usually requires three to six months for the patient to resolve this conflict and return to his premorbid pattern of living. For the patient who does not resolve it, he may have continued difficulties giving up his role as the patient to return to the work-a-day world. On the other hand, the patient who is too threatened by dependency cannot accept the program. He refuses to stay on his diet, takes poor care of his shunt, is grouchy with the nurses, and comes late to the dialysis unit for his treatments. (p. 42)
Abram (1970) also reported cases where dialysis patients would incorporate the dialyzer into their body images and then project their feelings onto it. This relationship with the dialyzer resulted in disturbances in body image and had a "defective, death-like quality to it" (p. 44). Ambivalence over life and death was another psychological situation reported to be unique to dialysis patients. Abram reported that most patients on dialysis programs speak of suicide at one time or another, but most do not take their own lives. In a later report Abram, Moore, and Westervelt (1971) reported the suicide rate among dialysis patients to be more than 400 times the rate of suicide among the general population. Their results indicated that suicidal behavior occurred in approximately 5% of the dialysis population in their questionnaire sample.

Denial was found to be a universal finding in psychological studies of chronic hemodialysis (Abram, 1970). Defining denial as being "a mechanism of defense in which the facts or logical implications of external reality are refused recognition in favor of internally defined, wish-fulfilling fantasies" (p. 46), Abram viewed the "external reality" as the dialysis regimen and the "wish-fulfilling fantasies" as the wish not to be ill. He suggested that denial is so commonly found among dialysis patients that psychotherapeutic intervention may be difficult or impossible and, if it is that strong, it is best left alone. He stated that denial becomes dangerous "when the patient refuses to accept dialysis, that is, when the wish not to be ill leads to a massive psychotic denial and a break with reality" (p. 47).
As a follow-up to the study by Abram et al. on suicide, Goldstein and Reznikoff (1971) examined suicide behavior from an external locus of control framework. They suggested that hemodialysis patients adopt external loci of control as attempts to cope with continuous responsibility and anxiety that result from rigid treatment regimens. The authors found that dialysis patients were significantly more external in orientation than were patients with minor medical conditions. This led to the conclusion that since the patients believed that reinforcements occur on a random basis, their behavior had little or no effect upon what happened to their lives. If chronic dialysis patients perceive their behavior as being unrelated to their conditions, the likelihood of rejection of their role in the treatment program increases. Goldstein and Reznikoff concluded that by utilizing an external locus of control framework of reference, suicidal behavior is understandable in terms of the orientation of the patients toward the view that their actions do not affect their medical conditions. The authors urged intervention in order to help patients with chronic medical conditions to develop more internal outlooks.

Kaplan De-Nour and Czaczkes (1970) discussed the difficulties faced by the personnel in hemodialysis units in getting patients trained to perform dialysis in the home. Their decision to begin a home-training program was reported to be based on the literature which suggested that this type of treatment was both medically and psychologically better for patients (Curtis, Cole, Fellows, Tyler, & Scribner, 1965; Eschback, Wilson, Peoples, Wakefield, Babb, & Scribner, 1966; Eschback, et al., 1967; Hampers, Merrill, & Cameron,
1965; Rae, Marr, Steurg, Gothberg, & Davidson, 1968). They found, however, that training patients to treat themselves in the home was more difficult than they had imagined. The results indicated that after two years, only one patient was on home dialysis with one other patient nearing that stage. The six other patients were reported to be in various stages of resistance to home dialysis. Kaplan De-Nour and Czaczkes reported five factors which influenced readiness or resistance to home dialysis. Firstly, they reported that, during the "setup," the initial, universal and normal reactions of fear and anxiety were even greater to home dialysis than to in-center hemodialysis situations. Secondly, the attitudes of the medical team affected the success of their program. Their observations were that the medical team was basically opposed to the philosophy of home dialysis, and that these feelings were conveyed to the patients and relatives. The authors contributed the anti-home dialysis philosophy held by the staff to be related to the staff's possessiveness, overprotectiveness, and threat to their professional self-image. Thirdly, the authors stated that the patients' personalities affected their attitudes toward home dialysis, with the patients' dependency needs being the major common personality trait which influenced these reactions. They found that patients with strong dependency needs preferred hospital dialysis while those patients who had stronger needs to achieve independence exhibited more motivation to dialyze at home. The fourth factor reported was the attitude of the family. The authors' conclusion was that the better families for home dialysis were not the dedicated ones, in whom the dedication was often a reaction formation to aggression.
and guilt, but those with little tendency toward guilt and high ability for verbal expression and aggression. The fifth and final factor was reported to be related to financial problems. This was a problem because of the nature of medical insurance coverage in Israel, where many home dialysis costs were non-reimburseable expenses.

The expression of anger and denial was commented upon by Halper (1971). He expressed belief that it is important for patients to feel free to express their anger about the pain, discomforts and frustrations associated with dialysis without having fears that retaliatory behavior will be exhibited by the staff. He commented that the expressions of feeling of anger are therapeutic for patients in terms of reducing levels of tension and warned that if anger is not expressed directly, the danger exists of it being directed inwardly with the results being possible depression, paranoid symptoms, or problematic family situations. Halper reported the use of denial by patients—both prior to the onset of dialysis and during treatment—and commented that this denial may protect patients from emotional decompensation. He advocated a flexible attitude toward denial, allowing patients the opportunity to deny feelings of anger, depression or anxiety until such time as the use of denial prevented patients from seeking attention for medical complications. At those times the patients should be encouraged to talk about painful thoughts and feelings even though they may prefer not to do so. Halper concluded with the statement that:

The adaptation of the patients in our program has in general been good. We sometimes wonder how patients can accept the extraordinary stresses of

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the dialysis regimen and problems in multiple organ symptoms without decompensating emotionally; yet, we have had few serious psychiatric complications. (p. 189).

He contributed such good patient adaptation to the attitudes of hopefulness and acceptance on the part of the staff.

Enelow (1971) reported interviewing five hemodialysis patients, all of whom showed marked psychological and mental difficulties with two of the patients being clearly psychotic. Three of the patients were reported to have had exhibited verbal incoherence, hallucinations, and delusions. Four of the patients were reported to have had significant degrees of depression, and all were reported to have ambiguous neurological signs and to have been preoccupied with physical symptoms. Enelow's subsequent investigation into the personality structures of hemodialysis patients revealed that there was a significant relationship between the patients' abilities to recognize and admit feelings of depression and medical success. He also reported that the better functioning patient was less apt to deny unpleasant feelings and was better able to communicate negative and unpleasant feelings. He further commented that patients who could tolerate being more passive than physically active were likely to be more successful medically. Enelow also found a positive correlation between medical success and being able to manipulate one's environment. His investigation of hemodialysis spouses led to the conclusion that mothering, nurturing spouses were the ones best suited for dialysis treatment. After visiting several hemodialysis units, Enelow formulated a list of seven characteristics of units which were successfully coping with their patients' problems and were having a low incidence of severe psychological

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complications as contrasted to those units having a high incidence of such severe complications. Characteristics of the "successful" programs were as follows:

1. A cheerful, pleasant and warm-looking physical atmosphere
2. Friendly and communicative staff persons, all of whom had friendly relationships with several of the patients
3. Available diversions (music, T-V)
4. Considerable activity
5. An emphasis on increasing the activity of the patients and giving them increasing responsibilities for themselves
6. Rapid movement to training for home-dialysis and to becoming self-sufficient in managing the equipment
7. A strong, almost parental figure in the environment.(p. 6)

The important positive psychosocial aspects of hemodialysis were summarized as being the establishment of appropriate family and social support systems, helping to maximize patients' independence and self-sufficiency, helping patients to verbalize feelings of depression and to face and talk about discomforts, and providing counseling to help with family and medical problems (Enelow, 1971).

Reichsman and Levy (1972) observed the course of treatment for 25 hemodialysis patients over a four year period. Prior to the onset of dialysis all patients were seen as being significantly depressed, with sadness and helplessness being the most prevalent depressive affects. Feelings of anxiety concerning their present life situations were observed in most patients, but this anxiety was expressed less than was the depression. The anxiety that was observed was reported to be limited mainly to possible rejection from the treatment program and the future care of the patients' children. Overt
expressions of anger were found to be conspicuous by their absence. Reichsman and Levy observed three distinct stages of adaptation to hemodialysis. The first of these stages, the "honeymoon," was characterized by feelings of contentment, confidence, and hope with marked improvement, both physical and emotional, of which the patients had conscious awareness. Patients were reported to accept their dependence upon the artificial kidney machine and the medical staff readily, with few expressions of displeasure. Most patients were reported to have experienced intense, repetitive episodes of anxiety, manifested by sleeping disturbances, frequent masturbation by nearly two-thirds of the male patients, and apprehension related to life expectancy, vocational rehabilitation, and a variety of other factors. The "honeymoon" was reported to range in time from six weeks to six months, beginning one to three weeks after the first hemodialysis treatment. A period of "disenchantment and discouragement" was observed in all patients who had experienced a clear cut "honeymoon." Sadness and helplessness, hopelessness, guilt related to dietary indiscretions, shame concerning the nature of the illness and its complications, anger, and annoyance in relation to the hemodialysis unit personnel replaced the earlier feelings of contentment, confidence and hope. This period of "disenchantment and discouragement" lasted from three to 12 months. The final stage, "long term adaptation," was reported to be characterized by the patients' arriving at some degree of acceptance of their own limitations and of the shortcomings and complications related to dialysis. This stage was reported to be marked by fluctuations in the patients' senses of emotional and physical well-being,
with the fluctuations varying greatly from patient to patient and from
time to time. States of contentment alternated with periods of de-
pression with the most prominent defense mechanism employed being that
of denial. Reichsman and Levy stated that:

The patient's denial seemed to serve an effective
adaptative function in many instances: during periods
of depression it protected the patients from experi-
encing even more intense helplessness, and during
periods of contentment it helped to preserve the pa-
tient's sense of well-being. (p. 862)

The authors also reported stressful incidences related to the patients'
work situations and to a wide variety of real, threatened, or fanta-
sized other life stresses. Feelings of dependence upon the machine
were reported to increase, and expressions of anger and displeasure
were repeatedly expressed. In a later report (Levy, 1973b) the senior
author suggested that because hemodialysis is now given earlier in the
course of treatment than in previous years, the stages of adaptation
are now less well delineated and less dramatic.

Issue has been taken with the frequent references to the descrip-
tion of denial among dialysis patients as being indicative of psychia-
tric problems which were undesirable. Pierce et al. (1972) stated:

Defense mechanisms are not intrinsically patho-
logical nor is their use necessarily symptomatic of
psychopathology. Often, the symptoms cited as evi-
dence for denial are more readily interpreted in
terms of differences between patients and staff and
the knowledge each has of the medical condition and
its implications, implications not always unambiguous
to experienced staff members and certainly less clear
for patients. (p. 1)

After examining and analyzing MMPI profiles of hemodialysis patients,
they concluded that:
The psychological complications associated with chronic hemodialysis are interpreted as reactions to real life situations in contrast with psychopathology. MMPI results are viewed as reflecting the accurate endorsement of actual rather than psychogenic systems. Furthermore, the use of denial by dialysis patients is not necessarily pathological. Dialysis patients have a multiplicity of real life problems and are surprisingly well adjusted despite tendencies to somatize. (p. 2)

Kaplan De-Nour and Czaczkes (1972) studied 43 patients on chronic hemodialysis in an attempt to identify personality factors causing non-compliance with the dialysis regimen. The authors used compliance to the dietary regimen, i.e., compliance to fluid, potassium, and salt restrictions, as indicators for noncompliance. Their results indicated that on the whole, adherence to the diet was poor, with 45% of the patients being rated as abusers. Low frustration tolerance and primary and secondary gains from the sick role were found to be the most frequent causes for noncompliance. Other factors contributing to noncompliance, but to a lesser degree, included acting out behavior, denial of the sick role, and suicidal behavior. Kaplan De-Nour and Czaczkes hypothesized that the high rate of noncompliance could be attributed, at least in part, to high levels of aggression among patients. The authors attributed these high levels of aggression to the dependency and loss of mastery caused by hemodialysis treatment.

Kaplan De-Nour and her associates contributed several articles related to the medical teams' reactions and opinions to hemodialysis and dialysis regimens. Kaplan De-Nour and Czaczkes (1968) reported that the main emotional reactions of the dialysis medical team (consisting of three physicians, five registered nurses, two technicians,
a dietitian, a social worker, and a psychiatrist) were feelings of guilt, possessiveness, over-protectiveness, and withdrawal from patients. The feelings of guilt were reported to be related to the selection procedure employed and the choices made not to allow certain patients to receive hemodialysis. The possessiveness was reported to be related to jealousy about who is more important to the patients. The over-protectiveness situation was likened to a familial structure with the nurses taking the role of the over-protective mother and the chief physician the bad demanding father; the patients were the children. (The authors pointed out that hostility and unconscious aggression lay below this mask of over-protectiveness). Withdrawal reactions were seen among physicians who immediately abandoned patients who had not been selected for dialysis, and among nurses, where the attrition rate was extremely high. In general, the reactions of the physicians were mostly those of guilt and withdrawal; over-protectiveness and possessiveness were found mostly in the nurses.

In a later report Kaplan De-Nour and Czaczkes (1971), searching for sources of the discrepancies in the psychiatric reports on patients on chronic hemodialysis, studied "team opinion" of dialysis personnel by using questionnaires describing various aspects of dialysis. A high agreement between the team members and a definite team opinion were found when the team was comparing patients' conditions, but when amount of absolute suffering was considered, it was found that team members were not in agreement. The authors suggested that team opinion reflects team spirit and the personal bias related to personality.
Kaplan De-Nour, Czaczkes, and Lilos (1972) studied the functioning of medical teams in chronic hemodialysis units with concentration placed on teams' opinions and teams' expectations from the patients. Of the three teams studied, two were found to have team opinion with the third team showing a marked lack of team opinion or little agreement on what is more or less important in their patients' behavior and adjustment to dialysis. The two teams that were found to have team opinions had similar systems of values in regards to what makes a "good" patient. All three teams showed high discrepancies in the members' actual expectations from their patients. The authors suggested that these inter-team discrepancies in expectations might explain some of the discrepancies seen in the various reports on patients' adjustment to chronic hemodialysis. They also suggested that intra-team discrepancies might be one of the reasons for patients' poor compliance with the medical regimen.

The results of a national survey by questionnaire related to sexual adjustment among hemodialysis and kidney transplant patients were reported by Levy (1973a). Questions asked were reported to be aimed at comparing patients' sexual functions at three points in time including before developing uremia, after developing uremia but before being on a program of hemodialysis or receiving a kidney transplant, and at the time of the questionnaire. The results from the 536 respondents (57%) indicated that hemodialysis patients of both sexes and male transplant recipients experienced a great deterioration in sexual function at the time of answering the questionnaire as compared to before the onset of uremia. Initiation and continuation of hemodialysis
was reported to be associated with worsening of sexual function in a considerable number of patients. Levy stated that:

The worsening of sexual problems -- instead of improvement -- in the presence of physical improvement during maintenance hemodialysis, points to the likelihood that emotional factors play a role in sexual dysfunction in patients on programs of this modality of treatment. (p. 142)

Abram (1974a) reported that it is difficult to assess the psychological reactions of patients to chronic hemodialysis. He suggested that the majority of dialysis patients are not psychiatrically ill, and commented that:

If it had not become necessary for them to undergo this life-prolonging method of treatment for illnesses formerly hopelessly terminal, it is doubtful that they would have consulted a psychiatrist unless it had been for coincidental neurotic problems of everyday living. (p. 67)

Abram suggested that the long term responses to hemodialysis may be viewed as falling under the broad categories of regression, depression, and denial. He suggested that dialysis patients must be able to tolerate regression to the point where they can trust the medical staff charged with caring for them, but eventually must take more mature and active steps toward assuming responsibility. The author, commenting on the independency versus dependency problem, asserted that this will be an area of conflict because patients must accept some dependency (upon the artificial kidney machine and the medical staff), and at the same time be independent, working and maintaining responsibility in their worlds outside of the dialysis unit. Depression was noted to be an understandable by-product of dialysis because of the multiple losses experienced by patients. Abram cited losses of bodily function, work
capacity and learning ability, and sexual performance as examples that may lead to damaged self-esteem. Denial was viewed as being a pervasive, unconscious mechanism of defense used to handle conflicts productive of anxiety. He explained that it may be adaptive in that it allows patients to minimize the hardships associated with dialysis, but may become maladaptive when it interferes with the treatment and adherence to the medical regimen, or when "under severe psychological stress or gross reality pressures it breaks down with the eruption of underlying anxiety or, rarely, frank psychosis" (p. 70).

Abram (1974b), in a later report, commented on the "binds" in which dialysis patients are placed. In addition to the independency-dependency conflict or bind discussed above, the patients also face possible conflicts related to dependence upon dialysis and fear of expressing dissatisfaction because of its effect upon the medical personnel. Abram stated:

If the patient allows his negative feelings to emerge and vents his anger over his situation, the limitations on his life, etc., or if he criticizes his care, he becomes vulnerable to retaliation by the staff and even rejection from the program....The patient picks up messages, both covertly and overtly, that it is safer to keep submerged any feelings of disillusionment with or hostility toward the treatment. Otherwise you will get the reputation of being a "bad patient" or a complainer and eventually be labeled as uncooperative. (p. 52)

Another bind discussed by Abram was that of patients' perceptions of the quality of life on dialysis. The bind is created when patients feel that life is no longer worthwhile and wish to take steps to end life by either direct means of suicide (overdosage or gun wound) or

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indirect suicide (diet abuse) but must deal with the expectations of the medical staff who expect them to continue attempting to lead worthwhile and profitable lives.

The review of the literature related to emotional problems of hemodialysis patients points out that in the early days of dialysis reports centered on emotional problems of patients which were new and unknown to the field. The reports suggested that dialysis patients were apt to develop severe emotional reactions to their treatments, and the quality of life for these patients was questioned. The eventual response to these early works was a series of reports which seemingly said that not all patients had to experience these problems but that many patients could lead relatively normal lives with a minimal number of emotional problems. These findings were also unique at that time. Finally, the published reports shifted to a more neutral ground where patients' emotional problems were identified as being "problems of living" unique to dialysis patients because of the increased intensity and duration of stresses related to multiple losses, conflicts, and frustrations which were directly related to patients' dependency upon machines to sustain life.

Emotional Problems of Renal Transplant Patients:
A Selected Review of the Literature

Emotional problems among kidney transplant recipients and donors have also been reported by a number of authors. Columb and Hamburger (1967) reported the results of psychiatric examinations of nine kidney transplant recipients. A reactive depression was reported to occur
after physical complications in only one patient. The eight other cases were reported to have normal functioning and satisfactory tolerance of the transplanted kidney contrasted with the presence of overt or partly concealed anxiety. The authors made the following comments regarding the overall adjustment of the patients:

One cannot anxiety directly expressed in the concerns of the patient about his family duties, possibilities for marriage, and professional future. More rarely, difficulties occur in the adjustment of the patient to his new situation. Some patients in the later periods after a graft, even though their renal conditions are entirely satisfactory, complain of weakness, changes of mood, and inability to resume normal vocational activity. Sometimes it appears that the emotional trauma of the graft accounts for the origin of these difficulties in readjustment: they are massive denials of the entire traumatic situation. (p. 175)

Anxiety was also noted among donors prior to transplantation (Columb & Hamburger, 1967). Their study of 22 donors yielded reports that eight to ten were considered to be stable, balanced individuals with good emotional control. Two of the donors were found to be disturbed by their situations as donors, four had preceding neurotic disorders, and five were reported to be affected by some special situation in their relationship to the recipients.

Kemph (1967) reported that although severe emotional or mental disturbances occur seldom and transiently among kidney transplant patients, a variety of psychiatric complications including hysteria, phobia, compulsion, anxiety, depression, and psychosis occasionally develop. The most commonly encountered symptom in both donors and recipients was reported to be depression. Donors were found to become depressed immediately following surgery because they felt unrewarded
for maximum sacrifices. Recipients were reported to have developed recurrent depressive episodes with the major precipitating cause being an underlying fear of death. Kemph added that, "Both donors and recipients expressed concerns which were rich with psychodynamic implications for the giving and receiving of organs, including the effects of this surgery on their sexual potency" (p. 83).

In a later report Hertel and Kemph (1969) reported that determining factors in patients' abilities to cope with kidney transplants were related to the seriousness of the physical symptoms and the degree of psychological maturity. They reported that transplant patients may be seen as being optimistic immediately following the graft, but depression is common after one or two days. This postoperative letdown may be heightened by several factors including interrupted sleep patterns, restlessness, blurred vision, memory lapses, inability to concentrate, and hallucinations. Hertel and Kemph found the severity of this depression to decrease in a few days and to be followed by a two week period of anxiety and mood shifts while patients waited for kidneys to begin functioning. The authors found that, "After this is the period when they feel most 'inhumane,' most guilty for having made the ultimate demand--another person's kidney" (p. 617). Hertel and Kemph noted that once the kidney begins to function well, euphoria may predominate until the time for discharge from the hospital approaches, when the patient becomes restless and complaining because of the frustrations of the long confinement and the anxiety about new adjustment to be made in the future. Patients were reported to leave the hospital with "an almost religious feeling that they have been given a second
chance—a new life" (p. 618). The authors commented that the adjustment period may be a tense one with anxieties related to overassertion and independence as well as feeling a strong need to rebuild basic foundations of confidence in themselves. Hertel and Kemph found that conflicts sometimes occurred between the recipient and the donor following the successful transplant. They reported that recipients had difficulty integrating the kidney into their body concept, feeling that they had robbed the kidney and anticipated some kind of retribution. The donors were reported to exhibit unconscious resentment toward the recipients and the staff who requested the transplant. Donors were also reported to attempt to create bonds with the recipients, feeling needs to control recipients' behavior as if to protect their own investments. The authors commented that when the recipients are married, this closeness may be upsetting to the spouses.

Biorck and Magnusson (1968) commented on the concept of self as experienced by kidney transplant patients. They found that the great majority of the patients in their population had immediately or gradually accepted the transplanted kidney as their own. They found that only one of 15 patients could not accept the transplanted organ into his concept of himself. They suggested that a kidney from an anonymous cadaver donor might be most easily accepted, and that reactions to kidneys from close relatives are conditioned to some extent by feelings of affection or hostility toward the particular donor. The authors concluded, however, that their experiences had shown that transplant recipients had "a remarkable capacity for psychological acceptance of a foreign organ incorporated in their body" (p. 192).
Eisendrath (1969), reporting on 11 patients who died following renal transplantation, found that eight of the patients who died were "distinguished either by a sense of being abandoned during their illness by an important person upon whom they depended and whose esteem and love were integral parts of their lives or by anxiety approaching panic about their ultimate outcome" (p. 381). A ninth patient displayed unusual euphoria, denied his illness, and went into a terminal coma acting as though no problem existed at all.

Increasing experience with renal transplantation is "augmenting our knowledge of the impact that transplantation has on the kind of life the transplant patient lives and on the quality of that experience" (Beard, 1971, p. 24). The reality problems and psychological stresses experienced by transplant patients and their families were viewed as being great. Beard stated:

Renal transplantation is literally a family affair. Parenthetically, experience is beginning to teach us that the patients who adjust the best are those who have a concerned, supporting, and stable family, and who have a deep and meaning relationship with at least one significant member of that family. (p. 25)

Reporting on five patients, Beard found the quality of life was "seriously marred by the uncomfortable, uncertain, and unfulfilling existence which they were forced to endure" (p. 30). He found that transplantation did not guarantee immediate acceptable existence and that the uncertainty of survival or rejection was a continual threat to recovering patients. Patients were viewed as being fear-ridden and anxious with conflicts between fear and hope, dependence and independence, apathy and involvement, and meager survival versus needs for fulfilling lives.
Kemph, Bergmann, and Coppillo (1969) described intrapsychic and interpersonal shifts that occurred in the families of kidney transplant patients. They found that when family members were first evaluated as donors for related kidney transplants, there was much concern expressed about the recipient. When the evaluation progressed to the point where the opportunity to provide the patient with a kidney was considered, a variety of responses was observed. The authors found the following patterns to emerge:

The usual pattern was for a few family members to offer to serve as donor immediately after learning of the patient's need. Then after agreeing and being praised by friends for their sacrifice, the donors began to look forward with some trepidation. They tended to reappraise the situation with some misgivings but usually stuck to their decision. However, on occasion a donor would find reasons why he should not donate his kidney, such as family obligations or financial loss from missing work... Mothers were usually the most willing and able to serve as donor, the fathers running second, and the siblings least willing and somewhat more reluctant than the parents. (p. 1486)

In many of the cases studied the relationships between the donors and recipients tended to change as a result of the transplant. Recipients frequently had guilt feelings about taking advantage of the donor and, in cases when rejection took place, hostility toward the donor was common. Resentment among donors was also found. The authors observed that in many families the transplant was perceived as a rebirth for the patient and served, at least in fantasy, as an opportunity for various family members to alter identities and roles that they had played within the family for many years.
Follow-up interviews with kidney donors has shown that hostile dependency develops between recipients and donors (Cramond, 1968). Difficulty accepting the new organ into the body schema was found with recipients being self-conscious of their new organs. All patients were seen as being over-protective of the transplanted kidney with accompanying fears of damage to the organ by sexual intercourse.

Penn, et al. (1971) stated that, "Psychiatric problems are common in individuals who are candidates for organ transplantation" (p. 133). The authors found significant psychopathology prior to transplantation in 50 of 292 (17%) kidney homograft recipients. Severe symptoms of depression and anxiety were found in 30 patients and personality disorders in ten others. Ten patients had overt psychotic episodes, six being of organic origin and four being functional. Postoperative emotional problems were found among 36 (72%) of the patients having been identified as having had preoperative psychopathology. The overall postoperative impressions indicated significant psychopathology in 94 of 292 patients (32%). The most common problems were reported to be anxiety and reactive depression, although organic brain syndromes were also common. The authors stated that, "Postoperative organic brain syndromes...were secondary to a combination of poor organic function, infection and high dosage steroid therapy, and in many patients led to their ultimate demise" (p. 142). Penn et al. concluded that psychologically, patients tolerate transplants better than dialysis, and that preoperative anxiety and depression are not contraindications to transplantation because these problems were seen as being mostly reactive and self-limiting. They also found that
organic brain syndromes were completely reversible by successful transplantation. Severe personality disorders or functional psychoses were viewed as contraindications for transplantation.

Kemph (1971) reported that the psychological effect of kidney transplantation on both donors and recipients varies greatly among individuals with age, sex, kinship, and conscious and unconscious motivating forces being some of the major determinants of the responses to such a procedure. All donors were found to experience anxiety and a sensation of loss; some displayed transient depressive affect. The symptoms seen most commonly among recipients were depression, anxiety, and phobia.

The review of literature reveals that the emotional problems of kidney transplant patients, while oftentimes not as severe or disrupting as those of dialysis patients, are still frequent and may lead to radical changes in patients' styles of living. The major problems of transplant patients are those of anxiety and depression. The anxiety is of a pervasive type and is related to the patients' fears of rejection of the transplanted organ. Depressive reactions are common among transplant patients and are often associated with fears of death, guilt about accepting a relative's organ, and distorted body images. Depression may also be seen as being the result of the loss associated with the transplant. Even though transplant patients seemingly experience only gains related to living more normal types of lives, there is an element of loss associated with the dependent status which many patients were allowed to assume while on dialysis. Transplant patients are often expected to become more active and productive members of society and, due to these expectations, may struggle with their own
doubts about their abilities to become more productive as workers, family members, and sexual partners. The results of the loss of the dependent status may be depression.

This chapter has reviewed the literature related to the emotional problems of dialysis and transplant patients. While opinions have varied on the types of problems experienced by these patients, the most recent consensus of opinion appears to be that dialysis and transplant patients experience frequent and intense life stresses related to loss, conflict, and frustration which far exceed those of the general population and which oftentimes require the attention of a mental health professional.

Having seen that there are serious emotional complications to the treatment of chronic renal failure, the question remained regarding to what extent dialysis facilities were providing mental health services for their patients. The following chapter reports the results of an investigation conducted by this author of the frequency with which mental health workers were employed to assist these patients in coping with the life stresses related to dialysis and transplantation, and the types of services which these professionals provided.
CHAPTER III
ROLES OF MENTAL HEALTH WORKERS IN DIALYSIS UNITS: THE RESULTS OF A NATIONAL SURVEY BY QUESTIONNAIRE

The review of literature related to the emotional and psychological aspects of hemodialysis and renal transplantation indicates, almost without exception, that there is a distinct need for intervention by mental health workers—psychiatrists, psychologists, and social workers. Many authors (Cramond, Knight, and Lawrence, 1967; Abram, 1968, 1970; Abram and Wadlington, 1968; Cramond, Court, Higgins, Knight, and Lawrence, 1967; Kemph et al., 1969; Korsch, Fine, Gruskin, and Negrete, 1971; Cheetham, 1970; Kemph, 1967, 1971; Columb and Hamburger, 1967; Reichsman and Levy, 1972; Halper, 1971; Kaplan De-Nour et al., 1968) have commented on the value of psychiatric input to assist in the selection of patients. In addition, many writers in the field have outlined areas in which the mental health worker may play an important role (Abram, 1968, 1969, 1970, 1974a; Kaplan De-Nour and Czaczkes, 1970, 1972; Kaplan De-Nour et al., 1968; Kaplan De-Nour, 1970; Enelow, 1971; Levy, 1973b; Norton, 1967; Wright et al., 1966; Johnson et al., 1966; Shea et al., 1965; Brand and Komorita, 1968; Cramond et al., 1968; Shambaugh and Kanter, 1969; Sorensen, 1972; Tuckman, 1970; Wijsenbeek and Munitz, 1970). In addition, Cheetham (1970) has made the following general comments about psychological intervention in a renal transplantation program:

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Psychiatry and psychology are therefore in the position today in which they are able through scientific method to provide an assessment of personality and of the reaction of the different personality types to particular stress, and to predict with reasonable success the reaction of these individuals to differing types of stress. Thus it would appear that the services of the psychiatrist and psychologist are essential in the selection of donors and recipients, in the handling of pre- and postoperative complications, and in handling with understanding the family of potential donors and recipients and the dying. Probably one of the most important functions, however, is the provision of support to the doctors, nurses and other personnel who cannot but be emotionally involved in the transplant situation. (p. 1093)

Cramond (1968) similarly outlined the psychiatric contribution to the nephrology unit as being in the following areas: 1) assessment of personality structure; 2) donor selection; 3) assisting the treatment team in dealing with countertransference; and, 4) psychotherapy with the family of the patient. He commented that:

The psychiatrist whose role is seen as integral to the growing team can impart some of his understandings and in time supervise the staff/patient interactions. This is particularly important as we cannot control which staff member will make the most positive relationship with the patient and family members....It seems clear that a full-time psychiatrist (if possible) and certainly a full-time social worker experienced in counseling are essential members of the transplantation team dedicated to "total care." (pp. 626-627)

The role of the psychiatrist on a multidisciplinary renal transplantation team was summarized by Kemph (1971):

To predict the psychological effect of the transplant on both recipient and donor; to prevent the development of severe emotional disturbances by supporting the patients during their preparation for transplant and through their postoperative course; to provide whatever treatment is necessary when serious emotional disturbances develop and to assist other personnel to understand the behavior and underlying motivations of both the recipients and donors. (p. 148)
Although the problems of hemodialysis patients have been investigated and reactions of patients have been noted, "surprisingly little has been written about the psychiatrist involved in chronic hemodialysis programs" (Kaplan De-Nour, 1973, p. 63). Even less has been written about the psychologist.

Abram (1969) commented that psychiatrists can prove useful in at least three areas related to hemodialysis: "1) the selection of patients; 2) evaluating, understanding, and treating the patient's reaction to the artificial or transplanted organ; and 3) working with the personnel and family who are involved in caring for the patients" (p. 164). Enelow (1971) summarized the important psychiatric contributions as being:

- those of establishing an appropriate family and social supportive context, helping to maximize the patient's independence and self-sufficiency, helping the patient to verbalize feelings of depression and to face and talk about his discomforts, and counseling to help with family and marital problems. (p. 8)

The functions of the psychiatrist in a hemodialysis unit were described as falling into the following inseparable categories: "collection of observations, treatment of patients, treatment of patients' families, work with the teams, and participation in selection of patients for chronic hemodialysis" (Kaplan De-Nour, 1973, p. 72).

Abram (1974a), noting that attitudes toward patient selection have changed with more emphasis placed on medical grounds and less on social worth and emotional maturity, viewed the psychiatrist's role as follows:

- Thus, the role of the psychiatrist centers around his work with patients, family and personnel after the
institution of treatment, although making contact with the patient in the predialysis phase has its obvious advantages of gaining baseline personality assessment and establishing a relationship. Psychotherapeutic approaches ... are mainly those of crisis intervention, although some centers utilize other forms of psychotherapy (e.g., groups, behavior modification and hypnotherapy).... Psychotherapeutic measures are therefore directed toward patients who manifest overt problems with overdependency (excessive regression), excess independence (rebellion from the regimen), depression or the eruption of underlying anxiety which is at times the harbinger of a psychotic episode. Some of these reactions may be avoided or handled through the personnel's interaction with the patient. The psychiatrist may therefore be more effective at times through his work with the nursing staff or family and consultations with the physicians who are more directly involved in patient care. (p. 70)

Despite the numerous reports enumerating the emotional problems faced by hemodialysis and transplant patients, their families, and the medical staff involved in their care, there have been no published reports about the number of mental health workers now engaged in offering assistance to this population. Nor have there been any systematic investigations of what these mental health workers—psychiatrists, psychologists, and social workers—are actually doing on a broad scale to improve the quality of life for the patients and their families in question.

Method

In order to investigate the roles of psychiatrists, psychologists, and social workers in hemodialysis programs, a nationwide survey of facilities offering hemodialysis services was made.

All programs listed as offering chronic hemodialysis or limited care hemodialysis facilities as reported by the Department of Health,
Education, and Welfare's document entitled Kidney Disease Services, Facilities, and Programs in the United States (1971) were mailed questionnaires consisting of 70 items. (See Appendix B, p. 243.) The mailings were directed to the individuals listed as the medical directors of those programs, all of whom were doctors of medicine. Of the total number of questions asked, ten requested information about the size and scope of the hemodialysis program. Questions regarding the roles of psychiatrists, psychologists, and social workers numbered 60 with 20 questions being related to each of the mental health workers' roles. A cover letter explaining the purpose of the questionnaire was attached (See Appendix C, p. 249). A follow-up letter (See Appendix D, p. 250), a second questionnaire, and a stamped, self-addressed return envelope were mailed to all non-respondents to the first questionnaire 20 days after the mailing date of the initial questionnaire.

Results

Of the 336 programs to which questionnaires were mailed, 151 (45%) were returned with all questions answered (See Table 3.1). In addition, 20 incomplete and nonusable questionnaires were returned, eight units reported that they had ceased to offer hemodialysis, and 22 questionnaires were returned with various reasons such as "insufficient address" and "no forwarding address" stamped on the unopened envelopes. Table 3.2 illustrates which types of facilities responded to the questionnaires. Veterans' Administration and military hospitals (VA) (defined as those hospitals identifiable as such by the names of the listed facilities) produced the highest percentage of usable

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### TABLE 3.1—Respondents to questionnaires on the roles of Mental health Workers in dialysis units

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usable questionnaires returned</td>
<td>151</td>
</tr>
<tr>
<td>Incomplete questionnaires returned</td>
<td>20</td>
</tr>
<tr>
<td>Facilities reporting that they no longer offered hemodialysis</td>
<td>8</td>
</tr>
<tr>
<td>Returned by post office</td>
<td>22</td>
</tr>
<tr>
<td>Responded with letters but did not complete questionnaire</td>
<td>2</td>
</tr>
<tr>
<td>Responded after deadline date</td>
<td>12</td>
</tr>
<tr>
<td>Nonrespondents</td>
<td>121</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>336</strong></td>
</tr>
</tbody>
</table>

### TABLE 3.2—Respondents to questionnaires on the roles of mental health workers in dialysis units by type of dialysis facility

<table>
<thead>
<tr>
<th>Type of Facility</th>
<th>Number Mailed</th>
<th>Number of Usable Responses</th>
<th>Percent Received of Total Mailed</th>
<th>Percent Received From Type of Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Hospitals</td>
<td>221</td>
<td>105</td>
<td>31%</td>
<td>48%</td>
</tr>
<tr>
<td>Veterans Administration &amp; Military</td>
<td>39</td>
<td>20</td>
<td>6%</td>
<td>51%</td>
</tr>
<tr>
<td>College and university</td>
<td>54</td>
<td>23</td>
<td>7%</td>
<td>43%</td>
</tr>
<tr>
<td>Limited Care</td>
<td>22</td>
<td>3</td>
<td>1%</td>
<td>13%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>336</strong></td>
<td><strong>151</strong></td>
<td><strong>45%</strong></td>
<td><strong>45%</strong></td>
</tr>
</tbody>
</table>
General Hospitals (defined as being those public, private, and community hospitals not under the direction of the federal government and not being associated by name with colleges or universities) responded in 48% of the cases. College and university hospitals and medical centers (defined as being those centers associated with colleges or universities by virtue of the name of the facilities) responded with usable questionnaires in 43% of the cases. Limited Care Facilities (those facilities designated as such by the Department of Health, Education, and Welfare) responded in only 13% of the cases. The respondents to the questionnaires appear to be representative by type of facility in all cases except that of Limited Care Facilities. It is hypothesized that these centers, because of their relatively narrow treatment approach as contrasted to the other three types of facilities, saw little value or significance in the questionnaires.

The distribution of the total population and the respondents by type of facility is further illustrated in Table 3.3. These results indicate that the percentage of respondents from each facility closely approximates the percentage of the number of questionnaires mailed to each type of facility. Each of the percentages of the usable questionnaires returned was within four percentage points of the percentage sent to that type of facility, again suggesting that the respondents are representative of the total population.

The distribution of respondents by geographical region is shown in Table 3.4. The respondents were relatively evenly distributed among geographical regions with the response rate varying from a low
TABLE 3.3—Distribution of population and respondents to questionnaires on the roles of mental health workers in dialysis units by type of dialysis facility

<table>
<thead>
<tr>
<th>Type of Facility</th>
<th>Number Mailed</th>
<th>Percent of Total Mailed</th>
<th>Number of Usable Responses</th>
<th>Percent of Usable Questionnaires Returned of Number Sent to Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Hospitals</td>
<td>221</td>
<td>66%</td>
<td>105</td>
<td>70%</td>
</tr>
<tr>
<td>VA and Military</td>
<td>39</td>
<td>12%</td>
<td>20</td>
<td>13%</td>
</tr>
<tr>
<td>College and University</td>
<td>54</td>
<td>16%</td>
<td>23</td>
<td>15%</td>
</tr>
<tr>
<td>Limited Care</td>
<td>22</td>
<td>6%</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>336</td>
<td>100%</td>
<td>151</td>
<td>100%</td>
</tr>
</tbody>
</table>

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### TABLE 3.4—Respondents to questionnaires on the roles of mental health workers in dialysis units by geographical area

<table>
<thead>
<tr>
<th>Geographical Area</th>
<th>Total No. Mailed</th>
<th>Percent of Total Mailed</th>
<th>No. Received From Region</th>
<th>Percent Received of Total No. Mailed</th>
<th>Percent Received of No. Sent to Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast Region</td>
<td>99</td>
<td>29.5%</td>
<td>49</td>
<td>14.6%</td>
<td>49.5%</td>
</tr>
<tr>
<td>Southern Region</td>
<td>72</td>
<td>21.4%</td>
<td>28</td>
<td>8.3%</td>
<td>38.9%</td>
</tr>
<tr>
<td>North Central Region</td>
<td>92</td>
<td>27.4%</td>
<td>40</td>
<td>11.9%</td>
<td>43.5%</td>
</tr>
<tr>
<td>Western Region</td>
<td>73</td>
<td>21.7%</td>
<td>34</td>
<td>10.1%</td>
<td>46.6%</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>336</strong></td>
<td><strong>100.0%</strong></td>
<td><strong>151</strong></td>
<td><strong>44.9%</strong></td>
<td></td>
</tr>
</tbody>
</table>
of 38.9% in the Southern Region to a high of 49.5% in the Northeastern Region. The respondents, therefore, appear to be representative of the total population in terms of geographical location.

The first mailing produced 98 (29%) usable questionnaire responses; the second mailing produced 53 (16%).

Of the total of 151 respondents 117 (78%) indicated that their programs drew from a catchment area with a population of over 250,000. Twenty respondents (13%) represented programs drawing from a catchment area of between 100,000 and 250,000 people. Eleven responses (7%) were received from programs drawing from a 50,000 - 100,000 catchment area and three (2%) were received from representatives of hemodialysis programs drawing from a catchment area of 20,000 to 50,000. There were no responses from dialysis programs with catchment areas less than 20,000 people.

The respondents included 98 (65%) programs which also were engaged in kidney transplant programs. One hundred and three (68%) of the hemodialysis programs were training patients for home dialysis.

Table 3.5 indicates the means, medians, modes, maximums, and minimums for the variables related to the size and scope of the dialysis program. The wide ranges in each of the variables are indicative of the wide variations in size of the facilities.

The number of mental health workers (psychiatrists, psychologists, and social workers) employed by hemodialysis facilities and the amount of time worked by each of these professionals is shown in Table 3.6. While nearly 50% of the respondents utilized psychiatric services, none of the 75 psychiatrists worked more than half-time and 97% worked
TABLE 3.5—Size and scope of dialysis programs among respondents to the questionnaires on the roles of mental health workers in dialysis units

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of dialyses</td>
<td>2617</td>
<td>2000</td>
<td>3000</td>
<td>27000</td>
<td>48</td>
</tr>
<tr>
<td>Number of bed or chair spaces</td>
<td>9.4</td>
<td>8</td>
<td>6</td>
<td>42</td>
<td>1</td>
</tr>
<tr>
<td>Number of patients trained for home dialysis</td>
<td>8.4</td>
<td>4</td>
<td>3*</td>
<td>79</td>
<td>0</td>
</tr>
<tr>
<td>Number of patients transplanted</td>
<td>9.9</td>
<td>3</td>
<td>13*</td>
<td>91</td>
<td>0</td>
</tr>
<tr>
<td>Number of nurses</td>
<td>5.9</td>
<td>5</td>
<td>3</td>
<td>31</td>
<td>1</td>
</tr>
<tr>
<td>Number of technicians</td>
<td>4.6</td>
<td>4</td>
<td>3</td>
<td>31</td>
<td>1</td>
</tr>
<tr>
<td>Number of physicians</td>
<td>2.3</td>
<td>2</td>
<td>1</td>
<td>10</td>
<td>1</td>
</tr>
</tbody>
</table>

*Actual mode of all respondents was 0; mode indicated is for responses greater than 0
TABLE 3.6—Number of respondents to the questionnaires utilizing the services of mental health workers in dialysis units

<table>
<thead>
<tr>
<th>Mental Health Worker</th>
<th>N</th>
<th>%</th>
<th>Full Time</th>
<th>3/4 Time</th>
<th>1/2 Time</th>
<th>1/4 Time</th>
<th>Less Than 1/4 Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychiatrists</td>
<td>75</td>
<td>50</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>14</td>
<td>59</td>
</tr>
<tr>
<td>Psychologists</td>
<td>28</td>
<td>19</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>Social Workers</td>
<td>128</td>
<td>85</td>
<td>48</td>
<td>5</td>
<td>29</td>
<td>12</td>
<td>34</td>
</tr>
</tbody>
</table>

quarter-time or less. While many fewer psychologists were reported to be associated with the dialysis programs surveyed, the ones who were involved tended to work a greater percentage of the time with 25% working half-time or more. Social workers were employed by a much larger percentage of the responding programs and also worked a greater percentage of the time. Of the 128 social workers employed by the 151 responding dialysis programs, 82 (64%) worked half-time or more with 48 (38%) working full-time.

Of the 75 psychiatrists working in hemodialysis units 64 (85%) were reported to be board certified. Responses from facilities employing psychologists indicated that 23 (82%) of the psychologists had earned doctoral level degrees while five (18%) had masters degrees. Of the 128 social workers employed in dialysis units 98 (77%) had either M.A. or M.S.W. degrees, 29 (23%) had baccalaureate level degrees, and only one had less than a bachelor's degree.

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Table 3.7 exhibits the number of mental health workers employed in each of the four types of facilities. General hospitals reported employing the greatest number of psychiatrists, psychologists, and social workers. No limited care facilities reported using mental health workers.

TABLE 3.7—Types of dialysis facilities employing mental health workers

<table>
<thead>
<tr>
<th>Mental Health Worker</th>
<th>General Hospitals</th>
<th>VA Facilities</th>
<th>University Hospitals</th>
<th>Limited Care Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Psychiatrists</td>
<td>75</td>
<td>63%</td>
<td>10</td>
<td>13%</td>
</tr>
<tr>
<td>Psychologists</td>
<td>28</td>
<td>50%</td>
<td>11</td>
<td>39%</td>
</tr>
<tr>
<td>Social Workers</td>
<td>128</td>
<td>69%</td>
<td>19</td>
<td>15%</td>
</tr>
</tbody>
</table>

The types of nephrology programs which reported using mental health workers are illustrated in Table 3.8. Facilities with home dialysis training programs also had the greatest number of psychiatrists, psychologists, and social workers. These facilities employed 77% of the psychiatrists, 79% of the psychologists, and 71% of the social workers. Facilities with transplant programs also utilized a large percentage of the mental health workers with 53 (71%) of the psychiatrists, 15 (54%) of the psychologists, and 89 (70%) of the social workers working in facilities with transplant programs.
TABLE 3.8—Types of nephrology programs utilizing mental health workers

<table>
<thead>
<tr>
<th>Mental Health Worker</th>
<th>Total</th>
<th>Transplant Program</th>
<th>Home Dialysis Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychiatrists</td>
<td>75</td>
<td>53</td>
<td>58</td>
</tr>
<tr>
<td>Psychologists</td>
<td>28</td>
<td>15</td>
<td>22</td>
</tr>
<tr>
<td>Social Workers</td>
<td>128</td>
<td>89</td>
<td>91</td>
</tr>
</tbody>
</table>

All but two of the facilities which reported having psychiatrists and all but three of the facilities which reported having psychologists also reported having social workers. Thirteen of the facilities with psychiatric services also had psychological services available.

Tables 3.9, 3.10, and 3.11 show in rank order the activities in which mental health workers were involved. Table 3.9 indicates that the greatest number of psychiatrists in the population were involved in individual counseling or psychotherapy with "incenter" hemodialysis patients. Of the 75 psychiatrists working in dialysis facilities, 60 (80%) provided this type of service. The only other activity which was marked as being a service provided by over 50% of the psychiatrists was psychiatric appraisals of kidney patients, a service provided by 41 (55%) of the psychiatrists. Individual counseling or psychotherapy with home dialysis patients (47%), consultation or training with staff members (41%), counseling or psychotherapy with staff members (41%), and counseling or psychotherapy with the families of patients with kidney disease (40%) also ranked high among the priorities of services offered by psychiatrists to hemodialysis units.
### TABLE 3.9—Rank order of frequency of services provided by psychiatrists in dialysis units

<table>
<thead>
<tr>
<th>Rank</th>
<th>Services</th>
<th>Frequency</th>
<th>Percentage providing this service</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Individual counseling or psychotherapy with &quot;in-center&quot; patients</td>
<td>60</td>
<td>80%</td>
</tr>
<tr>
<td>2</td>
<td>Psychiatric appraisals of kidney patients</td>
<td>41</td>
<td>55%</td>
</tr>
<tr>
<td>3</td>
<td>Individual counseling or psychotherapy with home dialysis patients</td>
<td>35</td>
<td>47%</td>
</tr>
<tr>
<td>4</td>
<td>Consultation or training with staff members</td>
<td>33</td>
<td>44%</td>
</tr>
<tr>
<td>5</td>
<td>Counseling or psychotherapy with staff members</td>
<td>31</td>
<td>41%</td>
</tr>
<tr>
<td>6</td>
<td>Counseling or psychotherapy with the families of patients</td>
<td>30</td>
<td>40%</td>
</tr>
<tr>
<td>7</td>
<td>Individual counseling or psychotherapy with transplant recipients</td>
<td>29</td>
<td>39%</td>
</tr>
<tr>
<td>8</td>
<td>Individual counseling or psychotherapy with kidney donors</td>
<td>17</td>
<td>23%</td>
</tr>
<tr>
<td>9</td>
<td>Psychodiagnostic testing of kidney patients</td>
<td>13</td>
<td>17%</td>
</tr>
<tr>
<td>10.5</td>
<td>Research regarding hemodialysis or transplant patients</td>
<td>9</td>
<td>12%</td>
</tr>
<tr>
<td>10.5</td>
<td>Other activities</td>
<td>9</td>
<td>12%</td>
</tr>
<tr>
<td>12</td>
<td>Group counseling or psychotherapy with &quot;in-center&quot; patients</td>
<td>8</td>
<td>11%</td>
</tr>
<tr>
<td>13</td>
<td>Group counseling or psychotherapy with home dialysis patients</td>
<td>7</td>
<td>9%</td>
</tr>
<tr>
<td>14</td>
<td>Community consultations or speaking engagements</td>
<td>6</td>
<td>8%</td>
</tr>
<tr>
<td>15</td>
<td>Group counseling or psychotherapy with transplant patients</td>
<td>1</td>
<td>1%</td>
</tr>
</tbody>
</table>
Table 3.10 shows that the greatest number of psychologists as well as psychiatrists were involved in individual counseling or psychotherapy with "incenter" patients. Of the 28 psychologists working in dialysis facilities 20 (71%) provided this type of service. The majority of psychologists were also reported to provide psychological testing services for kidney disease patients (61%) and individual counseling or psychotherapy for home dialysis patients (57%). Psychologists were also reported to place relatively high priorities on consultation or training with staff members (39%), individual counseling or psychotherapy with transplant patients (29%), and counseling or psychotherapy with the families of patients with kidney disease (29%).

The rank order of frequency of services provided by social workers is illustrated in Table 3.11. This table indicates that 91% of the social workers did social work evaluations of patients. Financial evaluations (84%) and financial counseling (82%) were also frequent activities for social workers. Psychosocial counseling with "incenter" patients (77%) and the families of patients with kidney disease (73%) also were indicated as being services provided by the majority of social workers in the population. Consultations with community agency resources (64%) and psychosocial counseling with home dialysis (54%) and transplant patients (51%) also were reported to be services provided by over half the social workers in the population.

The rank orders of priorities of services provided by mental health workers are illustrated in Tables 3.12, 3.13, and 3.14. Each respondent was asked to rank in terms of priority of services the activities in which the respective mental health worker was typically
<table>
<thead>
<tr>
<th>Rank</th>
<th>Service</th>
<th>f</th>
<th>Percentage providing this service</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Individual counseling or psychotherapy with &quot;in-center&quot; patients</td>
<td>20</td>
<td>71%</td>
</tr>
<tr>
<td>2</td>
<td>Psychological testing of kidney patients</td>
<td>17</td>
<td>61%</td>
</tr>
<tr>
<td>3</td>
<td>Individual counseling or psychotherapy with home dialysis patients</td>
<td>16</td>
<td>57%</td>
</tr>
<tr>
<td>4</td>
<td>Consultation or training with staff members</td>
<td>11</td>
<td>39%</td>
</tr>
<tr>
<td>5.5</td>
<td>Individual counseling or psychotherapy with transplant patients</td>
<td>8</td>
<td>29%</td>
</tr>
<tr>
<td>5.5</td>
<td>Counseling or psychotherapy with the families of patients</td>
<td>8</td>
<td>29%</td>
</tr>
<tr>
<td>7</td>
<td>Research regarding hemodialysis or transplant patients</td>
<td>6</td>
<td>21%</td>
</tr>
<tr>
<td>10.0</td>
<td>Group counseling or psychotherapy with &quot;in-center&quot; patients</td>
<td>4</td>
<td>14%</td>
</tr>
<tr>
<td>10.0</td>
<td>Psychological testing of potential kidney donors</td>
<td>4</td>
<td>14%</td>
</tr>
<tr>
<td>10</td>
<td>Individual counseling or psychotherapy with kidney donors</td>
<td>4</td>
<td>14%</td>
</tr>
<tr>
<td>10</td>
<td>Community consultations or speaking engagements</td>
<td>4</td>
<td>14%</td>
</tr>
<tr>
<td>10</td>
<td>Counseling or psychotherapy with staff members</td>
<td>4</td>
<td>14%</td>
</tr>
<tr>
<td>13</td>
<td>Group counseling or psychotherapy with home dialysis patients</td>
<td>3</td>
<td>11%</td>
</tr>
<tr>
<td>14</td>
<td>Group counseling or psychotherapy with transplant patients</td>
<td>2</td>
<td>7%</td>
</tr>
<tr>
<td>15</td>
<td>Other activities</td>
<td>1</td>
<td>4%</td>
</tr>
</tbody>
</table>

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### TABLE 3.11—Rank order of frequency of services provided by social workers in dialysis units

<table>
<thead>
<tr>
<th>Rank</th>
<th>Service</th>
<th>f</th>
<th>Percentage providing this service</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Social work evaluation of patients</td>
<td>116</td>
<td>91%</td>
</tr>
<tr>
<td>2</td>
<td>Financial evaluations of patients</td>
<td>108</td>
<td>84%</td>
</tr>
<tr>
<td>3</td>
<td>Financial counseling with patients</td>
<td>105</td>
<td>82%</td>
</tr>
<tr>
<td>4</td>
<td>Psychosocial counseling with &quot;in-center&quot; patients</td>
<td>99</td>
<td>77%</td>
</tr>
<tr>
<td>5</td>
<td>Psychosocial counseling with the families of patients</td>
<td>94</td>
<td>73%</td>
</tr>
<tr>
<td>6</td>
<td>Consultations with community agency resources</td>
<td>82</td>
<td>64%</td>
</tr>
<tr>
<td>7</td>
<td>Psychosocial counseling with home dialysis patients</td>
<td>69</td>
<td>54%</td>
</tr>
<tr>
<td>8</td>
<td>Psychosocial counseling with transplant patients</td>
<td>65</td>
<td>51%</td>
</tr>
<tr>
<td>9</td>
<td>Home visits with patients</td>
<td>49</td>
<td>38%</td>
</tr>
<tr>
<td>10.5</td>
<td>Staff training</td>
<td>29</td>
<td>23%</td>
</tr>
<tr>
<td>10.5</td>
<td>Consultations with the local Kidney Foundation chapter</td>
<td>29</td>
<td>23%</td>
</tr>
<tr>
<td>12</td>
<td>Community consultations or speaking engagements</td>
<td>21</td>
<td>16%</td>
</tr>
<tr>
<td>13</td>
<td>Occupational therapy with hemodialysis or transplant patients</td>
<td>16</td>
<td>13%</td>
</tr>
<tr>
<td>14</td>
<td>Research regarding hemodialysis or transplant patients</td>
<td>12</td>
<td>9%</td>
</tr>
<tr>
<td>15</td>
<td>Other activities</td>
<td>11</td>
<td>9%</td>
</tr>
</tbody>
</table>

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involved. The ranks could range from one to 15 if the mental health workers were involved in each of the activities listed. In order to rank the priorities placed upon different services, a weighted score of 15 was given to each variable ranked as being number one, a weighted score of 14 for each one rated as being number two, a weighted score of 13 for each variable ranked as being number three, and so on until the variable listed as priority number 15 was given a weighted score of one. The total points for each variable were accumulated by multiplying the weighted score times the frequency with which it occurred and then summing all scores.

Table 3.12 shows that individual counseling or psychotherapy with "in-center" dialysis patients received the highest weighted score for psychiatrists, indicating that this service was considered to be of the highest priority for psychiatrists. This variable also received the greatest number of number one (26) and number two (19) rankings. Sixty percent of the respondents ranked individual counseling or psychotherapy with "in-center" patients as being of the highest or second highest priority. The second highest ranked service, nearly 300 weighted points, 11 first rankings and 13 second rankings behind, was psychiatric appraisals of kidney patients. Individual counseling or psychotherapy with home dialysis patients, consultations or training with staff members, counseling or psychotherapy with staff members, individual counseling or psychotherapy with transplant recipients, and counseling or psychotherapy with family members were ranked third through seventh, each with point totals of 340 or more. The total points for the remaining eight services dropped off significantly.
TABLE 3.12—Rank order of psychiatrists' priority of services in dialysis units

<table>
<thead>
<tr>
<th>Rank</th>
<th>Service</th>
<th>Total Points</th>
<th>f  No. 1 Ranking</th>
<th>f  No. 2 Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Individual counseling or psychotherapy with &quot;in-center&quot; patients</td>
<td>838</td>
<td>26</td>
<td>19</td>
</tr>
<tr>
<td>2</td>
<td>Psychiatric appraisals of kidney patients</td>
<td>549</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>Individual counseling or psychotherapy with home dialysis patients</td>
<td>451</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>Consultation or training with staff members</td>
<td>412</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>Counseling or psychotherapy with staff members</td>
<td>397</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Individual counseling or psychotherapy with transplant recipients</td>
<td>352</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Family counseling or psychotherapy with families of kidney patients</td>
<td>343</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>Individual counseling or psychotherapy with kidney donors</td>
<td>183</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Psychodiagnostic testing of kidney patients</td>
<td>152</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>Other</td>
<td>126</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>Research regarding hemodialysis or transplant patients</td>
<td>104</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>Group counseling or psychotherapy with &quot;in-center&quot; patients</td>
<td>81</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>Group counseling or psychotherapy with home dialysis patients</td>
<td>69</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>14</td>
<td>Community consultations or speaking engagements</td>
<td>56</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

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TABLE 3.12 (Continued)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Service</th>
<th>Total Points</th>
<th>*f No. 1 Ranking</th>
<th>*f No. 2 Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Group counseling or psychotherapy with transplant patients</td>
<td>9</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>75</td>
<td>63*</td>
</tr>
</tbody>
</table>

*12 questionnaires were marked with only one service as being provided.
Table 3.13 indicates that individual counseling or psychotherapy with "in-center" patients was also the variable receiving the highest point total for psychologists. This variable also had the highest number of number one rankings (11). Forty-six percent of the respondents ranked this as being the variable of either first or second priority for the psychologist. Psychological testing of kidney patients received the second highest point total and the second highest number of first (9) and second (3) place rankings. Individual counseling or psychotherapy for home dialysis patients was ranked third and received the most second rankings (5). Consultation and training with staff members was ranked fourth, 66 total points behind the third ranked variable. The remaining 11 variables were clustered together with only 77 points separating variables ranked fifth and fifteenth.

Social work evaluations were given the highest total priority among services provided by social workers (see Table 3.14). This variable had the most number one rankings (50) and was ranked either first or second by 50% of the respondents. Psychosocial counseling with "in-center" patients received the second highest point total and the greatest number of second rankings. Financial evaluations of patients and financial counseling with patients were ranked third and fourth respectively. The combined first and second place rankings for these two services shows that 48% of the respondents ranked financially related services as being of either the first or second highest priority.

The reasons why dialysis facilities which did not employ mental health workers chose not to do so are listed in Tables 3.15, 3.16, and 3.17. The major reason cited for not having psychiatrists or
<table>
<thead>
<tr>
<th>Rank</th>
<th>Service</th>
<th>Total Points</th>
<th>$^f$ No. 1 Ranking</th>
<th>$^f$ No. 2 Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Individual counseling or psychotherapy with &quot;in-center&quot; patients</td>
<td>290</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Psychological testing of kidney patients</td>
<td>229</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Individual counseling or psychotherapy with home dialysis patients</td>
<td>202</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>Consultation or training with staff members</td>
<td>136</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Individual counseling or psychotherapy with transplant patients</td>
<td>92</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Family counseling or psychotherapy with families of kidney patients</td>
<td>86</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>Research regarding hemodialysis or transplant patients</td>
<td>66</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>Counseling or psychotherapy with staff members</td>
<td>57</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>Group counseling or psychotherapy with &quot;in-center&quot; patients</td>
<td>52</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>Psychological testing of potential kidney donors</td>
<td>49</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>11.5</td>
<td>Group counseling or psychotherapy with home dialysis patients</td>
<td>36</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>11.5</td>
<td>Individual counseling or psychotherapy with kidney donors</td>
<td>36</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td>Group counseling or psychotherapy with transplant patients</td>
<td>27</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>14</td>
<td>Community consultations or speaking engagements</td>
<td>25</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>15</td>
<td>Other</td>
<td>15</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

*Five questionnaires were marked with only one service provided*
<table>
<thead>
<tr>
<th>Rank</th>
<th>Service</th>
<th>Total Points</th>
<th>f No. 1 Ranking</th>
<th>f No. 2 Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Social work evaluations</td>
<td>1530</td>
<td>50</td>
<td>14</td>
</tr>
<tr>
<td>2</td>
<td>Psychosocial counseling with &quot;in-center&quot; patients</td>
<td>1295</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>3</td>
<td>Financial evaluations of patients</td>
<td>1267</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>Financial counseling with patients</td>
<td>1220</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>5</td>
<td>Psychosocial counseling with the families of patients</td>
<td>1123</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>6</td>
<td>Psychosocial counseling with home dialysis patients</td>
<td>893</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>7</td>
<td>Consultations with community agency resources</td>
<td>775</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>Psychosocial counseling with transplant patients</td>
<td>762</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>Home visits with patients</td>
<td>441</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>Staff training</td>
<td>254</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>Consultations with the local kidney foundation chapter</td>
<td>235</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>Occupational therapy with hemodialysis or transplant patients</td>
<td>139</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>13</td>
<td>Other</td>
<td>125</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>14</td>
<td>Community consultations or speaking engagements</td>
<td>124</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>15</td>
<td>Research</td>
<td>103</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

*Five questionnaires were marked with only one service as being provided*
TABLE 3.15—Respondents' reasons for not employing psychiatrists

<table>
<thead>
<tr>
<th>Reason</th>
<th>f</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No perceived need</td>
<td>17</td>
<td>22%</td>
</tr>
<tr>
<td>No financial resources</td>
<td>27</td>
<td>36%</td>
</tr>
<tr>
<td>Not perceived as being their</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>responsibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No psychiatrists available</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Other(^a)</td>
<td>30</td>
<td>39%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>76</td>
<td>100%</td>
</tr>
</tbody>
</table>

\(^a\)Various "Other" responses included the following:

- Consultations available on a limited basis: 8 (11%)
- No psychiatrists interested or willing: 9 (12%)
- No adequate psychiatrists available: 3 (4%)
- Utilize psychologists, residents, or social workers instead: 6 (8%)
- Miscellaneous responses: 4 (5%)

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<table>
<thead>
<tr>
<th>Reason</th>
<th>f</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No perceived need</td>
<td>43</td>
<td>35%</td>
</tr>
<tr>
<td>No financial resources</td>
<td>51</td>
<td>41%</td>
</tr>
<tr>
<td>Not perceived as being their responsibility</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>No psychologists available</td>
<td>9</td>
<td>7%</td>
</tr>
<tr>
<td>Other&lt;sup&gt;a&lt;/sup&gt;</td>
<td>17</td>
<td>14%</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td>123</td>
<td>100%</td>
</tr>
</tbody>
</table>

<sup>a</sup> Various "Other" responses included the following:

- Consultations available on a limited basis: 9 (7%)
- No interested psychologists: 3 (2%)
- Hospital administration opposed: 2 (2%)
- Utilize psychiatrist: 1 (1%)
- No reason given: 2 (2%)

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### TABLE 3.17—Respondents' reasons for not employing social workers

<table>
<thead>
<tr>
<th>Reason</th>
<th>f</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No perceived need</td>
<td>9</td>
<td>39%</td>
</tr>
<tr>
<td>No financial resources</td>
<td>6</td>
<td>26%</td>
</tr>
<tr>
<td>Not perceived as being their responsibility</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>No social workers available</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>Other*</td>
<td>7</td>
<td>30%</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td>23</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Various "Other" responses included the following:

- Use hospital social worker consultants when necessary: 4 (17%)
- Utilize community liaison nurse: 1 (4%)
- Hospital administration uncooperative: 1 (4%)
- Plan to hire social worker when available: 1 (4%)

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psychologists was indicated as being financial concerns. The second most frequent reason given for both psychiatrists and psychologists was "We do not feel that we have a need for a ...." (psychiatrist or psychologist). No perceived need was the most frequent reason given for those facilities not utilizing the services of social workers.

Discussion

The results of the survey indicate that while 85% of the dialysis units which responded to the questionnaire employed social workers, only half utilized the services of psychiatrists and less than 19% had psychologists associated with their programs. The psychiatrists who were associated with hemodialysis units all worked half-time or less with almost 80% working less than one-quarter time. Three facilities reported having full-time psychologists and four others utilized half-time psychologists, but the majority (75%) of psychologists were found to work quarter-time or less. Social workers seem to have found more of a place in dialysis units, both in terms of the number of facilities employing individuals from this profession (85%) and in terms of the percentage of time worked. Sixty-five percent of the social workers were hired to work half-time or more.

General Hospitals hired the greatest numbers of psychiatrists, psychologists, and social workers, but VA and University hospitals hired the largest percentages of mental health workers based on the number of respondents from those types of facilities. That is, of the 20 VA hospitals responding to the questionnaire, ten (50%) reported utilizing the services of psychiatrists, 11 (55%) had hired psychologists,
and 19 (95%) had social workers. University or college hospitals or medical centers accounted for 23 completed questionnaires. Psychiatrists worked for dialysis units in 18 (78%) of the cases, psychologists serviced three (13%), and social workers provided assistance in 21 (91%) university based dialysis facilities. General hospital dialysis units, while having greater numbers of mental health workers, had lower percentages based on the numbers of respondents. Forth-seven (45%) psychiatrists, 14 (13%) psychologists, and 88 (84%) social workers were reported to work in general hospital settings. No limited care facilities reported utilizing the services of any mental health workers.

The majority of the mental health workers reported worked in dialysis units which also had home training or transplantation programs. Seventy-seven percent of the psychiatrists, 79% of the psychologists, and 71% of the social workers were associated with dialysis facilities which provided home training. Seventy-one percent of the psychiatrists, 54% of the psychologists, and 70% of the social workers were employed by programs offering transplantation services. It seems apparent that the more comprehensive the nephrology program, the greater are the chances that mental health workers will be employed.

Psychiatrists were found to place their highest priorities in the areas of individual psychotherapy, psychiatric appraisals of kidney patients, and consultations and training with staff members. It is suggested that because of the limited time psychiatrists had available to work with the patients and staffs of dialysis facilities, priorities were placed on crisis intervention techniques, psychiatric appraisals,
and helping staff to work more effectively with patients. The relatively high priority placed upon psychotherapy with staff members is consistent with the views of many authors who have commented on the stresses of dialysis imposed upon dialysis staffs. Several authors (Abram, 1969; Cheetham, 1970; Cramond, 1968; Kaplan De-Nour, 1973) have reported on the contribution which mental health workers could make to the members of dialysis teams in terms of helping them to adjust to the pressures and countertransference problems associated with dialysis patients. As a group the psychiatrists placed a higher priority on this service than on providing either group or individual counseling or psychotherapy for transplant donors or recipients or families of patients with kidney disease.

Psychologists also placed high priorities on individual psychotherapeutic services, psychological testing and evaluations, and staff training. Despite the recent publicity and emphasis placed upon group techniques, few psychologists rated group counseling or psychotherapy with any type of dialysis or transplant associated patient population among the top half of their priorities. Psychologists placed a lower priority on counseling or psychotherapy with staff members than did the psychiatrists, but ranked consultation or training with staff members at the same level as did psychiatrists. The relatively high priority placed on training and consultation again suggests that because of the limited time which psychologists had available to work with dialysis programs, efforts were made to assist nurses and other staff members make the most of their frequent contacts with patients and perhaps to assume somewhat of a counseling role.
Social workers were reported to place their highest priority on evaluations of patients. It is suggested that much of the content of these evaluations is data based and consists of asking questions and recording responses about patients' life histories, family backgrounds, work patterns, and medical histories. Ninety-one percent of the social workers were reported to be engaged in this type of activity and 50% of the respondents ranked it as being of either the first or second priority. Financial evaluations of patients and financial counseling with patients were the second and third most frequent activity for social workers. Over 80% of the social workers were reported to offer these services which were ranked third and fourth among priorities. Psychosocial counseling with "in-center," home dialysis, and transplant patients, and the families of patients with kidney disease were also ranked highly among social workers' activities as was consultation with community agency resources.

The results suggest that despite the relatively high numbers of social workers and the moderate number of psychiatrists employed by dialysis units, emotional problems and concerns of the patients may receive little direct attention from mental health workers. In many of the cases psychiatric and psychological services may be available only in periods of crises or when patients become so noncompliant that their behavior greatly disturbs the staff or other patients. While social workers services are available in many more facilities, it is suggested that because of the financial counseling burden placed upon these workers due to the high costs of dialysis and the complications inherent in Medicare, little actual time may be available to work with the emotional problems of dialysis patients.
In addition, while some social workers may have had one or two years of training in counseling related areas, few would have backgrounds in counseling and psychotherapy which could compare to the extensive training and supervision required of doctoral level psychologists and psychiatrists.

The reasons cited for dialysis units not hiring psychiatrists and psychologists suggest that given the choice and financial support, most programs which are without psychiatrists and psychologists would choose to have the services of these professionals. Of the respondents without psychiatrists, over 50% indicated that either they do not have the financial resources available or that no interested, willing, or capable psychiatrists were available. Over half of the programs without psychologists cited similar reasons, although over one-third did not perceive a need or felt that they were not responsible for providing such services.

Conclusions

In conclusion, despite the urgings of several authors that mental health professionals become integral parts of dialysis teams, most programs do not utilize the services of either psychologists or psychiatrists. Of the facilities which do utilize such services, 91% of them have psychiatrists and psychologists who work quarter-time or less. This is in spite of the Kidney Advisory Committee's recommendation (in their listing of optimal criteria for end-stage kidney disease care) (1973) that the availability of a part-time psychiatrist or psychologist for dialysis centers, and a full-time psychiatrist or psychologist...
for kidney disease, transplant, and dialysis centers is a "must" or essential. Social work and rehabilitation counseling services were also classified as essential full-time services for those facilities offering comprehensive treatment for kidney disease (Kidney Advisory Committee, 1973). This survey indicates that many dialysis facilities have mental health programs which fall short of these criteria.

Nephrology programs and dialysis units are urged to re-evaluate the needs of their patients and staffs and to take steps to include the costs of psychiatric, psychological, and social work services within the per dialysis costs reimbursable by Medicare.

Dialysis programs seeking a professional to provide many of these mental health and rehabilitation services may wish to consider hiring a counseling psychologist to assist patients in their adjustment to dialysis. The following chapters of this dissertation describe some of the services which a counseling psychologist may provide for dialysis and transplant patients, their families, and the staff members who are involved in their care.
CHAPTER IV
COUNSELING PSYCHOLOGISTS AS PSYCHOTHERAPISTS IN NEPHROLOGY SERVICES

It has been shown that patients receiving treatment for chronic renal failure experience a wide variety of emotional problems which warrant the intervention of mental health professionals. It has also been shown that many facilities providing treatment programs for these patients offer little in the way of psychiatric or psychological services. It has been suggested that counseling psychologists may be utilized to provide many of the counseling and psychotherapeutic services which these patients may require. This chapter describes the role of counseling psychologists as relates to counseling and psychotherapy. The chapter begins with a selected review of the literature pertaining to various psychotherapeutic approaches which have been used with dialysis and transplant patients. A discussion of various types of counseling and psychotherapeutic approaches including crisis intervention, supportive psychotherapy, group therapy, conjoint marital counseling, and preventive counseling are also discussed with case vignettes being given to illustrate those types of treatment modalities. Resistances to psychotherapy with dialysis patients and suggestions for minimizing those resistances are also discussed.

A Selected Review of the Literature Pertaining to Psychotherapy With Dialysis and Renal Transplant Patients

The need for a variety of counseling and psychotherapeutic services to assist dialysis patients in their adjustment to changed life
styles has been commented upon in several written reports. Cramond (1968) commented on the need for psychotherapeutic intervention with dialysis and transplant patients and their families. He stated that:

The illness and its therapy concern and disturb the entire affectual relationship of the family group. If we are to prevent unnecessary suffering in the "at risk" family, we require team members skilled in the therapy of inter-personal relationships. (p. 626)

Brand and Komorita (1968) suggested that the need for psychological support among dialysis patients must be an ongoing process. They stated that "verbalizations of problems which are causing tension, in the presence of a non-judgmental but receptive listener ... seems to be helpful in temporarily reducing the tension" (p. 1781). Wright et al. (1966) concluded that planned psychological support for hemodialysis patients is indicated, with the support coming from the physician and additional group treatment with other patients. Shea et al. (1965) reported on the perceived needs for psychotherapy among their patient population and commented that "the severe reactions that have occurred and the inability to compensate have impressed us with the necessity to develop a more intensive program of psychotherapy for our patients on chronic dialysis program" (p. 563). MacNamara (1967) reported that one of the important roles of the social worker in a dialysis unit is to serve as a supportive therapist for patients. The provision of factual information and reassurance given to patients about their situations were viewed as being supportive and helpful in alleviating further anxieties.

Abram (1969) reported that some patients on hemodialysis require specific psychotherapeutic intervention. Problems related to
independency-dependency conflicts and depression were reported to be of particular concern with crisis oriented intervention being the most frequent type of treatment. In a later report Abram (1974) made the following comments related to the role of the psychotherapist in a nephrology service:

As noted earlier, most patients would not have sought or needed any form of psychiatric therapy if it had not been for the pressures and burdens imposed by their illness and its treatment. Thus, their "normality" or lack of psychopathology in the usual use of the term and the pervasive mechanism of denial diminish motivation in seeking or accepting psychiatric aid. Psychotherapeutic measures are therefore directed toward patients who manifest overt problems with overdependency (excess regression), excess independency (rebellion from the regimen), depression or the eruption of underlying anxiety which at times is the harbinger of a psychotic episode. (p. 70)

Specific types of therapy used with dialysis and transplant patients have been described by several authors. Tuckinan (1970) reported on a case utilizing brief psychotherapy for a hemodialysis patient. Brief psychotherapy was defined as "a form of psychiatric intervention limited as to time and the areas of pathological disturbance dealt with" (p. 65). The major objective of this type of treatment was "to help the patient traverse a current crisis in his life situation, enabling him to take over again the management of his life" (p. 65). Tuckman commented that brief psychotherapy is well suited to dialysis patients because of the shortness of the treatment program and its lack of long-range interference with the time commitment of hemodialysis. The rapid evaluation and treatment of target symptoms was viewed as being more advantageous than open-ended types of psychotherapy.

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because of the delays which may occur in the latter possibly altering the patient's concept of self, the dialysis procedure, and the relationship with staff. Ebra and Toth (1972) reported that brief psychotherapy can assist dialysis patients in understanding their patterns of reactions to stress and to help them to cope with recurrent problems. They commented that:

A most beneficial aspect of brief psychotherapy is that it not only assists the person through a crisis situation but establishes a firm foundation for future positive emotional reactions. The patient can draw upon these learning experiences at a future date and continue to function adequately. If again faced with an overwhelming problem, he will have enough insight into his mental patterns to request further help, rather than to fall into the many possible emotional "traps" awaiting the home dialysis patient. (p. 7)

A mandatory program of psychotherapy for chronic hemodialysis patients was reported by Kaplan De-Nour (1970). She reported that the main indication for psychotherapy was the perceived ego-restriction and impoverishment of personality caused by the defenses mobilized against the anxieties resulting from the stresses of loss of body function, dependency, threat of death, and frustration of drives and their derivatives. She developed a planned program of psychotherapy which focused on problems related to independence, aggression, threat of death, and regression. The goal of the therapy was to help patients adjust to dialysis without developing anxiety or other psychiatric symptoms and without causing patients to mobilize extreme defense mechanisms. Kaplan De-Nour reported that although psychotherapy with these patients was difficult due to problems in forming relationships with the patients and the constant threats and stresses related to the
dialysis therapy, it was of help to at least some of the patients who were seen as being better adjusted to dialysis.

Cooper (1967) reported treating a hemodialysis patient with a hypomanic psychosis effectively with Chlorpromazin and psychotherapy. The psychotherapy was described as consisting of "encouragement to the patient to discuss freely her conflict arising out of her renal disease" (p. 172). Scott (1973) reported treating one isolated dialysis patient suffering from insomnia, pruritis, and depression successfully with hypnosis. Hypnosis was offered as an alternative to drug therapy in the treatment of hemodialysis patients, particularly with those patients having difficulty with diet control.

Varying degrees of psychotherapeutic success with dialysis patients presenting factors causing noncompliance with the medical regimens were reported by Kaplan De-Nour and Czaczkes (1972). They reported success with patients exhibiting acting-out behavior with the use of psychodynamic techniques to help patients understand the aggression underlying their behavior and to find new methods for dealing with it. They reported that intensive focused psychotherapy together with manipulation of the environment was beneficial in treating suicidal patients, even though establishing relationships with these patients was difficult. They reported that family psychotherapy with the homicidal patient had been more effective than individual psychotherapy with family members. They reported difficulty in working effectively with patients seeking excessive gain from the sick role because of the limited motivation for change among patients. They had similar problems with patients with low frustration tolerances and commented:
Our experience of trying to influence this factor by psychotherapy has been very poor. Individual supportive psychotherapy, psychoanalytically oriented psychotherapy and mobilizing other patients in a sort of group therapy, not to mention pleas and threats, have not helped. (p. 342)

Kaplan De-Nour and Czaczkes concluded that identifying the factors of noncompliance in each patient is important, and that this factor should dictate the type of psychotherapeutic intervention and give expectations from such intervention.

Kaye, Leigh, and Strauch (1973) used a case study method to describe the role of a liaison psychiatrist in a hemodialysis and transplant program. Initially the psychiatrist helped to establish the cause of the patient's behavior and later allowed the patient the opportunity to express his fears and concerns about dialysis and transplantation. In the post-transplant period the psychiatrist managed the behavioral aspects of the patient's mental confusion with appropriate chemotherapy while also becoming involved in counseling the patient's family. Throughout the time from prior to the patient's transplant and continuing to the patient's discharge from the hospital, the psychiatrist served as a consultant to the dialysis nurses, physicians, and social worker, assisting them in understanding the behavior of the patient. The authors describe the psychotherapy in the following manner:

As a psychotherapist the liaison worker found his role a varied one. Initially the patient was encouraged to ventilate his fears and anger; no effort was made to interpret or ask the patient to examine his own behavior. Shortly after transplantation, the therapist helped the patient gain control of the situation by supporting him in his efforts to take increasing responsibility for his own care. Near the time of discharge the patient was discussing his fears and fantasies as well as practical issues. (p. 320)
In the past several years there have been reports on the use of
group therapy for hemodialysis patients and their spouses. Wijsenbeek
and Munitz (1970) reported using group therapy for eight hemodialysis
patients. Topics discussed and worked through included family prob­lems, fears of death, coping with aggression, the shunt as a symbol of
illness, body images, dependency upon the artificial kidney machine,
and depression. The course of therapy included three parts or stages
distinguished by time and topics of conversation. The three stages
included discussion of superficial problems, the effect of the medical
regime on the lives of the patients, and the place of the dialysis pa­
tient in the family structure. The authors gave the following results:

As in any group treatment it is difficult to evaluate
the results. It seems to us that this form of treat­ment helps the patient to work through his problems
together with fellow-sufferers. We noticed that group
therapy improved to a great deal the atmosphere in the
unit until it became a real therapeutic community....
After one year of work in the unit we found that every
patient and his family are in need of psychiatric as­
sistance and that group therapy was appreciated by the
patients and the medical staff as the best form of
treating the manifold coping mechanisms of the patient
and his therapist. (p.220)

Weekly group therapy meetings with hemodialysis patients, doctors,
and nurses were described by Bloom (1972). He concluded that:

So far we have not evaluated the specific impact
of group therapy in terms of actual improvement and
functioning, and I do not even know that is is pos­sible to do it. In any event, I believe it is axi­
omatic that attention to the personality and the feel­nings is highly desirable, and that group therapy is an
efficient and effective way to accomplish this goal.
The results are intangible, but real in a psychic
sense. The people on our program feel cared for as
human beings. They are not merely organisms whose life
has to be prolonged, just because we have the technical means. We help our patients to care about living and help them to make the most of what they have, while they are still alive. It may not seem like much by normal standards, but for chronically ill people and their loved ones, such gains have great significance. (p. S-8)

Greenberg (1974) reported on a self-help renal dialysis patient group which had as its goals the "desire to help patients avoid emotional crisis and to facilitate their identity changes" (p. 39). The group met on a monthly basis and included in-center dialysis patients, home dialysis patients, transplant patients, and parents, spouses, and friends of the patients. The Renal Dialysis Psychosocial Team of two nephrologists, two registered nurses, a technician, a clinical chaplain, a dietitian, a clinical psychologist, and a social worker attended all sessions. After working in a large group format initially, the group was broken down into smaller groups of six to eight individuals with the results being that the larger group dealt with technical, non-emotional issues related to machine problems, employment patterns, and insurance concerns, while the smaller groups dealt more with the emotional feelings of patients and their families on such issues as marital conflicts, social isolation, and excessive demands on the spouses of home dialysis patients. In an earlier report involving the same hospital, Sorenson (1972) described the group situation as being "a prime teaching technique since participants seem to learn faster from peers than from professionals" (p. 900). The group setting was also reported to be of benefit in reducing the fears and anxieties of patients nearing the time at which they were to begin hemodialysis treatment.
Wilson, Muzekari, Schneps and Wilson (1974) compared the effects of six group counseling sessions involving nine chronic hemodialysis patients with a comparable no treatment control group. The group approach was expected to "enable patients to become more aware of behaviors maladaptive to the treatment process and allow them to adopt a more internal frame of reference concerning their lives" (p. 370). Comparisons between the experimental and control groups on Rotter's locus of control and the Self-acceptance, Sense of Well-being, Good Impression, and Communality scales of the California Psychological Inventory (CPI) revealed no significant difference among groups. The authors concluded that treatment begun during the earlier stages of dialysis may be more useful than a later treatment approach because of the initial stresses often evidenced among dialysis patients and their families at that time.

D'Afflitti and Swanson (1975) reported using group sessions for the wives of hemodialysis patients to "explore responses to the home dialysis situation, to provide emotional support based on understanding their responses, and to decrease the anxiety, depression, and isolation that these wives felt" (p. 634). They recommended that hemodialysis treatment should include on-going emotional support for the family of the patient and that group therapy seemed to be an effective way to help wives deal with their responses. They concluded that spouses in the group "became less depressed, less isolated, and able to deal more directly with their anger, thereby decreasing guilt" (p. 635). Shambaugh and Kanter (1969) reported on weekly group meetings involving a psychiatrist with a small group of spouses of patients on hemodialysis.

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The group members were allowed to discuss whatever they wished, and the psychiatrist took a sympathetic, interested, and realistic role, commenting on the members' defense reactions in terms of general human responses to stress and never interpreting their manifestations of dependence or hostility. The psychiatrist's major effort was "to help the members find a mutually endurable common ground between denial and despair" (p. 101). The group progressed from an initial state of panic and denial to one of more openness and interaction among members. The authors concluded that "the most striking accomplishment of the group was the members' progressively increasing sense of emotional separate­ness from their partners as they lessened their reliance on denial" (p. 935).

The role of the psychiatrist in working with kidney transplant donors and recipients was described by Kemph (1971). He commented that after patients had been accepted for transplantation they required considerable emotional support from the psychiatrist in preparation for the upcoming surgery. He stated that "both recipient and donor can be relieved of many unrealistic fears and misgivings, and, following surgery, development of more serious emotional disturbances can be prevented" (p. 147). Following transplantation the psychiatrist may assist the donors by allowing them to talk about their feelings of loss and resentment. The psychiatrist may also help the recipients to resolve guilt for having taken another person's organ and causing him or her to go through surgery and hospitalization. During the initial weeks following transplantation the psychiatrist can encourage the recipient and help him to understand his shifting moods of depression,
guilt and anxiety. After discharge from the hospital additional help may be given to the patients to assist them in the struggles involved in returning to society. Support may also be of benefit when the patients face the anxiety and depression associated with rejection of the kidney.

Psychotherapy and Counseling in a Nephrology Service

There is a wide variety of counseling and psychotherapeutic services which a counseling psychologist in a nephrology service can provide for dialysis and transplant patients and their families. This study will discuss several different types of counseling and psychotherapeutic approaches with several different types of patients in a variety of settings. While these approaches are by no means exhaustive, they are presented because they are typical of the kinds of counseling and psychotherapy which psychologists can provide to patients with chronic renal failure. Although an eclectic theoretical approach is recommended, other types of counseling and psychotherapeutic theories may be equally efficient in treating similar types of problems.

Crisis intervention

Abram (1974a) has stated that "psychotherapeutic approaches in the dialysis and transplant patient are mainly those of acute crisis intervention" (p. 70). This statement would probably hold true more for psychiatrists or psychologists who serve only as part-time consultants for nephrology services, but less true for the counseling
psychologist who works on a full-time basis with kidney patients. Nonetheless, crisis intervention is a technique which psychologists can expect to utilize frequently when working with patients facing the stresses imposed by dialysis and transplantation. Crisis intervention refers to a technique used to deal immediately with emotional turmoil precipitated by clear and present insults or hazards. The word crisis implies something which is acute and relatively severe. Caplan (1964) formulated a theory called crisis theory about the relevance of crises for potential behavior change. Roen (1971) summarized crisis theory with the following statement:

Crisis theory relegates importance to the timing and mode of an intervention. A crisis is seen as a transition period for the individual in which is embedded not only opportunity for personal growth, but also potential for serious damage. This equilibrium caused by accidental or developmental crises places people in a highly responsive state toward help. The briefest kinds of intervention at this time could forestall the fixating of symptoms and determine a more appropriate outcome, and might educate the individual to a problem-solving attitude that would be helpful in subsequent disruption. (p. 801)

The opportunity to utilize crisis intervention techniques is frequent with dialysis and transplant patients because of the many crises that each patient experiences. The initial crisis faced by many patients is the learning of the fact that their kidney disease is irreversible and that dialysis or kidney transplantation remains as the only alternative to death. Patients respond to this crisis in much the same way as do patients facing death without the existing possibility of dialysis. Ross (1969) described patients' responses as going through five stages. The first stage, denial and isolation, is
characterized with statements such as, "No, it can't be true—not me."

Stage two, anger, occurs when denial can no longer be maintained and is replaced by feelings of resentment, anger, and envy. This anger is typically displaced in many directions and projected onto the environment, the doctors, nurses, family, and medical science. What the patient is saying is that he can accept the disease itself, but "why me?"

The third stage, bargaining, is an attempt to put off or postpone death, or with patients with chronic renal failure, to postpone dialysis. The bargaining may be done with the physician or may be made as a secretive type of bargain with God. The fourth stage, depression, reflects the feelings of loss or fears of impending losses. With potential dialysis patients this loss is related to loss of freedom, loss of health, and many other symbolic losses associated with the loss of kidney function. The fifth state, acceptance, reflects, for kidney patients, a realization for the need for dialysis and the resignation that although life will be different and more difficult, it can go on.

The case of one patient with chronic uremia clearly illustrates similar types of responses. The patient, a 35 year old male, was diagnosed as having glomerulonephritis and was hospitalized for conservative treatment and further evaluation. He was angry at his being hospitalized and voiced a comment that he did not want dialysis and preferred to die. He bargained for weekend passes to leave the hospital, always promising that he would return promptly on Sunday. He became depressed and expressed the opinion that he knew he would never leave the hospital. He thought his opinion was accurate when informed that he was being transferred to the intensive care unit for an acute
peritoneal dialysis. Not knowing what peritoneal dialysis involved, he was left only with the feeling that patients are sent to intensive care in order to die. Following successful dialysis, the patient's behavior was changed drastically. He no longer felt hopeless and stated that he felt better than he had in over a year and that he could only then realize the value of life. It was at that time that the intervention of the psychologist (who had been seeing the patient since the time of his hospitalization) became timely and valuable in assisting the patient to work through his fears of the artificial kidney machine and to decide to begin training for home dialysis. The stages which this patient went through were quite similar to those explained by Ross (1969). The patient had denied the illness long before hospitalization and had shown much of his anger and bargaining stages shortly thereafter. His behavior in the hospital reflected primarily the stages of depression and acceptance. This case also points to the significance of the timeliness for crisis intervention. The crisis occurred at the time of the acute dialysis and placed the patient in a situation where he was very responsive to help.

There are innumerable crises for dialysis patients which are somewhat inherent in the total treatment of the patient with chronic renal failure and which, to a certain degree, can be expected to produce fear and anxiety in most instances. Surgery, particularly major surgery such as bilateral nephrectomy, can be expected to be usually stressful to patients, as can other procedures such as shunt declotting and revision and catheter replacement for peritoneal dialysis patients. In addition to these dialysis-related crises, patients are
faced with the same types of marital, family, and vocational problems which create crises for all of us. These "normal crises" are magnified in intensity because of the additional recurrent dialysis problems. Each of these periods of crisis or transition periods place the patients in positions where they are more responsive toward help and have greater potential for growth or damage. The following case vignette illustrates a crisis situation which, because of the intervention of the counseling psychologist, resulted in some growth.

Mrs. B., a 64 year old hemodialysis patient who had been dialyzing in the home with her husband as the backup for over a year, reported that because of her spouse's excessive drinking and subsequent abusiveness toward her had left her home, moved in with friends, and needed dialysis in the hospital. Mr. B. was known to be a problem drinker but denied any such problem and had continually refused treatment.

The B's were ineffectively attempting to make a decision about changing their place of residence to their cottage or moving to another state and selling their home. Although they had met with the counseling psychologist on several sporadic occasions to discuss this issue, they could not make a choice but frequently argued back and forth about the alternatives. The staff, being aware of Mr. B.'s drinking problem, questioned his ability to continue with home dialysis and collectively felt that because of this problem (in addition to Mrs. B.'s tendency to become hypotensive very rapidly while on dialysis) Mrs. B. might be better off to dialyze as an in-center patient.

As a result of the crisis involving Mr. B.'s drinking and Mrs. B.'s subsequent decision to move out of the house, the B.'s again sought the services of the psychologist. Subsequent marital counseling resulted in the B.'s returning to living together. They also made the decision that home dialysis was too stressful for them and that because of this stress Mr. B. had begun to drink excessively as a form of escape. Because of the increased responsivity created by the marital crisis, the B.'s were
also to make mutual decisions about where they were to live in the future. Since the time of that crisis the B.'s have reported that their total relationship has improved significantly.

Supportive and preventive psychotherapy and counseling

It was mentioned previously that a counseling psychologist working full-time with dialysis and transplant patients might find less need to use acute crisis intervention techniques than would a psychiatrist or psychologist serving as only a part-time consultant. The full-time psychologist has the advantage of being able to form some type of relationship with each patient and to provide supportive and preventive counseling on an on-going basis. The fact that patients know that there is someone available to provide additional support in times of crisis may in itself reduce the need for crisis intervention. As one patient stated, "I hope I never have to call on you for help, but it's good to know that you are here just in case something does happen."

Supportive and preventive counseling may take many forms and may be provided for dialysis and transplant patients in a variety of ways. By observing patients on dialysis it has been possible to identify some of the developmental antecedents of behavioral problems and to work with patients so as to minimize, alleviate, or forestall subsequent behavioral dysfunction. Various elements of preventive, supportive, and educative counseling can be melded together to increase the likelihood that functional and adaptive behavioral patterns can be acquired and reduce the likelihood that ineffective behavior will be exhibited in
predicted periods of stress. These counseling techniques have proven to be effective with dialysis patients in several different situations. The following case illustrates the use of preventive, supportive, and educative counseling techniques to assist a patient and her husband to cope with the trauma of a bilateral nephrectomy preceding transplantation.

Carol, a 27-year old female, had been on hemodialysis for approximately one year following the rapid progression of renal failure. Her course on dialysis had been a difficult one for her and her husband and their family of two small children. For Carol, hemodialysis was an extremely unpleasant necessity. She slept much of the time on dialysis and intentionally stayed up very late on the nights before dialysis so that she would sleep most of the time. She reported feeling miserable following dialysis and did very little around the house in terms of housework or child care. Her mother and/or sister-in-law stayed with her six days and nights of the week to help maintain the household while her husband worked. Carol seldom went out of the house except for dialysis. She had developed numerous physical symptoms without apparent physiological causes during her dialysis treatments and had what was considered to be a very low pain threshold.

Carol looked forward to a planned kidney transplant with mixed feelings of anxiety and anticipation. She longed for the transplant, seeing it as a means of living without the uncomfortable dialysis. She greatly feared the bilateral nephrectomy which was to precede the kidney graft by approximately six weeks. She had been told by other transplant patients that the nephrectomy was much worse than the transplant itself, and this suggestion increased her fearfulness.

Bob, Carol's husband, had been seen as being supportive of his wife but also feared the upcoming nephrectomy. Because of the psychophysiological problems and management difficulties which Carol had presented while on dialysis, she was asked by her nephrologist to see the counseling psychologist for four sessions up until the time of the nephrectomy. Bob also expressed interest in seeing the psychologist and separate interviews were scheduled.

The sessions gave Carol an opportunity to express her fears about the upcoming surgeries and to gain increased insight into her ways of coping with stress and pain. The interviews also
gave the psychologist the opportunity to explain to Carol what could be expected afterwards. She asked many questions about other patients' reactions prior to bilateral nephrectomies and was relieved to find that her feelings were neither abnormal or unusual. Her fears of the nephrectomy were explained to Carol as being a reflection of her being forced to give up hope that somehow her kidneys would miraculously function normally again; the removal of the kidneys forced her to give up such hope. Carol also seemed to have more insight into her fears of the nephrectomy when it was pointed out to her that there was no immediate reinforcement or gain for having gone through this procedure. The transplant itself could be reinforcing because of the possibility that dialysis could no longer be required. The nephrectomy offered no such immediate payoff, only pain and the knowledge that she was one step closer to the transplant.

Bob complained of being depressed for the past few months. He felt guilty about leaving Carol with the children, even at times when he had to go to work. He expressed some suicidal thoughts and ruminations and subsequently felt guilty about having those feelings. Bob responded well to the suggestion that his sadness, guilt, lowered mood, and emptiness were part of his grief reactions to the loss of his wife's health rather than being symptoms of depression per se. He was able to express the fact that his expressions of emotions had been inhibited in the immediate past because of his fears of upsetting Carol. He was encouraged to express his pent-up emotions with the psychologist and was able to cope better with the entire situation. Some educative counseling related to what he could expect during Carol's hospitalization also seemed to lower Bob's anxiety level.

Although Carol's transplant has not taken place at the time of this writing, the bilateral nephrectomy went rather smoothly. On one occasion while Carol was in the intensive care unit she did become somewhat agitated and broke out in hives. The counseling psychologist for the nephrology service was called in to see her in the evening and Carol talked at length about a series of frustrations related to her nursing care which had caused her to become very upset. Given the opportunity to express her frustrations, Carol's subsequent course in the hospital was without incident. The psychologist saw her on a regular basis to allow her to express her feelings and fears.

The case of Carol illustrates the use of preventive, educative, and supportive techniques to help a patient cope with a major life crisis. The techniques were preventive in that they helped minimize
the potential maladaptive responses of the patient, educative in that the patient was informed of what types of reaction she might experience, and supportive in that the patient was given the opportunity to express her feelings without the fear of retaliation but instead with reassurance.

Marital counseling

Because of the stresses imposed by dialysis, conflicts in marriage and family relations are common among dialysis patients. Each partner in a marital relationship has his or her usual pattern of attempting to satisfy individual needs as well as his or her way of reacting to needs of the other person. When the marital relationship fails to satisfy the needs of the partners in ways which have been customary, or when the needs of one partner radically change, conflicts develop with which both partners may be unable to cope. Dialysis represents a type of radical change which frequently alters the needs of the patient and may inhibit the patient's ability to satisfy the needs of his or her partner.

The types of changes which may occur vary among patients, but some changes may be anticipated. One of these changes is related to the possibility that the patient may be unable to return to his or her former employment and, as a consequence, the marriage partner may be obliged to assume the unaccustomed role of breadwinner in the family. This change has been more evident among male patients than female with the resultant effect being that the patient's wife finds a job and the patient assumes more domestic responsibilities in the home. This change has proven to be a difficult one for both marriage partners in
several cases because of the hesitancy on the part of the wife to go
back to work or, conversely, because of the husband's reluctance to
assume a role which does not fulfill his masculinity needs.

Another area of changing needs is related to impotence or loss
of libido among dialysis patients. Levy (1973a) found that hemodialy­
sis patients of both sexes had substantial deterioration of sexual
function both in terms of quality as well as quantity after beginning
dialysis treatments. Impotency among male patients oftentimes results
in a patient feeling depreciated and devalued in his role of husband
and may lead to fears of losing his wife's affection. Females under­
going dialysis have also reported reductions in sexual desire. For
both males and females the loss of libido may produce conflicts with­
in the marriage due to the changed needs of the patient as well as the
patient's inability to meet the needs of the marriage partner.

Conflicts with independency versus dependency and regressive
tendencies may result in changes in needs for patients and spouses.
While patients are expected to be dependent upon the artificial kidney
machine and the people who operate it, they may receive the message
that they are to be independent in such areas as work and family care.
Some patients are unable to resolve this conflict and regress and be­
come dependent upon marriage partners. If this dependence reflects a
radical change in the marriage, an alteration in needs and the ability
to satisfy needs may result in marital conflict.

When conflicts occur and are not resolved, the marriage becomes
threatened and intervention by the counseling psychologist may be
helpful. The goal of marriage counseling with dialysis patients and

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spouses is to assist both partners to achieve increased awareness of feelings, needs, expectations, and responses as they are related to the marriage and dialysis, and to help them to deal more adequately with the factors causing trouble in the marriage. The focus in the counseling for the counseling psychologist is to learn to understand the reciprocal interactions between the partners. The psychologist's role is to relate to the partners in an impartial, unbiased, receptive, and responsive manner, showing equal consideration for both the dialysis patient and the spouse. This may initially be difficult for the psychologist because the patient, in most cases, would have had more contacts with the psychologist than would have the spouse. It is important for the counseling psychologist to convey through words and actions that the feelings and behavior of the spouse are as important as those of the patient.

Counseling psychologists working with kidney patients may be able to assist marriage partners in their relationship because of their knowledge and understanding not only of human behavior and the psychology of interpersonal relations, but also because of their understanding of the types of stresses and resultant behavioral changes that have been experienced by other dialysis patients. These psychologists may utilize their knowledge and experiences in assisting couples to learn new techniques of coping with the changes that have been brought about by the dialysis treatments.
Because of the nature of the patient population with which counseling psychologists work, they frequently come into contact with patients who are dying and, subsequently, the families of the deceased dialysis or transplant patients. The emotional reactions of dying patients received only sporadic interest until the works of Elizabeth Kubler-Ross were published in 1969. Since then more and more physicians, nurses, clergymen, and mental health professionals have given attention to the patient facing death.

In many ways dialysis patients are faced with death continually because of their reliance on the kidney machine as a means of sustaining life. Most patients realize that death is a possibility every time they are attached to the kidney machine but because of the nature of the treatment for renal failure they are not in situations similar to those of the terminally ill patient with leukemia, multiple sclerosis, or one of the variety of cancer syndromes. That is, many dialysis patients die accidental or sudden deaths rather than the lingering deaths associated with other terminal illnesses. The fears of dialysis patients may be as much related to life as to death. Beard (1969) stated that:

Patients with renal failure fear that their lives will be cut short by an untimely death, and as we listen closely we also hear these same patients express their fears that even if they live, their lives may not be acceptable. This fear of death, coupled with the fear of life, is the dilemma of the patient with chronic renal failure. (p. 373)
There are times when psychologists working with dialysis patients will have the opportunity to work with patients who for one of a variety of reasons can no longer be adequately dialyzed and who face impending death. The primary role of counseling psychologists in such cases is to allow patients the opportunities to talk freely about their needs and fears and to let them know that someone is willing to share those concerns. Timing is important in working with dying patients. The patients should be given the opportunity to talk, knowing that the psychologist is willing to listen, but the patient must choose the time. If patients seem uneasy talking about their concerns on one occasion, the psychologist should respect the patients' desires and continue to return for visits, waiting until patients are ready to share their feelings.

Counseling psychologists can also provide support and counseling during periods of grieving by the families. It is important that the counseling psychologists let the families know that they are available and willing to talk with them about their concerns and feelings both during the period of anticipatory grief—the grief occurring prior to the loss but after the inevitability of the loss is known—as well as during the period of normal grief following the loss. Although many people can do their "grief work" constructively and individually, psychologists may facilitate normal grieving by acknowledging the reality of the loss and of the feelings related to it and by not trying to diminish the significance of those feelings. The grievers should be allowed to feel pain and psychologists can encourage the expression of feelings and acknowledge the reality of the pain without
attempting to defend or justify those feelings. They may also explain to the family that grieving is a normal healing process and that the pain of the loss, the sense of isolation, and the feelings of helplessness will end eventually.

In working with the family of a dialysis patient who has died it is important that the family realize that because the patient has died is no reason why continued support for the family cannot continue. It is wise for psychologists to be aware of the reactions of the grieving family members. If the acute stage of grieving persists, activity should be encouraged. If the griever remains unresponsive, evaluation and possible treatment for depression may be indicated.

The following case vignette illustrates how the intervention of a counseling psychologist with a Nephrology Service was helpful to the family of a deceased dialysis patient.

Rosemary, the 34-year old wife of a hemodialysis patient, was placed in the position of watching her husband slowly die while being maintained with the assistance of a respirator. After her husband arrested for the second time and had suffered what was considered to be severe brain damage, Rosemary decided that the removal of the respirator would afford her husband a more humane type of death with less suffering. She accepted her decision with few signs of guilt immediately following her husband's death. She remained quite calm and cheerful following the funeral with a noticeable absence of pain and other signs of the grieving process. Approximately one month following her husband's death Rosemary called the counseling psychologist for the Nephrology Service, requesting help for her four-year old daughter who had become increasingly hostile since her father's death and had reverted to frequent enuresis. A consultation was arranged for Rosemary, her daughter (Amy), and the counseling psychologist to meet with a child psychiatrist. During the consultation it became evident that not only was Amy having her normal grieving interrupted by positive reinforcement of denial (e.g., "Jesus took daddy away to be with him for awhile.") and punitive reactions to her anger about her father's dying and leaving her, but that Rosemary, because of
the necessity of her continued, uninterrupted functioning as a mother and worker, had also not continued with her own grief work. It was arranged that the child psychiatrist would work with Amy while the psychologist would work with Rosemary. The psychiatrist and the counseling psychologist met regularly to discuss the progress in the two cases.

The counseling sessions gave Rosemary the opportunity to express some of her own feelings of guilt and to increase her insight into her behavior toward her daughter. It quickly became evident to Rosemary that much of her anger toward her husband was being directed toward her children. She responded to Amy's reactions of anger and hostility with more anger—anger which she had previously not been able to direct toward her dead husband for leaving her alone to run a business and to raise two small children. She was also having difficulty making decisions regarding her husband's "death wishes." These requests made by her husband during his last days were not consistent with Rosemary's own goals and desires, and she struggled with the conflict of pleasing herself for maintaining her closeness with her husband by following his wishes. The counseling sessions assisted Rosemary in making decisions and returning to normal activities without feelings of guilt. She gradually became able to enjoy herself without feeling that she was being unfaithful to her husband.

The psychiatric sessions with Amy were directed at allowing her to express her feelings of the significance of the loss and to explain to her that although her father would never be back, other people who left temporarily could return to visit her. The transference was readily visible and Amy expressed fears to her mother that Dr. X would also leave and never come back. Intermittent appointments were made with the psychiatrist so that Amy could see that significant people in her life would not as a routine leave her. Amy's behavior slowly returned to normal at about the same rate as did her mother's.

**Group counseling and psychotherapy**

Group counseling can be an effective means of assisting patients in their adaptation to hemodialysis and kidney transplantation. Because of the different treatment approaches available for renal failure, a variety of homogeneous groupings of patients and family members exist. Homogeneous groups could be formed to assist home hemodialysis patients,
home peritoneal dialysis patients, dialysis patients awaiting transplantation, transplant patients, in-center hemodialysis patients, in-center peritoneal dialysis patients, patients nearing the beginning of hemodialysis or peritoneal dialysis treatment, and the spouses and families of all of these groups. Homogeneous groupings have the advantage that because each member is receiving the same type of medical treatment, everyone is familiar with the procedures involved and many of the frequent problems adherent in that type of treatment. Because each of the patients is faced with the same types of threats he or she can identify with the problems and reactions of the other patients. This form of treatment helps patients to work through their problems with fellow sufferers and to receive suggestions and support from peers. The group contact allows patients to see that they are not alone with their problems and that others have experienced similar types of problems and conflicts.

There are also advantages to making the membership of the groups more heterogeneous by including patients being treated with different types of therapy for kidney disease. Transplant patients, for example, are sometimes able to give dialysis patients first-hand information about the gains and losses associated with kidney transplantation so that patients considering transplantation can evaluate this possibility with input from other than physicians and staff members. Patients on home hemodialysis can likewise be of assistance to other patients considering home treatment. In addition, patients are often eager to learn a special procedure and unique experiences which they might be able to employ themselves. Because the treatment of kidney disease
affects the whole family, it is sometimes helpful to include spouses and other family members in the composition of the group. Although avenues of communication may be made clear within the families because of these group experiences, it is also possible that spouses of patients may be reluctant to talk about problem areas in the presence of the patients. Shambaugh and Kanter (1969) found group meetings with the spouses alone to be an effective means of helping them to cope with stresses of dialysis.

Although group meetings with patients with renal failure can be effective in increasing communication and helpful because of the group support, there are problems unique to this group of patients. One of the first problems to overcome is that of time. Dialysis patients typically spend from 20 to 60 hours per week in dialysis related activities. Many patients are reluctant to return to the hospital or to remain after dialysis for anything but emergency treatment. Although patients may express the desire to be active in group meetings, attendance can be expected to be a problem. Once a group of dialysis patients is formed, patients are eager to talk about problems related to physical status, kidney machines, vacations, and medications, but are hesitant to deal with issues more emotionally charged. The leader of the group must take care in guiding the discussions into areas which have been dealt with individually with several patients and, therefore, may be of concern to several patients, without threatening the group as a whole. Greenberg (1974) reported similar problems and suggested that small groups be formed to deal with psychosocial issues while a larger group meets to deal with non-emotional issues. My experiences
have led me to conclude that nursing personnel and physicians should be excluded from the patient groups as their attendance seems to inhibit responsivity among the patients in spite of continued reminders of confidentiality. Anger and hostility directed at the medical team have been much more evident when none of these people involved in the direct care of the patient have been present.

The use of psychiatric consultative services

There are times when it is advisable to ask for consultations and assistance from other mental health professionals. Because of their combined background in medicine and psychology, psychiatrists may be able to make valuable contributions to the ongoing care of dialysis patients. It is helpful if counseling psychologists for nephrology services can make arrangements for occasional liaison and consultative psychiatric services. Psychiatrists have the advantage of being able to recommend and prescribe medications as an alternative or supplement to counseling or psychotherapy. It is helpful if counseling psychologists and psychiatrists can meet to discuss the patients being referred prior to the consultations. Seeing the patients together also has advantages in that the psychologists can offer background information which may be helpful to the psychiatrists. Following the consultation the psychologists can serve as a liaison between the psychiatrists and the attending physicians, helping to clarify the psychiatrists' recommendations, prognosis, and treatment plan. The psychologists may also be expected to follow-up on the psychiatrists'
recommendations with psychotherapy, counseling, or psychological testing.

The following case vignette outlines why a psychiatrist was asked to provide consultation, what happened after the initial consultation, and what the ultimate benefits were for the patient and the nephrology service.

Rita, a 20-year old female patient with chronic uremia, was on hemodialysis for five months preceding her cadaveric renal transplant. During that time period she had been a compliant patient, adhering to the medical regime quite well. She was observed as being quiet and withdrawn, seldom conversing with other patients and initiating few conversations with staff members. Following the transplant it was necessary to dialyze Rita for three weeks due to ATN. On the ninth day following the transplant Rita became confused and disoriented following dialysis. She talked about having received written messages from God and confused her nephrologist with God. Her thinking included illusions, delusions, and hallucinations. She was difficult to manage both in the hemodialysis unit and on the nursing floor. She talked continuously and would try to roam around the hospital claiming she was a maid and was expected to clean the hallways.

A psychiatrist was called in for a consultation on the day following the initial psychotic episode. He diagnosed the condition as an organic brain syndrome secondary to the immuno-suppressive therapy to combat the rejection of the transplanted kidney. Heavy dosages of Chlorpromazine were prescribed to sedate the patient, and the psychiatrist agreed to follow the case for the remainder of the hospitalization.

Rita's psychiatric symptoms failed to improve although the transplanted kidney began to function adequately. The psychiatrist had Rita transferred to an inpatient psychiatric facility shortly after dialysis was discontinued. She remained hospitalized for approximately four weeks at which time she was discharged with only minimal improvement being evident. Shortly after her release from the psychiatric hospital, Rita's condition began to improve. She continued to be seen by the psychiatrist as an outpatient and was also followed by her nephrologist on an outpatient basis. Approximately 20 weeks following the transplant the kidney was removed due to medical complications. Rita's psychiatric symptoms also worsened and it was necessary to re-admit her to the psychiatric hospital in order to treat her...
recurrent psychosis. During that hospitalization she had her only known aborted seizure. She was released to her home on Chlorpromazine 200 mg, 4 times a day, and Dilantin, .1 gm, twice a day.

For the next three months Rita's condition continued to improve. Rita's case was discussed at a case conference at a psychiatric hospital with the psychiatrist who had served as the consultant in Rita's case, the counseling psychologist from the nephrology service, and several other psychiatrists, four of whom had interviewed Rita during her initial psychiatric hospitalization, present. The consulting psychiatrist diagnosed Rita as having the Denver Dialysis Disease, a rare and progressive encephalopathic syndrome characterized by tremors, myodonic jerks, asterixis, delirium, delusions, hallucinations, seizures and suicidal ideations ("Denver Dialysis Disease: a Dilemma," 1974). The prognosis was that death would be expected within one year and that other neurological signs were anticipated in the future. There was considerable debate about the diagnosis and prognosis with opinions varying from organic brain syndrome to functional psychosis. The final recommendation from the group of psychiatrists was that Rita should be carefully observed for a period of one year and, if no recurrent psychotic episodes were exhibited and if neurological deterioration was not evident, transplantation might once again be considered.

At the time of this writing, ten months following the last psychotic episode, Rita has shown neither major neurologic or psychiatric deficit. She has returned to being a compliant but reserved patient and has managed to complete her high school education while on dialysis. She is once again being considered for renal transplantation.

Rita's case illustrates how psychiatrists or teams of psychiatrists can be helpful to counseling psychologists and the nephrology services in managing patients who require psychiatric hospitalization and psychotropic medications, two services which neither counseling psychologists nor nephrologists can provide independently.

Resistances to psychotherapy

While there are several different types of counseling and psychotherapeutic services which the counseling psychologist can provide for patients with renal failure, there are also many obstacles and
resistances to be dealt with before therapeutic intervention becomes helpful. Abram (1974a) commented on the resistances of social stigma and denial:

There are other factors which hamper communications of an emotional nature, such as the social stigma associated with psychiatric treatment. This situation may become more acute for the dialysis patient for whom preservation of self-esteem with fellow patients is often vital. To be thought of as "crazy" or having to confide in a "shrink" can be viewed by the patient as humiliating, an insult or a sign of weakness. To refuse psychiatric aid or scoff at it therefore becomes a sign of strength and a means of maintaining a mental and bodily integrity which may be inwardly crumbling. Another resistance is that related to the deeply entrenched and unconscious mechanism of defense broadly termed "denial," a universal phenomenon and one commonly employed by patients with life-threatening illnesses. (p. 67)

Kaplan De-Nour (1970) found that resistance to psychotherapy was much greater among dialysis patients than among neurotics or other patients with organic illnesses:

We have attributed this resistance to two main factors: the patients' awareness of the brittleness of their defenses combined with the awareness that they were changing or "slipping down," as some of them later put it. The second factor was the underlying aggression. (p. 213)

Johnson et al. (1966) found dialysis patients to be resistant to any extensive medical, physiologic, or psychiatric intervention or investigation. Kaplan De-Nour et al. (1968) and Daly (1969) found similar resistance to any type of psychiatric help and only minimal cooperation in research projects.

Counseling psychologists working full-time with nephrology services have the opportunities to break through and minimize many of...
the resistances. By being available and visible the psychologists are able to develop supportive relationships and even friendships with patients rather than being confined to working purely on a psychotherapeutic basis. Also, because counseling psychologists assist patients in areas other than pure "emotional problems" they are seen as being less threatening. The term counseling psychologist itself is also less threatening than the term psychiatrist for many patients. The "shrink" image is minimized and counseling psychologists are viewed as persons to turn to for any one of several different types of concern.

Counseling psychologists familiar with working in community mental health centers or other agencies with a waiting list for appointments will find that initially dialysis patients will not be waiting in line to see them. Many patients, being accustomed to the medical/hospital approach where the doctor comes to the patient, will wait for counseling psychologists to make the first move. While this might constitute a change for the counseling psychologists, who in the past had waited for the motivated patient or client to come to them, it is important to remember that these patients, because of the commitment they have made to dialysis and life on the artificial kidney machine, are reluctant to make further commitments for behavior change or personal growth. The commitment to dialysis itself is the commitment to change.

Counseling psychologists might also have to use their imaginations and flexibility to break through other resistances offered by patients. The following case study illustrates how it was necessary for a psychologist to successfully treat a patient's daughter and
wife before the patient himself would show enough confidence in the
psychologist to seek treatment.

Bob, a 47-year old hemodialysis patient awaiting cadaveric renal transplantation, had been hesitant to communicate with the nephrology services' counseling psychologist on anything but a very superficial level. The only cooperation which Bob had shown was by taking an MMPI administered and interpreted by the psychologist. Even then Bob rejected the test interpretation as being inaccurate because it did not compare favorably with test results which had been interpreted by an industrial psychologist several years earlier. (The MMPI profile had T scores of over 70 on scales K and 4, suggestive of much denial, defensiveness, and projection on the part of the patient. Bob's rejection of the test interpretation—the negative results of which were mentioned but minimized by the psychologist—only served to confirm the interpretation.) Even though Bob's physician had recommended counseling for him on several occasions, Bob refused to admit that he had any emotional, familial, or marital problems. He realized that many staff members viewed him as being hostile and uncooperative, but he projected this blame back onto the nursing staff.

Bob finally sought the counseling psychologist's services when his 18-year old daughter continued to be significantly depressed and anxious after one year of psychotherapy with a psychiatrist. (It was subsequently discovered that the impetus for the referral was that Bob's insurance coverage for the psychotherapy had run out.) The counseling with the daughter proved to be fruitful and she was better able to visualize how she had been living for her father rather than for herself. She decided to move to another state and subsequently made an adequate adjustment to her new environment. The next referral made by Bob was his wife who also presented herself with mixed symptoms of anxiety and depression as well as recently diagnosed colitis. Once again the psychotherapeutic sessions (augmented with appropriate chemotherapy prescribed by the patient's family physician) were quite successful and the patient reported and showed a significant decrease in symptomatology.

The successful therapy with daughter and wife convinced Bob that he too could perhaps benefit from working with the psychologist. Subsequent sessions—both individual and conjoint marital—were reported to be helpful to both Bob and his wife.

The above case illustrates how the psychologist, by being flexible and available to family members as well as patients, was able to assist the dialysis patient in his adjustment despite stiff resistances of denial and extreme defensiveness.

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This chapter has attempted to illustrate how counseling psychologists may provide a variety of psychotherapeutic and counseling services to several types of patients. Crisis intervention techniques, although perhaps utilized less by counseling psychologists who work on a full-time basis with dialysis patients than by part-time psychiatric or psychological consultants to a renal unit, may still be expected to be an important role. Supportive and preventive counseling, both individual and group, may minimize the incidence and severity of crises among patients. Due to the stresses placed on family members of dialysis patients, marital problems may be frequent among patients and their spouses and counseling psychologists may be valuable in assisting these couples to work through their problems. Resistances related to the social stigma attached to psychotherapy, time restrictions of patients, and the brittleness of defense mechanisms among patients may make attempts at psychotherapy unusually difficult. By being available on a regular basis and by establishing themselves as mental health generalists rather than exclusively psychotherapists, counseling psychologists may be able to minimize these resistances.

Although direct personal counseling and psychotherapy represent a major part of the role of counseling psychologists in nephrology services, other types of counseling related activities may also prove to be beneficial to patients and staff. The following chapter discusses the role of counseling psychologists as psychodiagnosticians and psychological examiners.
CHAPTER V
COUNSELING PSYCHOLOGISTS AS PSYCHODIAGNOSTICIANS
IN NEPHROLOGY SERVICES

Another function that may be provided by the counseling psychol-
ologist is that of testing and evaluating for personality factors, intel-
ligence, and general rehabilitative potential. A selected review of
the literature pertaining to the use of tests and other evaluative
techniques as predictors of behavior for patients with chronic renal
failure shows that many nephrology services have utilized the results
of personality and intelligence tests and interview impressions for
basically three different reasons: selection of patients, assistance
to the nephrology staff in understanding the behavior of patients,
and research directed at finding personality factors common to pa-
tients with chronic renal failure.

A Selected Review of the Literature Regarding the Use
of Psychodiagnostic Techniques With Dialysis
and Transplant Patients

The use of psychological factors as criteria for the selection
of patients was reported by Gombos et al. (1964). They commented that,
"It was clear that information concerning potential emotional reactions
of the perspective patient were of high practical interest in the sele-
tion of candidates for treatment" (p. 462). Each candidate for
hemodialysis was given a psychological battery consisting of the
Wechsler Adult Intelligence Scale (WAIS), the MMPI, the Rorschach,
and the Stein Completion Test. Intellectual criteria were that the

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patient had to be free of chronic mental disturbances such as disorientation and memory loss, had to have sufficient intelligence to understand the nature and prognosis of the disorder, and needed sufficient practical sense to appreciate reasons for changes in life and habits. Gombos et al. examined potential dialysis patients' abilities to tolerate these changes emotionally and to realign their lives in realistic manners. They commented that "Implicit here was a generous degree of emotional stability and absence of intense conflict" (p. 462). Shea et al. (1965) reported excluding patients with severe psychiatric disturbances from dialysis treatment. Detailed psychiatric evaluations (including psychological testing) were reported to be done on all chronic dialysis patients. Specific instruments used were not delineated.

Schupak, Sullivan, and Lee (1967) reported that emotional stability and maturity were included as criteria for selection of hemodialysis patients. They also used evaluations for "an indication that the patient was likely to cooperate in his own care" (p. 708). The authors did not specify what types of procedures were used to evaluate these variables except that the WAIS was used to provide a measure of intelligence. The results indicated the mean IQ score for all patients tested was 92. The mean score earned by those patients still alive and on treatment was 95.0, while the mean of those who died was 84.4. Schupak et al. concluded that despite the significant difference in intelligence found between these groups, the intellectual capacity of the patient was of "dubious value" (p. 714) in determining potential well-being and rehabilitation. Reichsman and Levy (1972) reported
that assessments of psychosocial factors played a major role in the selection of patients. The assessments included evaluations of the patients' abilities to cope with stress and tolerate frustrations, the absence of psychoses or severe character disorders, and the presence of responsible family members willing to help in the care of the patient. Assessments were based on interview results and data obtained through conferences with nurses and other staff members.

The use of psychiatric consultations and projective test interpretations as part of the evaluation procedure for potential transplant recipients and donors was described by Kemph et al. (1969). One of the findings showed that both recipients and donors responded to the projective test stimuli with fantasies about birth. The recipients often saw themselves as being reborn, and donors saw themselves as providing rebirths of their children, giving them new, healthy bodies. Following transplantation, recipients were found to make up stories on the Thematic Apperception Test (TAT) about people being robbed. Kemph et al. reported that "Often the idea of robbing was linked with a punishment theme—that is, the recipient might be punished for having stolen something that belonged to someone else" (p. 1488). Psychological test interpretations also indicated that whether donors were living relatives or cadavers, recipients felt hostility toward the donor when rejection of the kidney took place.

Cramond et al. (1967) reported that although medical and surgical considerations were the primary factors involved in the selection of their candidates for renal transplantation, all potential recipients and donors underwent psychological and psychiatric assessments. The
psychiatric interview for the potential donor had as its object to "discover the dynamic relationship to the patient and in particular any unconscious motives of a negative kind" (p. 1214). The authors felt that it was also important to discover the potential donor's preferred pattern of ego defenses, the adjustments he or she had made to life's stress periods, and whether neurotic or psychotic breakdown had previously been experienced. Psychological tests for intelligence, ego strength, and degrees of neuroticism were also used to attempt to formulate the resources of the donor. Tests used included the WAIS, Rorschach, Cattel's 16 Personality Factor (16 PF), and the Hand Test. Cramond et al. reported that projective techniques provided the most useful interpretations because these measures were less susceptible to donors' manipulations to distort their responses in order to create more favorable impressions.

Abram (1974a), speaking on the topic of selection of patients for hemodialysis, commented that "the necessity to exclude patients for psychiatric reasons has diminished. Again, this move is a fortunate one as there are no proved and accurate predictors of psychological adjustment to intermittent dialysis" (p. 70).

Psychiatric interviews and psychological evaluations for the initial purpose of screening all patients were used by Sand et al. (1966). Standard intelligence and personality tests included the WAIS, the MMPI, the TAT, and Rotter Incomplete Sentences Blank. These pre-treatment measures were also used to obtain information which would help the medical treatment staff in working with the patients. Intelligence test scores indicated that "there's a small but
consistent tendency for the more intelligent patients to be seen as showing better cooperation and emotional adjustment" (p. 607). The mean IQ score for the total population was 115; patients rated as making above average emotional adjustment earned a mean IQ score of 119.1. The mean IQ score for the poor adjustment group was 107.8. None of the patients was reported to show clinically significant scores on the Paranoid (Scale 6), Schizophrenic (Scale 8), or Psychopathic Deviant (Scale 4) scales of the MMPI. The authors did find that:

In general the patients who were later seen as making poorer adjustments tended to be more defensive on all tests and to deny even normal amounts of adaptive difficulty and anxiety. On the MMPI, for example, they most characteristically scored higher scores on a scale measuring defensiveness (K Scale) than on any other scale. Typically they endorsed items having a concealed, rather than obvious, relevance to emotional difficulties. During predialysis assessment the potentially "better" patients show fewer somaticizing defenses (hypocondriasis, hysteria scales) than do the potentially less adaptive patients, but relevantly higher levels of depression. (pp. 607-608)

No differences between the two groups in the frequency or affective tone of references to sickness - death themes on any of the projective techniques were found. They did find that potentially better patients more often showed signs of greater flexibility and imaginativeness and, in general, a more stable emotional make-up. Sand et al. concluded that:

Above-average intelligence, a willingness to discuss emotional difficulty and anxiety openly, a relative prominence of depression over somaticizing defenses during pretreatment period, and supportive family attitudes are variables related to successful adjustment in this patient sample. (p. 608)
Blatt and Tsushima (1966) administered a battery of personality and intelligence tests to 17 male patients who were candidates for chronic hemodialysis at a VA hospital. The test battery consisted of the WAIS, the Bender-Motor Gestalt test, human figure drawing, and the Rorschach Psychodiagnostic test. The results showed a mean full-scale IQ score of 106.9 on the WAIS, with the mean verbal IQ score being 111.9 and the mean performance IQ score 97.0. The mean scale scores for the subtests showed above-average scores for Information (12.71) and Comprehension (13.56) while below-average mean scores were found in the Digit Symbol (7.1) and Block Design (8.4) subtests. The discrepancy between the verbal and performance IQ scores as well as the reduced scores on the digit symbol and block design subtests was interpreted as being indicative of "some reduction in cortical efficiency in these patients" (p. 207). The interpretations of the Bender-Motor Gestalt test "did not point to any clear sign of organic cortical dysfunction in the design productions" (p. 208), although several patients were reported to take more than the usual amount of time to complete the task. Rorschach interpretations yielded common responses related to color influence, somatic concern, and depressive reactions. No clearly normal records were found for the human figure drawings, leading the authors to conclude that the patients "all presented evidence of serious emotional problems, although none were blatantly psychotic" (p. 208).

Malmquist, Kopfstein, Frank, Picklesimer, Clements, Ginn, and Cromwell (1972) evaluated 13 patients with chronic renal failure using the WAIS, Holtzman Ink Blot Test, the House-Tree-Person, the
Tennessee Self-Concept Scale, the MMPI, the Social Reaction Inventory, the Ullmann Scale of Facilitating Versus Inhibiting Anxiety (repression-sensitization), and the Strong Vocational Inventory. The patients' adjustment levels were then evaluated at three and 12-month intervals after treatment had begun. Their results indicated that:

No medical or social background variables correlated with the adjustment during treatment. However, closeness to mother as an adult, no focal dependence as a child, lack of overt irritability and reported anxiety, and adaptability to previous life changes was significantly related to positive adjustment during hemodialysis. (p. 23)

Malmquist (1973a), in a subsequent study of 23 patients, used tests and techniques very similar to those reported earlier (Malmquist et al., 1972). The results indicated that patients who had shown psychiatric symptoms as children had more pessimistic attitudes regarding hemodialysis and prospects for rehabilitation while more optimistic attitudes were found among patients without previous psychiatric symptoms. Patients who exhibited psychiatric symptoms as adults also showed greater anxiety toward their kidney disease; the same was true with the patients who had anxious spouses, even if the patients themselves lacked particular psychiatric symptoms. Malmquist concluded that "a detailed study of the patients revealed that early adjustment to life changes and prior psychiatric history predicted the patients' attitude towards the disease, the treatment, and coming rehabilitation" (p. 337).

The Wechsler Bellevue Intelligence Scale, Form II, and physician's ratings of diet adherence and pre- and on-dialysis levels of vocational functioning were used to determine if there was a strong correlation between intelligence and dialysis adjustment, and if there
was some minimal amount of intelligence required for successful dialysis (Winokur, Czaczkes, and Kaplan De-Nour, 1973). The results indicated that on the whole intelligence is a poor indicator of the two aspects of the adjustment to hemodialysis studied. It was also concluded that pre-dialysis level of functioning is the best predictor of on-dialysis level of functioning.

Greenburg, Davis, and Massey (1973) collected data from their psychological evaluations of 24 patients with their aim being "to broaden the base of the relatively few studies in the literature and to discuss some of the problems and issues raised in performing evaluations of these patients" (p. 274). Intellectual evaluations consisted of administering the WAIS to all patients. Their results showed that full-scale IQ scores ranged from 57 to 118 with a mean of 98.2. Sub-test evaluations indicated that most of the patients earned scores that would be consistent with the hypothesis of organicity. Sixteen of the 24 patients showed deficits in the area of visual motor coordination and 14 produced scores indicative of reduced ability to learn new material. Personality evaluations, consisting of interviews and psychological test batteries, were used with the goal being "to explicate how and with what ego resources the candidate is coping with the stress of renal failure and how he may be able to cope with future major surgery or dialysis" (p. 275). Their most consistent finding was that patients showed a significant decrease in the amount of energy available for coping with stress. Projective testing results indicated that only four patients were judged to be responding appropriately to affect-arousing stimuli. They commented that:
Most patients seem to be defending heavily against recognizing the seriousness of their illness. Responsibility tends to be lowered as patients withdraw into themselves and affect is either denied expression or appears with little control once it is stirred up. (p. 277)

Mlott and Allain (1974) investigated the personality variables found among hemodialysis patients and compared these variables with those of the patients' mates. All patients and spouses were evaluated using the MMPI, the Welsh Anxiety and Repressive Scale, Barron's Ego-Strength Scale, Dogmatism Scale, Fear Inventory, Life Goals Inventory, and the Internal Versus External Locus of Control Inventory. The results indicated that dialysis patients showed tendencies toward denial, defensiveness, attention-seeking, general preoccupation with physical functioning, and depression. The spouses of the patients were found to "possess levels of anxiety similar to those of their mates, and unfortunately, a generally higher fear pattern" (p. 943). The male dialysis patients displayed tendencies to act out impulses more frequently than their spouses, while the female patients were found to be more withdrawn and non-conforming. Female patients produced test scores suggesting that they had lower levels of ego strength than their husbands. These patients seemingly sought security from their husbands who also showed less anxiety. The authors concluded that:

Although the spouses of renal dialysis patients appeared slightly more introverted, they possessed sufficient resources to handle the defensiveness, depression, acting-out trends, and attention-seeking of the dialysis patients. They are apparently similar enough in their overall psychological makeup to help the dialysis patient, even if they are plagued by similar anxiety, or even, at times, more intense fears. (p. 944)
Interview techniques and psychometric and intelligence testing both for selection of patients and subsequent understanding of the patients by the medical staff were employed by Cramond et al. (1968). These techniques were used to explore the "personality structure of the patient, his or her strengths and resources, preferred patterns of ego defense, and the dynamics of family life as it has affected the patient" (p. 540). The goals of the assessment were reported to be to gain information in order to see the patient in depth and to assess the strength and support he or she could obtain from the family environment, from religious convictions, from personality resources, and from the will or desire to live.

Ebra and Toth (1972) suggested that given the absence of severe medical contraindications, psychological factors are the most crucial determinants of success or failure in the home dialysis program. They reported that:

Since almost everyone who undergoes dialysis experiences psychological reactions, it becomes necessary to evaluate comprehensively each patient psychologically. The patient's level of motivation, intellectual-cognitive functioning, and emotional stability, as well as past social adjustment patterns, are significant variables affecting the probable success of a long-term program of home dialysis. (p. 3)

The following tests were found to be useful in obtaining an intellectual and personality profile: WAIS, Bender Visual-Motor Gestalt Test, MMPI, Sentence Completion, and Rorschach. Ebra and Toth found that intelligence played an important role in overall adjustment to hemodialysis with the more intelligent patients being better able to understand their conditions and to alter their life-styles to meet the needs of

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their illnesses. The authors found the Bender Visual-Motor Gestalt Test to be of value because of the relative ease of administration and the wide range of visual-motor problems which can be revealed. Their experience as well as the work of others (Blatt and Tsushima, 1966; Short and Wilson, 1969; Abram, 1969) led to the conclusion that "uremia in itself may produce some type of temporary organicity that can be corrected, in most instances with repeated dialysis" (p. 4). Ebra and Toth reported MMPI results similar to those reported by other authors (Sand et al., 1966; Wright et al., 1966; Short and Wilson, 1969). These results included frequent elevations on the Hypochondriasis (Scale 1), Depression (Scale 2), and Hysteria (Scale 3) scales. Projective test findings were reported to be of value in evaluating inner feelings and thoughts of patients. They reported that these instruments "have been helpful in the determination of ego strengths and reserve that the person might have to call upon in crisis situations" (p. 4). Ebra and Toth concluded that:

Using the above-discussed instruments, in conjunction with clinical interviews, the psychologist can make a comprehensive evaluation of the total personality and level of intellectual functioning of the patient. He can assess the patient's attitude toward his illness, his altered life style, his social relationships, his self-image, and ego strengths. These will predict, with some measure of reliability, the patient's ability to handle stressful situations. The goals or motivational direction of the patient is also examined. This information will reflect the patient's willingness and ability to reshape his mode of living around the dialysis program, without destroying his incentives or seriously damaging his personal objectives. (p. 4)

Several investigators have reported using personality and intelligence tests in an attempt to identify factors common to dialysis
patients. Wright et al. (1966) reported that psychiatric interviews and psychological testing were used as part of an investigation directed toward the definition and recognition of the kinds of psychological stress posed by hemodialysis. Ten patients were tested with the WAIS, the MMPI, the Rotter Incomplete Sentences Blank, the TAT, and the Rorschach Technique. The interviews and tests were used for the purpose of getting a picture of the patient's basic personality traits and of their responses to prior illnesses. The results of the psychological evaluations pointed to the use of denial as a common defense mechanism used by dialysis patients. Scores on the Hysteria scale (scale 3) of the MMPI, a scale considered to be sensitive to denial and repressive tendencies, were found to be elevated above the scores earned by normals. Dialysis patients earned a mean T-score of 70.07 compared to 50.00 for normals. Depression was also indicated for the dialysis patients by their elevated scores on the Depression scale of the MMPI. Dialysis patients earned a mean T-score of 66.85 compared to 50.00 for normals. Wright et al. concluded that "an awareness of certain personality traits...prior to treatment seems pertinent both in the selection of more ideal patients and in the recognition of psychological needs of patients during dialysis" (p. 620).

Twenty patients who had been on hemodialysis for periods ranging from several months to five years were studied by Daly (1969). He found dialysis patients a difficult population to study:

It would seem important to note that these patients are often extremely resentful when asked to participate in any examination, be it biochemical, radiological or psychological. This is related both
to their disinclination to spend any extra time at
the hospital and to other more complex factors
principally involving transference phenomena.
Thus, for example, it was found that they fre­
quently forgot appointments, and sometimes lost
or destroyed questionnaire booklets. Secondly,
the measurement of outcome has been difficult to
assess by virtue of uncontrolled variables enter­
ing into each parameter. Blood pressure, weight
and electrolyte change and shunt complications
are all influenced by individual manipulation,
by administration of drugs and by changes in
technique. (p. 267)

Daly reported examining physicians' ratings, patients' ages, and scores
on the Hostility scale and factors B (Intelligence), F (Sober versus
Happy-go-lucky continuum), and G (Expedience versus Conscientiousness)
of the 16 PF. Scores on the Hostility scale were found to not differ
significantly from scores earned by populations of normal subjects.
Factor B of the 16 PF was found not to correlate significantly with
hostility or doctors' ratings. Factor F scores were found to correlate
significantly with age (older patients being more happy) but not with
hostility or doctors' ratings. The Spearman Rank Correlation (rₗ) be­
tween Factor G and the doctors' ratings was .57 (p .005), the more
conscientious patients being rated as more suitable. Significant
correlations were also obtained between age and Factor G (.51; p .025)
and Hostility and Factor G (.448; p .025).

Short and Wilson (1969) reported using psychological tests as
indicators of changes in the personalities of patients during the
course of dialysis. Testing with the Bender Gestalt indicated that
most of their patients developed a significant degree of organic brain
dysfunction. This finding was reinforced by performance IQ scores on
the WAIS which were appreciably below the verbal IQ scores. MMPI
profiles indicated that dialysis patients' scores prior to treatment did not differ significantly from the scores earned by other hospitalized patients. During dialysis treatment the profiles changed on Hypochondriasis, Depression, and Hysteria, reflecting increased denial. Using supplementary scales of the MMPI, Short and Wilson found that scores measuring repression were also elevated, but that the scale measuring anxiety went down. They concluded that these changes demonstrated the effectiveness of the use of denial as a defense mechanism. During periods of acute stress, the MMPI scales of hypochondriasis and hysteria became elevated even more, demonstrating the patients' ability to mobilize even more denial.

Psychodiagnostic Evaluations as Selection Criteria for Patients With Chronic Renal Failure

Psychological evaluations can play an important part in the plans for the treatment of patients with chronic renal failure. As suggested by Abram (1974a), the trend seems to be moving away from using psychological factors as criteria for the selection of patients for chronic hemodialysis. It is suggested, however, that many hemodialysis centers would be reluctant to initiate dialysis on patients who are found to be grossly and chronically psychotic or who, because of intellectual deficits, are unable to care for themselves without continual assistance from individuals outside the realm of relatives or significant others. Even in these cases the moral question regarding the "quality versus the quantity of life" becomes a relevant issue.
The selection process remains an issue for psychological input in a nephrology service which provides a variety of treatment facilities for patients with chronic renal failure. At Saint Mary's Hospital there are six possible forms of treatment. They include: home hemodialysis, in-center hemodialysis, home peritoneal dialysis, in-center peritoneal dialysis, kidney transplantation, living related donor, and kidney transplantation, cadaveric donor. Each of these forms of treatment requires that certain medical, psychological, intellectual, environmental, and familial criteria be met. The criteria vary among the types of treatment.

Before discussing the various psychological factors that are involved in the selection of a given patient for a particular type of therapy, it is emphasized that the most crucial criteria involved in such a decision are the medical ones. These criteria, typically evaluated by a team of nephrologists, surgeons, and urologists, include such variables as circulatory access, physical disabilities and diseases secondary to or complicating the kidney disease, and other potential medical problems. These factors may limit the options in terms of treatment before any subsequent evaluations are even initiated.

Home hemodialysis has perhaps the most stringent criteria of all because of the necessity for an additional person to be involved. At Saint Mary's Hospital it has been found to be advantageous to evaluate not only the potential home hemodialysis patient but the spouse or other back-up person as well. Before beginning psychological evaluations of the potential home dialysis team, the physical setting of the home must be evaluated to see if it can accommodate an artificial kidney
machine and the necessary electrical and plumbing changes that are required. The availability of an individual who is willing to serve as the back-up must also be determined early.

Given no medical contraindications, a suitable home setting, and the availability of a back-up person, the potential home dialysis patient is then evaluated from a psychological and intellectual point of view. Although a systematic investigation of the intelligence necessary to operate a kidney machine has not been completed due to the relatively small population involved, it appears that anything below the average range of intelligence would make training difficult and tedious. The WAIS has been found to be the most beneficial index of intelligence in this setting because of its standardization and its sensitivity in measuring various components that contribute to what is referred to as intelligence. An attempt is made to judge not only the overall usable intelligence but, by comparing test scores it has been possible to identify areas of strengths and weaknesses that are useful to the home dialysis instructors in preparing educational plans. For example, if a particular patient were found to have a full scale IQ score of 108 with a Verbal IQ score of 116 and a Performance IQ score of 100, and if scores in the subtests of Block Design and Object Assembly (subtests found to be sensitive to abilities in the areas of non-verbal and perceptual organization) were significantly elevated above the other test scores, it might be hypothesized that the patient would learn best in situations which require less verbal ability (such as information gained through written sources) and more performance ability (such as modeling and demonstrations). This information could then be
incorporated into the training plans. It is necessary to also evaluate the intelligence of the potential back-up person, most frequently the spouse. Once again, average intelligence is desirable, in that many nephrology services attempt to train both the patient and the back-up in all of the procedures that are required for hemodialysis.

The results of psychological tests and interviews also play a part in the selection procedure for home hemodialysis. We have found the most useful tests to be the Bender Visual-Motor Gestalt Test, the House-Tree-Person Projective Drawing Technique, the MMPI, the Rorschach, the TAT, and a sentence completion test. On some occasions, due to time restrictions, the physical condition of a particular patient, or a lack of necessary reading ability, some of these instruments have been either not used or have been replaced by others. The major questions that are asked about the personality of the potential patient and back-up center around potential responses to stress producing situations. How will each individual react to crises? How will they relate to staff members in these periods of crisis? How will they relate to each other? These are all basic questions which could influence the decision whether or not to begin training for home dialysis.

Relationships between the patient, the spouse, and other family members, also play a part in the evaluation procedure. There are many factors here to explore. One of the more crucial questions relates to what types of stresses will occur in the family if a kidney machine is placed in the home. The reactions of children should be given some consideration. Some home hemodialysis patients have reported that their children fear the machine and resent the changes that have been caused
by its presence. Some of these children have reportedly stopped inviting friends over to the house because of "it." It is advantageous to speak with each member of the family—either individually or as a group—to determine potential reactions to the presence of the artificial kidney machine. If there are fears, they may be lessened or dispelled by giving a logical explanation of the machine and the techniques of operating it. In some cases the counseling psychologist might wish to arrange further sessions with a particular family member who seems unusually distressed.

The relationship between the patient and the spouse serving as back-up should be thoroughly investigated as part of the evaluation for home dialysis. The overall stability of the marriage should be reviewed with particular attention paid to areas that have resulted in conflict in the past. Couples who have had marriages marked by frequent discord and upheaval may, with the additional stresses related to hemodialysis, be unable to cope with this type of situation. The ability of the patient and the spouse to simply "get along" when together for extended periods of time should also be given attention. Because of the time commitments inherent in home dialysis treatment, the patient and back-up may be spending more waking hours together than they may have been accustomed to. How each individual will react to this time factor alone can be important. Test results and interview impressions can provide valuable data to assist in this aspect of the evaluation. It is particularly helpful to interview each individual alone regarding the interpersonal factors, and then to meet with both the patient and spouse together to observe the types of interactions.
Some evaluation of the total rehabilitation potential for the patient should also be made, although the results of the evaluation need not be a "worthiness scale" as suggested by Sullivan (1973). The evaluation of rehabilitation potential requires that the counseling psychologist inquire into the patient's goals for the remainder of his life. A major point to keep in mind is that home dialysis should be a type of treatment which benefits the patient and his or her family more than any other type of treatment for chronic renal failure. If home hemodialysis only serves to create more problems than it solves, another type of therapy may be preferable.

The selection procedure for in-center hemodialysis is much less rigid than that for home dialysis. Given there are no medical contraindications, the situation becomes more of a "first come -- first serve" policy. The only intellectual and psychological requirements placed on the patient are that he or she have sufficient intelligence and mental stability to understand the nature of his or her illness, and that he or she be able to control his or her own self care. This typically includes the ability to know what medications have been prescribed and when to take them, what procedures are required in the care of the AV shunt (if present), the ability to report the medical condition with at least some degree of accuracy, the ability to regulate diets, and where and when to report for dialysis. With these criteria as guidelines, the only contraindications appear to be severe, chronic mental deficiency and psychosis.

The selection procedure for home peritoneal dialysis again begins with the medical evaluation and the evaluation of the home to
determine if it is suitable for the required equipment. Intellectual
evaluation is important in determining what type of peritoneal dialysis
machine is to be used. At the present time Saint Mary's Hospital's
Nephrology Service utilizes two different types of peritoneal dialysis
machines, the proportioning machine and the cycler. The proportioning
machine is considered to require more training time and patients with
lower than average intelligence have had difficulty learning to operate
such a machine. The cycler is less complicated and can be learned by
individuals even with limited intelligence. Potential home peritoneal
dialysis patients must have the ability to care for themselves as re­
lates to diet control, minor machine maintenance, medical control, and,
of prime importance, as relates to techniques of sterility required
for the peritoneal dialysis procedure. They must also be free of major
disturbances of thought or mood which might affect their ability to
operate the peritoneal dialysis machine. The evaluation of the family
relationship is minimized because peritoneal dialysis is a procedure
which may be accomplished by the patient alone. No family member is
required as a back-up except in rare cases where the patient is too
sick or physically weak to accomplish the procedure alone. This does
not suggest that family responses and feelings are not important in
the overall evaluation for home dialysis; it does suggest, however,
that peritoneal dialysis done in the home allows the patient to be
more independent in terms of treatment than does home hemodialysis.

In-center peritoneal dialysis is reserved for the patient when
peritoneal dialysis is medically indicated but when the home site is
not acceptable or when the patient is too unstable—either medically or emotionally—to undertake such a risk.

The selection for renal transplantation should also take into consideration psychological factors. Cheetham (1970), commenting on the importance of psychological evaluations for potential transplant recipients, stated that "the personality of the patient is one of the vital factors governing success or failure of the procedure" (p. 1090). However, the means for predicting who will respond in what way following a transplant are basically undefined. As with interviews with hemodialysis patients, pre-transplant interviews should examine potential recipients' backgrounds and explore the ways in which they have responded to stress—particularly stress related to previous illnesses—in the past. Because most transplant patients have been maintained on dialysis for indefinite periods of time prior to transplantation, the counseling psychologists are given an opportunity to observe potential transplant recipients as they face the stresses of hemodialysis. The reactions to these stresses may be the best indicators of how patients will respond to the future stresses of transplantation.

Test interpretations are also helpful in predicting the behavior of transplant recipients. Intelligence testing, while of significant value in appraising the learning abilities of potential home dialysis patients, is less significant for potential transplant patients. Intelligence seemingly plays a small part in the success of these patients, although an index of intelligence may be useful in determining how well patients will be able to understand their medical status and how thoroughly they will be able to comprehend the importance of following
directions in areas such as diet control, follow-up appointments, and medication control. A shorter index of intelligence such as the Ammonds and Ammonds Quick Test or the Slosson Intelligence Test may suffice in place of the more time consuming WAIS. Personality tests are helpful in providing insight into patients' methods of handling fear, anxiety, hostility, and conflicts within the family. The same basic battery of tests and techniques as used with dialysis patients has proven to be beneficial.

When it has been decided that a living related kidney graft will be attempted, it is well to evaluate potential donors to assess the motivations which led these individuals to offer one of their kidneys to a relative. Columb and Hamburger (1967) made the following comments on the importance of evaluating potential donors:

The psychological factors are no less important than the physical factors in evaluating the offer of a voluntary donor. The acceptance of a donor is allowable if the donor is genuinely and spontaneously free of pressure, including any external psychological pressure, and if he is stable enough psychologically and capable of judging rationally the risk to which he is exposing himself and the impossibility of guaranteeing success. (p. 158)

The TAT has been a useful technique in the assessment of potential donors. Themes related to loss have been common, reflecting potential donors' feelings of self-sacrifice. Themes related to fear and hostility have also been elicited among potential donors, but less frequently than those of loss.

The ultimate selection of kidney donors has no clear cut psychological guidelines. Most transplant programs, undoubtedly, would not accept donated kidneys from relatives who were judged to be mentally...
incompetent or psychotic. Those potential donors who are judged to be generally emotionally labile or those who are apt to develop symbiotic types of relationships with recipients should also be advised against giving a kidney. A case vignette of a woman who was emotionally unstable and who had a history of developing dependent relationships with others is given below to illustrate the problems which might occur.

Marvin, a 39-year old married male, was diagnosed as having chronic renal failure and was subsequently accepted for transplantation at a large medical center. The only living relative with a compatible blood type and good physical health was his 40-year old sister, Joan. Joan's history included an unstable marriage which ended in divorce and a tendency to develop dependent relationships with others throughout her life. She was unemployed, receiving welfare for her three dependent children, and, although never treated for any emotional problems, was regarded as being eccentric and unreliable by other family members. Her relationship with Marvin had been almost non-existent since childhood; although living in the same community they seldom saw each other. In addition, Marvin's wife voiced disapproval of Joan in the past and avoided all contacts with her.

Joan was eager to donate a kidney and, without any psychological screening, was accepted as the donor.

Shortly after recuperating from the successful graft, Marvin reported receiving frequent phone calls from Joan asking "how's my kidney doing?" She frequently warned Marvin about doing anything that would damage "my kidney." Marvin, being grateful for the anatomical gift and not wanting to hurt his sister's feelings, did not complain of her behavior despite urgings from his wife who continued her disdain of Joan. In an effort not to hurt Joan's feelings but to placate his wife, Marvin asked that Joan call only when his wife was not home. This situation occasionally resulted in Marvin's wife answering the phone only to be hung up on by Joan. The situation continued to deteriorate; Marvin's wife, having learned of what was happening from her husband, forbade her dependent spouse from talking to his sister. Joan, feeling rejected despite her altruistic gift, had no one else to fulfill her dependency needs and became depressed, abused her tranquilizers, and was eventually admitted to a psychiatric hospital. Marvin, having felt guilty about deserting his sister for some time, had gradually become impotent, frequently became intoxicated out of frustration and anxiety, and, eventually was served divorce papers by his wife.
While the case of Marvin and Joan occurred over a period of six years, the impact is still felt. Joan has partially recovered after long-term psychotherapy although she remains unemployed and unhappy. Marvin is currently in treatment for alcoholism, is separated from his wife, and, at the time of this writing, is facing police charges for assaulting a police officer following a feud with his wife.

The case raises many questions, many of them perhaps unanswerable. Should Joan ever have been accepted as a donor given her history? Would a psychological evaluation have pointed to some of the impending problems? Would supportive counseling, begun before the transplant and continued thereafter, have assisted in avoiding such problems? While the answers are pure speculation, use of psychological intervention for evaluation and counseling would not have made the situation worse and may have helped to avoid some of the resultant problems.

The major point of this section has been that psychological evaluations can be helpful in selecting the most appropriate therapy for a given patient. The next part goes a step further and discusses the value of the results of the evaluations to the nephrology staff in terms of treating and working with the patients.

Psychodiagnostic Evaluations as Aids in Training and Counseling for Nephrology Patients

The results of psychological evaluations can be of significant value to counseling psychologists as they work with patients, family, and staff members. As referred to in the preceding section, these results have been beneficial in assisting dialysis instructors in
formulating teaching plans for home dialysis patients. Psychological
input can assist dialysis instructors to individualize teaching plans
to emphasize the strengths and minimize the weaknesses of the patients
and back-up persons in training. If, for example, the potential home
dialysis patient were found to be relatively strong in the general area
of verbal concept formation and understanding, but weak in visual motor
perception and coordination, the instructor might wish to concentrate
on using techniques such as didactic lectures and explanations and read­
ing materials; less emphasis might be placed on modeling and visual
comprehension of the tasks related to the functioning of the machine.
In the case where there are significant differences in the most bene­
ficial types of learning experiences for the patient and back-up, the
instructor may wish to emphasize certain aspects of dialysis with the
patient and other aspects with the spouse. For example, let us assume
that the patient has strengths in verbal concept formation and reading
but has deficits in visual motor coordination and mechanical activities;
the spouse is found to have strong interests and abilities in mechani­
cal activities, but is less verbal and has poor reading comprehension.
The instructor could choose to emphasize the mechanical aspects of the
machine to the spouse while concentrating more on theory with the pa­
tient. In some cases the differences in overall intelligence of the
two individuals in training for home dialysis may be very significant.
The dialysis instructor is then faced with the problem of how to teach
at a level for both individuals to be able to understand while not
boring the more intelligent member of the family. Just being aware of
this situation from the onset of training is of value in itself, and
further input about specific interests and skills of each of the individuals may be helpful in formulating a total teaching and training plan.

Some knowledge about the personality traits of the patients and spouses in home training may also be valuable to the instructor. Some explanation of the types of defense mechanisms used by trainees is useful in understanding how stress will be dealt with in training. Trainees' hypothesized responses to criticism may assist in the instructor's approach to a particular individual. It is also beneficial to describe the trainees' marital relationship to the instructor so that he or she will be aware of possible shifts in family dynamics. For example, let us assume that the patient is male and, in his pre-morbid state, had placed great emphasis on his ability to be an independent type of person. The dialysis instructor is in the best position to view possible changes such as the patient's tendency to slip into a dependent stage and allow his wife to assume the bulk of responsibility for dialysis. By being aware of the predisposition for the patient to become dependent and subsequently depressed over his lack of independence, the instructor may make note of the observed changes and discuss them with the psychologist.

Staff meetings with dialysis nurses and technicians to discuss the results of psychological evaluations are also valuable in assisting the staff to deal with problems that may arise. Because nurses and technicians are the staff members who are typically around the patients the greatest amount of time, they often see more of the emotional problems and reactions to stress experienced by the patients.
Knowing what to expect from a particular patient makes the job of dealing with those reactions sometimes easier. Sharing test and interview results with the staff also gives the staff the opportunity to ask specific questions about why a particular patient behaves in a certain way. For example, in a recent staff meeting a nurse questioned a patient's behavior which consisted of an apparent indifference in a training situation. She felt that the patient was being uncooperative by failing to remember techniques which had been explained and reinforced on several occasions. An explanation of the test results revealed an acute organic brain syndrome which left the patient incapable of remembering details rather than being uncooperative; consequently, the nurse was better able to tolerate and understand her patient.

The results of psychological evaluations are also useful to the physicians working with dialysis patients. A general explanation of how patients will respond to dialysis personnel, physicians, and other staff and patients may allow physicians to be more understanding of the reasons behind patients' behaviors. The results of the psychological evaluations also give the physicians an opportunity to better understand the motives behind their patients' behaviors. Some additional testing may also be useful in assisting to diagnose problems. Testing for organicity, for example, may be beneficial to a physician who is having difficulty differentiating a particular problem.

The results of psychological evaluations may be of significant benefit to the psychologists themselves when it comes to helping patients to deal with particularly stressful situations. I often refer back to my original psychological evaluation of a patient when a referral has

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been made to see a particular individual. The evaluation provides baseline data and a picture of the dynamics influencing the patient's behavior.

The procedure of psychological testing often elicits feelings of fear and anxiety for the person to be tested. Potential dialysis patients are oftentimes threatened and angered by the suggestion that they see a psychologist for this purpose. As it is often the physicians who make the referrals, it is best for them to explain to the patients the reasons for requiring the psychological examination. I have found that if physicians explain that psychological evaluations are part of the overall evaluation required of all patients, the patients are apt to be less threatened by the situation. It is also helpful if the physicians explain that the purpose of the testing is to assist in finding out as much as possible about the patients so that the physicians and other staff members can select the most suitable type of therapy for the patient and so the staff can assist the patients in their adjustment to dialysis.

It is beneficial to evaluate patients prior to the onset of dialysis for several reasons. Initially, this procedure reinforces the physicians' explanations that the psychological evaluation is part of the overall evaluation. Secondly, patients are less apt to feel that they have been singled out because of perceived emotional problems. Thirdly, the psychologists are given the opportunities to establish rapport and to begin to develop relationships with the patients. If it is difficult to establish rapport, it may be useful to postpone testing at that particular time until a later date so that more time
can be spent establishing a relationship. Fourthly, the psychologists can take this time to explain their roles to the patients and to outline the variety of services which are available. This has the added benefit of giving the patients the opportunity to ask questions about their disease and the anticipated treatment. Oftentimes patients will feel more comfortable when they know that they are in the presence of an individual with some background in a counseling related profession. And finally, the psychologists have the opportunity to gather baseline personality assessment data which might prove to be useful for research purposes.

The following outline is presented as a guide for writing psychological evaluations on potential dialysis patients. While it is not all encompassing, it does refer to many areas which might be considered when evaluating potential patients. When major areas of conflict are discovered, they should be noted in detail with specific examples included when possible.

I. Intelligence

A. Does the patient have the intelligence necessary to understand his or her physical condition?

B. Does the patient have the intelligence necessary to control his or her own self care?

C. Can the patient learn to operate the artificial kidney machine?

D. Which machine(s) are beyond the grasp of the patient?

E. What are the learning problems that might be encountered in attempting to teach this patient?
F. What intellectual strengths does the patient have?

G. What types of learning experiences might be most beneficial with this patient?

H. What types of learning experiences might be most difficult for this patient?

II. Personality

A. Is there evidence of organic brain damage? If so, how might the patient's behavior be altered?

B. How has the patient responded to stress (in general) in the past?

C. What types of stress has the patient had the most difficulty in coping with?

D. How has the patient coped with illnesses in the past?

E. How is the patient coping with his or her illness at present?

F. To what extent may the patient be able to control impulses?

G. What degree of anxiety has been observed and/or measured?
   1. What types of situations might be the most anxiety producing?
   2. In what ways might the patient deal with his or her anxiety?

H. What types of affect have been observed and/or measured?

I. What types of management problems might the patient present?
1. Diet control?
2. Scheduling?
3. Others?

J. What defense mechanisms might the patient typically utilize?

K. What are the diagnostic impressions?

L. What is the estimated extent of impairment?

III. Inter-personal Relationships

A. How might the patient be expected to relate to the following?
   1. His or her physician?
   2. Nurses and technicians?
   3. Dialysis instructor?
   4. Other patients?
   5. Dietitian?
   6. Consultants? (Specify)

B. How might the patient be expected to relate to the psychologist?

C. How might the patient be expected to relate to the social worker?

D. What will be the patient's characteristic relating style toward each of the above? (Passive, manipulative, aggressive, etc.)

IV. Family Relationship

A. Describe the relationship between the patient and his or her spouse.
B. Describe the spouse's feelings regarding the treatment possibilities.

C. What areas of marital conflict have been evidenced in the past?
   1. How have these conflicts been dealt with.
   2. How have they been resolved.

D. What are the reactions of the children in the family?

E. Describe other supportive family members or significant others.

F. How might dialysis change the family dynamics?

V. Rehabilitation

A. Describe the patient's work history.

B. Does the patient seem motivated to return to work?
   1. Possible problem areas?
   2. Recommended intervention?

C. Areas of interest outside work?
   (Hobbies, clubs, extracurricular activities)

D. What types of rehabilitation seem feasible?

VI. Recommendations

Psychodiagnostic Evaluations of Nephrology Patients for Research Usage

The third major use of psychological evaluations is, as mentioned above, to provide counseling psychologists with baseline personality data which can be used for research purposes. Although many writers have commented on the psychological aspect of hemodialysis and

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transplantation, few studies have reported on anything but small populations based on relatively short periods of time. While this type of report adds to the general fund of information about these patients in most cases, it also has contributed to the vast differences in descriptions found in the literature. Controlled longitudinal studies of large patient groups are needed to better understand the behavior of these patients.

There are also areas related to the psychological aspects of the treatment of chronic kidney disease which have not been explored or which have been investigated only superficially. The following topics are offered as only a few possible areas for such investigations:

1. A psychological comparison of patients with chronic kidney disease with patients with other types of chronic illnesses
2. An investigation of personality changes following renal transplantation
3. A longitudinal study investigating changes in relationships between kidney donors and recipients
4. Comparisons in the overall adjustment of patients on hemodialysis and peritoneal dialysis
5. A study of the shifts in dynamics in the families of patients on dialysis
6. A study of personality changes in the spouses of patients on hemodialysis
7. A comparison of treatment modalities for sexual inadequacy of dialysis patients
8. A systematic longitudinal study of factors related to non-compliance among dialysis patients
This chapter has described how counseling psychologists may make use of their backgrounds in testing and psychometrics to provide dialysis nurses and technicians, physicians, colleagues, and themselves with valuable information regarding patients' potential responses to dialysis. While no clearcut criteria for the selection of dialysis patients exist, it is suggested that by using interview and psychometric techniques some predictions of patients' behaviors are possible. The results of psychological examinations may also be of value to the medical teams by allowing them to better understand the dynamics behind patients' behavior. The need for more research regarding predictive variables for dialysis patients has also been discussed, and psychologists are urged to develop controlled longitudinal studies with large groups of patients in order to answer many of the questions which still exist about emotional responses to dialysis and transplantation.

The next chapter examines the roles of counseling psychologists as they assist patients to become more fully rehabilitated within their physical, emotional, and sociological limits.
Rehabilitation of patients receiving hemodialysis typically has been one of the primary goals of dialysis units. While many aspects of rehabilitation are typically examined, concentration has been placed on vocational aspects of rehabilitation. Counseling psychologists may be key personnel used in assisting dialysis and transplant patients to achieve some degree of vocational rehabilitation.

This chapter begins with a review of selected studies related to rehabilitation of dialysis patients. A report on the evaluation of the vocational adjustment of home dialysis patients at Saint Mary's Hospital in Grand Rapids, Michigan, is presented as evidence that patients, when given the support of dialysis personnel, may be able to return to vocationally productive and profitable lives. This chapter also presents guidelines and case studies as illustrations of the types of rehabilitation services which may be provided by counseling psychologists for dialysis patients.

Rehabilitation of Dialysis Patients: A Selected Review of the Literature

The rehabilitation of kidney patients has been a topic that has received the attention of several researchers. Reichsman and Levy (1972) observed that patients in their study wanted more help and support from the hemodialysis unit personnel in relation to job
opportunities and financial matters. They reported that, "they [the patients] were not striving for greater independence but rather for more support" (p. 863). They found that of the 25 patients studied, 11 worked less than 25% of their "available time." ("Available time" was defined as time available to the patient for work or school activities, excluding such periods as hospitalizations and time spent on dialysis.)

Gombos et al., (1964) using a performance rating system to assess the results of their program, found that, "significant improvement, but not complete rehabilitation, was accomplished in the selected patients" (p. 468). Chaudhry, Goodwin, and Freidman (1970) reported that of the 14 "employable" patients studied, 11 worked consistently while undergoing therapy. The average work week for these patients was four and one-half days. Their mean annual income was 37% less than earnings prior to illness; mean overall employment attendance was 79%. Each of the three patients who did not work was reported to manifest distinct problems such as chronic dependency, inadequate prior work skills and habits, passivity, and role reversal. Short and Alexander (1969) concluded that the more personality assets and life successes experienced by the dialysis patients in their premorbid lives, the more successful the adaptation to hemodialysis. They reported an employment rate of approximately 25% with those patients employed in "thought" or sedentary occupations doing better than those employed in manual labor occupations. Sand et al. (1966) were in accord with the above and suggested further that patients who had demonstrated strong tendencies to use symptoms for secondary gain would likely show inadequate rehabilitation.
Rae et al. (1968) reported that approximately two-thirds of their patients were working full-time with one-fifth working part-time. Their study was limited to home dialysis patients. Johnson et al. (1966) reported that all of the patients in their study had been at least partially rehabilitated, with two female patients being able to maintain their households and participate in social activities. One male patient worked full-time and was active in home and recreational activities. Their results indicated that four or five of the ten patients studied had been significantly rehabilitated. Lindholm, Burnell, and Murray (1963) reported that six of their seven patients were employed nearly full-time and engaged in their usual hobbies and recreational activities. Blagg et al. (1970), judging rehabilitation by the return to predialysis occupations, school, or household duties, reported that rehabilitation was good in 43 patients, partial in four patients, and poor in only five cases. Murray, Pendras, Lindholm, and Erickson (1964) admitted to difficulty in assessing rehabilitation among hemodialysis patients, but reported that nine of 11 patients had been able to realize the goal of the program by becoming "satisfied and productive patients who are able to play a continual role in society" (p. 196). Schupak et al. (1967) reported that ten of the 18 patients in their population had been rehabilitated sufficiently enough to return to work, school, or housekeeping; the remaining eight were regarded as "unemployed."

Kaplan De-Nour et al. (1968) reported that five of the nine dialysis patients in their study continued to function in their occupations much as prior to dialysis. They concluded that, "On the whole, therefore,
there was some, but not much, change in the level of functioning as far as work was concerned, in comparison to recent years before the onset of clinically manifest uremia" (p. 524). Harari, Munitz, Wijsenbeek, Levi, Steiner, and Rosenbaum (1970) found that most patients showed a strong decline in their ability to work during illness and the early phase of dialysis with over 90% of the patients showing no change or a decline in their ability to work during these time periods. A significant improvement was seen in 43% of the patients after they had become more stable on dialysis. Nearly 80% of the patients hoped that their ability to work would continue to improve as their physical conditions improved.

The overall pattern of employment among another population of patients was reported to be good (Curtis et al., 1969). Only four of 32 patients were unemployed and the careers of 16 of the patients were seen as not having been adversely affected. The factors affecting these positive results were considered to be related to available night dialysis, patients being previously employed in non-manual or skilled manual jobs where a minimum of physical activity was required, a wide range of jobs and facilities for retraining being available in that geographical area, and a low level of unemployment at that time. The authors suggested that once a patient is on hemodialysis, social and vocational rehabilitation becomes the major goal.

Malmquist (1973b) questioned whether employment is the best indicator of a good outcome of treatment by hemodialysis, but concluded that because other factors such as good adjustment to diet regime and satisfactory physical and mental adjustment to dialysis are present in
most patients returning to work, the ability to return to work may indeed be a good objective indicator of the overall adjustment of the patient. Malmquist studied 22 patients through six months on dialysis and 17 patients during 12 months. The study of the six month group indicated that while all but one of the patients were viewed by the staff as being medically and socially able to return to work, only 15 (68%) were actually employed. The follow-up study after 12 months showed that approximately 50% of the patients who were rehabilitated after one year were so already after six months. Two patients who were working at the six month evaluation were out of work at the 12 month follow-up with no obvious medical reasons for being unable to work being observed. Malmquist concluded that the extent to which patients can be rehabilitated is related to a great extent to the facilities of the kidney unit to offer night dialysis where the patients have a greater chance to return to daily work. He found that no background variables such as age, social status, number of children, intelligence, duration of kidney disease, number of days on sick leave, or other somatic variables were valuable as predictors of rehabilitation. He found that the significant differences between the rehabilitated and the non-rehabilitated groups were determined before the onset of the kidney disease. He stated that:

The way the patients had dealt with major changes in their lives before the kidney disease predicted the outcome to treatment. Patients who previously had adjusted well to major life changes prior to and after onset of kidney disease were also well adjusted to dialysis and were rehabilitated after 6 months in treatment. The expectations of the patients with regard to rehabilitation played an important role. With one exception, all patients who before dialysis
had a positive attitude to becoming rehabilitated as soon as possible were back to work after 6 months in treatment. None of the patients with a more negative attitude was back in work. Also the patients' interests for contacts outside their families predicted outcome. Absence of tension and anxiety at the interview before dialysis was started were also predictive variables. (p. 343)

Ebra and Toth (1972), using a review of the literature as well as their own experiences to evaluate the potential of vocational rehabilitation, stated that, "Some level of satisfactory vocational adjustment can be achieved through a multidisciplinary approach to the problems of end-stage renal disease" (p. 7). Sullivan (1973) suggested that, "a staff policy insisting on patient employment could create added pressures that might well prove insurmountable for some patients" (p. 214). Taking issue with other investigators who equated rehabilitation with employment, Sullivan viewed home dialysis as a full-time job which "requires the full-time work of two people who get no vacation" (pp. 215-216). He cautioned hemodialysis staff members to be aware of their desires to turn patients into reflections of their own expectations. He suggested that rather than receiving excess direction from others, patients should be encouraged to maintain as much control as possible over their own lives. He stated that:

Each patient needs to know the practical options that are available to him. These are best discussed in an open and honest way, so that he can understand clearly the pros and cons of each option. Once the patient makes his choice he should be given positive support in his efforts to achieve his objective. If a patient decides, for example, that he wants to keep his job, then every effort should be made to help him do so or to help him find more suitable employment if his present job is to be considered to be medically contraindicated. On the other hand, if a patient decides "to go on disability," he needs to be reassured

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that his legal right to apply for disability benefits is recognized and accepted without prejudice. It should also be reassuring for him to know that he will not have to beg or fawn favor to secure what information he may need from the staff to establish medical or administrative eligibility. (p. 217)

The Vocational Adjustment of a Selected Group of Home Dialysis Patients

A study of the occupational adaptations of home dialysis patients from Saint Mary's Hospital, Grand Rapids, Michigan, was completed in order to assess the work patterns of patients who had been trained to operate artificial kidney machines within their homes. The purpose of the study was not to evaluate the total adjustment of all patients, but to explore the occupational adaptation of those patients who had been chosen to dialyze at home.

Method

Subjects for this study were eight males who were on home dialysis and received regular care from one of the three nephrologists on the staff at Saint Mary's Hospital. Six of these men, along with their wives as back-ups, were trained to operate kidney machines by Saint Mary's Hospital personnel; the remaining two received training elsewhere. Each of the subjects was selected for home dialysis following an evaluation of medical data, a social work evaluation of such things as the adaptability of the home setting to hemodialysis, and a psychiatric or psychological assessment of emotional stability and intellectual ability to learn the skills required for home dialysis. The mean
age of the patients was 49.5 years with ages ranging from 38 to 64. The mean number of months on home dialysis was 35.5.

Each patient was asked to complete a questionnaire related to vocational adjustment. The questionnaire inquired into the nature of work experiences prior to and during home dialysis. Specific questions were asked regarding hours worked, type of occupation, job responsibilities, pay levels, and work limitations directly related to hemodialysis. (See Appendix E, p. 251.)

Results

Of the eight patients, all were working at least 16 hours per week prior to the onset of their treatments. The average work week was 42.5 hours, with seven of the patients working 40 hours or more per week. Six of the patients were employed in occupations that would be classified as "thought oriented" while the remaining two patients worked in areas that involved more manual labor.

After beginning hemodialysis, the patients' average work week was reduced to 31.6 hours. Five of the patients worked virtually full-time (37.5 hours or more per week), with two others working 20 and 25 hours per week respectively. One patient, a 64-year old self-employed salesman, worked seven hours per week and was taking steps to sell his business and retire. The results show that the average work week was reduced by 10.9 hours (25.6%) for the group as a whole. By eliminating the 64-year old patient who was near retirement from the study, the average work week for the other seven patients increased to 35.2 hours per week (from the 31.6 overall average); these seven men, then, showed only an 18% reduction in their average work week.
Only one of the patients had changed his place of employment since beginning dialysis and that change was necessitated by the sale of the employing company. All but one of the patients were doing virtually the same type of work with the same responsibilities as they had prior to home dialysis—the one exception being a patient who received additional training and made a job change within his organization. Three of the patients stated that their incomes had increased at approximately the same rate as they had prior to hemodialysis; two reported that their wages had increased but at a lower rate than prior to treatment. One man reported an hourly increase in wages and an accompanying decrease in total hours worked which meant a small net decrease in overall income. Two patients reported significant decreases in pay because of their inability to work as many hours. One of these patients commented, "It is better for me to draw disability income than for me to work a few more hours and have less money as a result."

Patient's comments regarding their limitations included the following:

"Due to medical complications, time on the machine and days of not feeling well, I lose much time at work."

"My anemia has limited my effectiveness."

"I am unable to call on customers freely."

"More effort is required to accomplish the same work that was done before."

"I cannot lift heavy objects because of the leg shunt; also, I tire very quickly."

"Without a small pension and my wife working full-time, we'd be on welfare."
"The company I work for has been very understanding and helpful."

"I'm unable to work away from home or work much overtime."

"I must schedule my work around dialysis with the result being less time to work."

"I've accepted home dialysis as a way of life and realize the time factor will not allow me to be as productive as before - but ain't it nice to be here!"

Discussion

The results of the study suggest that these patients have adjusted relatively well to home dialysis in terms of vocational adaptation. The results compare favorably with those reported by Rae et al. (1968), Chaudhry et al. (1970), Johnson et al. (1966), Lindholm et al. (1963), Murray et al. (1964), and Blagg et al. (1970), in terms of the percentage of patients who were able to return to full-time employment. The results also suggest agreement with Short and Alexander's (1969) conclusion regarding the high correlation between premorbid life successes and successful adaptation to hemodialysis. Information received by medical, nursing, and support staff members is in direct contradiction to the conclusion drawn by Reichsman and Levy (1972). This group of patients used support facilities only in periods of infrequent crisis.

It is interesting to note the apparent high activity level of the patients in considering the average work week of nearly 32 hours in addition to the 18 or more hours spent per week on dialysis. If one considers time spent on the machine as being equivalent to employment time or "work" as suggested by Sullivan (1973), the patients then show
an average of approximately 50 hours per week spent at "work." This method of evaluating the vocational rehabilitation of home dialysis patients may be useful as a "yardstick" for future rehabilitation plans. That is, the patient and staff may wish to set as a rehabilitation goal that the patient return to work to the extent that the number of hours spent on hemodialysis plus the number of hours employed equal or approximate the number of hours employed prior to the onset of treatment. Therefore, the patient who had been accustomed to working 40 hours per week pre-morbidly were to dialyze 18 hours a week, he or she might set a goal to return to work for 22 hours per week. This would, of course, be dependent upon cooperation of the employer, physical condition, type of employment, as well as several other variables.

The results of this study indicate that the screening of potential home dialysis patients has resulted in a group of individuals who are more capable of coping with problems related to vocational adjustment and adaptation. Similarly, the high importance placed by the nephrologist and hemodialysis staff on self-care, home care and returning to work and recreational activities has had a major impact on the patients' overall adjustment. Because of this influence, as well as the evaluation procedure involved prior to treatment, this group of patients may be atypical in regard to vocational adjustment. The same results would probably not be found with in-center dialysis patients who are more restricted by hospital or clinic schedules than home dialysis patients who may create and maintain more independent treatment schedules.
It is suggested that medical personnel may encourage better vocational adjustment in patients by adopting a "rehabilitation oriented" framework, employing the use of professional counselors as supportive personnel. The use of community agency resources, particularly those of Vocational Rehabilitation Services, may further augment potential adjustment and rehabilitation of hemodialysis patients by providing job training and placement facilities, when appropriate, as well as financial support for educational training programs.

Vocational Rehabilitation of Dialysis and Transplant Patients: Guidelines for Counseling Psychologists

The role of counseling psychologists as rehabilitation counselors may be seen as being integral parts of the overall counseling function. Rather than separate vocational rehabilitation from the other aspects of patient rehabilitation, it is suggested that it be only one aspect of the total rehabilitation plan. It may be helpful to conceptualize the total rehabilitation plan as ranging from basic functions such as return to self-care to more involved functions as return to work and recreational activities. The following hierarchy depicts several possible steps related to overall rehabilitation:

Level I: To what extent and how well can patients do all of their self-care activities such as dressing, personal hygiene, toilet activities, locomotion, communications, and other activities usually accomplished by age five?

Level II: To what extent and how well do they participate in family care activities such as jobs around the house, providing support...
to other members of the family, and acting in leadership capacities?

Level III: Have the patients returned to their jobs (including housewife)? What modifications have been necessary?

Level IV: To what extent and how well have patients returned to recreational and extracurricular activities? What modifications have been necessary?

What symptoms have interfered with or prevented any of the above activities? Are there symptoms present which don't interfere with these activities?

The above hierarchy must be adapted for individual patients depending upon their skills, interests, and typical kinds of activities. The scale is not a true hierarchy in that it is possible that a particular patient may be able to reach Level IV without being able to reach Level III. This could be the case when the patient's recreational activities require less effort than does his or her work activities. For example, a construction worker might be able to return to hobbies of chess and bridge quite easily but might be unable to return to work. The hierarchy may be useful, however, in serving as a rough guide for judging the progress of patients over a prolonged period of time. It need not become a "worthiness scale" with the patients highest on the scale being considered the "better patients," but may instead be viewed as an index of change for a particular patient.

Patients may be encouraged to set goals for rehabilitation that are based on input given by the nephrologists and other members of the nephrology team. Such factors as age, overall medical condition,
emotional reactions to dialysis, financial status, and motivation may be discussed while making plans and setting goals for rehabilitation. Once patients set goals, it becomes a major function of the counseling psychologists to help them to reach those goals. If the goals are found to be unrealistic, the patients and counseling psychologists may work together in re-evaluating the goals and making the changes that are indicated. By so doing, the patients—with the assistance of the counseling psychologists—maintain as much control as possible over their own rehabilitation and personal lives as well as responsibilities for their plans. The counseling psychologists provide guidance to the patients based on their knowledge of kidney disease, their awareness of individual differences, and their background in rehabilitation work.

Many patients have been found to place great importance on vocational rehabilitation. This has been particularly evident among male patients. The return to work is often viewed by these patients as being a return to a life style that more closely approximates normalcy. The return to work may increase feelings of independency, and patients may view themselves as being more productive, useful, and self-confident. Several male patients have been found to equate employment with masculinity. The following case vignette illustrates this point:

Phil, a 47-year old male, was diagnosed as having polycystic kidney disease six years ago and trained (with his wife as a back-up) for home dialysis. While dialyzing at home he continued to work productively as a salesman until 1972 when he decided that he would like to be considered as a candidate for a cadaveric renal transplantation. He had many complications following his bilateral nephrectomy in late 1972 and was unable to return to his previous employment. During his wait for a cadaver kidney, Phil became increasingly hostile and demanding of his wife. He allowed her little freedom and spent nearly
all of his non-dialysis time with her in their home. This pattern, in turn, led to mixed symptoms of anxiety and depression for his spouse, who, under extreme stress, threatened separation and divorce. Individual and conjoint marital counseling were initiated and continued for approximately three months. During these sessions Phil voiced his feelings of "losing his masculinity" by not being able to work. (Actual sexual impotency was not experienced although sexual relations were infrequent and unsatisfying for both partners.) It was suggested that Phil might feel better about himself if he were to work part-time in a position that allowed him to be flexible in his hours worked. He expressed some interest in real estate sales and, by his own initiative, was able to find part-time employment. Although this employment was not beneficial financially, the marital stress was greatly reduced and both patient and spouse reported renewed interest and activity in sexual relations.

In Phil's case the return to work represented a return to a lifestyle that was closer to what he had experienced prior to dialysis. He gained self-confidence and feelings of self-worth despite his inability to earn what he had been accustomed to in terms of wages. He, in turn, became less demanding of his wife, and they began to enjoy the company of each other more than they had for several years.

It is helpful to begin plans for vocational rehabilitation as soon as possible so that employers may be aware of the particular patient's potentialities for future employment. Employers, in general, have been found to be sympathetic and willing to make changes in job responsibilities to allow dialysis patients to continue working if they so desire. The more advance notice that can be given, the more time employers have to make plans for such changes. Early plans for vocational rehabilitation are also helpful in working with patients who are employed in positions in which they will not be able to continue after starting on dialysis. Plans for additional education or re-training should be formulated and begun long before dialysis is begun. The case of Steve makes this point.
Steve, a 17-year old male, was first seen in the Renal Clinic associated with the Nephrology Service in 1972. He was diagnosed as having medullary cystic disease of the kidneys with chronic uremia, metabolic acidosis, sodium wasting, and hyperparathyroid bone disease. He was placed on conservative management including medication and dietary restrictions. It was felt by his physician that dialysis would eventually be necessary.

Steve's educational background included having dropped out of school after having completed the ninth grade. He voiced little interest in academic affairs but had enjoyed classes in such areas as woodworking and mechanics. A psychological-vocational evaluation revealed that Steve was functioning in the bright-normal range of intelligence with a full-scale IQ score of 111 on the Wechsler Adult Intelligence Scale. His vocational interests as measured by the Minnesota Vocational Interest Inventory compared favorably with interests of men who were employed as painters, carpenters, bakers, and food service managers. Personality test scores and interview impressions indicated that Steve was significantly depressed with some suicidal ideation but with no physiological signs of depression. The results also suggested that he felt somewhat alienated and out of touch with his environment, unsure of his identity, and lacking in the capacity for simple and direct relationships with others. He would often withdraw into his private autistic fantasies in order to escape the pressures of his disease and his poor family life.

It was determined that the indications for the use of insight oriented psychotherapy or tricyclic antidepressants were not present. Instead, Steve was encouraged to see the counseling psychologist regularly to discuss with him the realities of his medical status. The opportunity was also given for continued ventilation for hostility and anger via the supportive counseling arrangement.

A referral was also made to a local office of the Vocational Rehabilitation Services with recommendations being given by the Nephrology Service's counseling psychologist. Steve shared in the process of making goals for vocational rehabilitation and was subsequently enrolled in a training program in the area of woodworking. He was able to earn high school credit while also working part-time and gaining on-the-job experience and a small income.

Although Steve has not yet started on dialysis, the groundwork for his vocational rehabilitation as a dialysis patient has already been laid. He has learned specific skills that will allow him to become gainfully employed when dialysis becomes a necessity. While training in an area that would require less
physical work may have strengthened Steve's vocational rehabilitation potential, such training would not have been seen as being important, relevant or enjoyable by Steve. Entry into such training may have resulted in a recurrence of his loss of interest in education and a subsequent behavioral pattern which may have included dropping out of school once again.

The case of Steve illustrates not only the value of beginning plans for vocational rehabilitation as early as possible, but also touches upon the contribution that community agency resources such as the Vocational Rehabilitation Services may make in the rehabilitation of kidney disease patients. The following case study of David further illustrates the services available through this particular agency and also depicts some of the problems and disappointments that were a byproduct of the Vocational Rehabilitation Services' attempts to help.

David, a 27-year old male, was started on hemodialysis following a motorcycle accident which had damaged his only remaining kidney, the other having been removed four years earlier due to kidney stones. David's background included having dropped out of school after having completed the eighth grade. His vocational background included a history of sporadic employment marred by being released from several jobs because of personality clashes with supervisors or employers. His background also included several instances of impulsive acting-out behavior which had resulted in minor run-ins with police officials, a brief marriage which ended in divorce after four years, and a second marriage which was unstable and frequently bordering on separation. Personality testing revealed that David was functioning in the dull-normal range of intelligence with an earned IQ score of 82. The test results also suggested that David would react to stress with cyclical phases consisting of excessive insensitivity and excessive concern for his actions. It was hypothesized at the time that he might act-out with little control aforesight, violating social and legal restrictions with little apparent concern for the welfare of others. Following such acts it was expected that David would react with guilt and remorse and easily develop symptoms of depression. These hypotheses were proven to be reasonably accurate in that David had difficulty controlling his behavior and was seen as a "problem patient" by physicians and floor nurses. He had several physical battles with his wife while an inpatient and signed himself out of the hospital against medical advice on
two occasions. He also complained frequently of severe pain and tended to over-use medications to control such pain. Following such incidences, David would be very apologetic and would worry greatly about having been a problem for the medical staff. He feared alienation from the physicians and sought much support from the Nephrology Service counseling psychologist and social worker who, in total, spent over 200 hours with David's case over a time period of approximately one year.

Following approximately six months on hemodialysis, David received a transplant with his mother being the living-related donor. After a lengthy hospitalization he was released. Although he had several major complications requiring prolonged hospitalization, David was able to begin to work part-time as a self-employed repairman, doing small painting jobs, roofing, and maintenance jobs. He expressed a desire to expand such a business, but realized that he lacked the financial support for supplies and equipment. After talking at length with the counseling psychologist (whom he had seen on many occasions and had developed a sound therapeutic relationship), David was referred to the Vocational Rehabilitation Services.

After several weeks of planning, preparation, conferences, and work evaluation trials, it was decided that a recommendation be made to allow David to become self-employed in his own cleaning and repair business, and that Vocational Rehabilitation would provide funds so that he could purchase equipment, supplies, transportation, and advertising. The total cost was expected to be several thousand dollars. The counseling psychologist served not only as a rehabilitation counselor in making such plans, but also as a liaison person with the Vocational Rehabilitation Services, a business consultant, a psychotherapist providing supportive therapy, and a coordinator of the total rehabilitation plan. The final decision to support David in such a business venture was made in March.

Eleven months later the go-ahead was finally given to expend a large amount of money for David's business venture. David learned this only days before he died of complications in February of the year following the time the initial rehabilitation plans were made.

The case of David illustrates the point that the services of the Vocational Rehabilitation can provide much needed financial support for dialysis and transplantation patients, but such support requires a large
investment in time and energy in order to carefully make rehabilitation plans and to have those plans checked, analyzed, and finally approved by the many rehabilitation counselors, supervisors, and directors involved. While it is unfortunate that David was never able to benefit from the services of the Vocational Rehabilitation Services, it is consoling to know that it is possible to "cut through the red tape" and provide much needed rehabilitation services to patients with chronic renal failure. David's case cleared much of that red tape so that patients in the future have been able to receive rehabilitation assistance in much less time and with greater efficiency.

Counseling psychologists, because of the nature of their training and education in the areas of vocational development, career counseling, and vocational guidance, can offer services to Nephrology Services which may not be available through other mental health workers such as psychiatrists or social workers. The keys to effective rehabilitation counseling for patients with chronic renal failure, in addition to a sound academic background in related areas, are seen as being:

1. To identify patients with rehabilitation needs as soon as possible
2. To work with patients to establish rehabilitation goals.
   Counseling psychologists may provide necessary support and guidance, but patients should be encouraged to make decisions regarding their rehabilitation based on medical recommendations and personal motivation.
3. To encourage patients to explore possible vocational alternatives, but not to push them to return to work. Take care not to attempt to turn patients into reflections of the nephrology staff's own expectations.

4. Use community agency resources when indicated. Be aware of the types of services provided locally and serve as a liaison between those service agencies and the Nephrology Service.

5. Consider vocational rehabilitation as only one step on the ladder of total rehabilitation plans of patients. Use the rehabilitation plans not as part of "worthiness scales," but as indices of change for those particular patients.

Included in this chapter have been a review of the literature related to the rehabilitation of dialysis patients, the presentation of a study showing that positive vocational rehabilitation can be achieved by home dialysis patients, and guidelines for planning rehabilitation programs for dialysis patients. At the present time it is difficult to assess rehabilitation potential among dialysis patients although it is suggested that with more research in this area it may be possible to predict rehabilitation by utilizing evaluations of vocational histories and employment patterns, interest and personality test results, and ways of responding to previous stresses. It is suggested that the key to successful vocational rehabilitation of patients is to begin to work with potential dialysis patients before the necessity for dialysis becomes imminent. Such early work may include preventive counseling as well as preliminary rehabilitation planning.
The following chapter describes a preventive mental health pro-
gram for dialysis patients which utilized community education resources
for personnel needs.
CHAPTER VII
A PREVENTIVE MENTAL HEALTH PROGRAM
FOR DIALYSIS PATIENTS

Introduction

The many emotional problems of dialysis patients have been described in numerous articles and elsewhere in this paper. While there seems to be little consensus about specific problems common to dialysis patients, it is suggested that most mental health professionals experienced in working with renal patients would agree that these patients are faced with life stresses related to loss, frustration, and conflict which greatly exceed the stresses of the normal population both in terms of duration and intensity.

While several authors have reported on various types of psychotherapy to assist dialysis patients in periods of crisis, a review of the literature reveals that there is a noticeable absence of material related to preventive mental health or preventive psychiatric approaches in dialysis units. Caplan (1964) defined "preventive psychiatry" as:

The body of professional knowledge, both theoretical and practical, which may be utilized to plan and carry out programs for reducing (1) the incidence of mental disorders of all types in a community ("primary prevention"), (2) the duration of the significant number of those disorders which do occur ("secondary prevention"), and (3) the impairment which may result from those disorders ("tertiary prevention"). (pp. 16-17)

An occupational therapy program in a chronic hemodialysis center which seemingly contained elements of a preventive mental health
program, but which was aimed more at patient rehabilitation was described by Supler (1972). She defined occupational therapy as being:

> The use of purposeful activity as treatment in the rehabilitation of persons with physical or emotional disability. By individual or group participation in supervised activity, the patient is helped to solve some of his problems and to increase his usefulness. (p. II-2)

Stated objectives for the program were as follows:

1. To provide an outlet for emotional stress or tension.
2. To assist the person in recognizing and adjusting to a physical limitation.
3. To assist in increasing tolerance for coping with stress.
4. To provide activities used to increase self-esteem and as a diversion from somatic preoccupation.
5. Provide activities which increase muscle strength and/or coordination where functional treatment is indicated.
6. To focus the person's interests on activities that enforce concepts of wellness vs. concepts of illness, discouraging invalidism and malingering. (pp. II-3- II-5)

Supler (1972) listed the following "resultant effects" of the occupational therapy program for chronic dialysis patients:

1. Occupational therapy functions encourage activity rather than passivity...Occupational therapy tends to encourage independence, freedom of choice and expression and self-direction thereby increasing self-esteem.
2. Working while on dialysis helps to prevent morbid preoccupation. Many persons find that their anxiety is so great while they are on the machine that they are unable to sleep. Occupational therapy helps to make this time pass more quickly.
3. Occupational therapy, particularly group functions, helps to encourage socialization and constructive competitiveness.
4. Long-term home activities help to alleviate preoccupation with diet restrictions, and encourage family members to become involved in the activity with the person. This helps discourage concepts of illness by providing a therapeutic atmosphere of work which is an ego-integrating function. (p. II-8)

One of the major problems experienced by dialysis patients is that of reduced levels of activity and subsequent feelings of

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inadequacy oftentimes associated with depressive tendencies. Much of the problem of inactivity is seen in patients' behavior while on the artificial kidney machine. Most patients have little to do while on the machine except be quite passive. Consequently, many patients sleep while others read, converse with other patients, or engage in conversations with the staff members. It was because of this passivity that the staff of the Nephrology Service at Saint Mary's Hospital felt that it would be beneficial for the patients to have some type of training resembling occupational therapy to make time on the kidney machine more useful, productive, and enjoyable. As occupational therapy services were not available, another type of service was sought.

The organization offering assistance was the recently created Physically and Otherwise Health Impaired (POHI) Program of the Grand Rapids Community Education Department of the Grand Rapids, Michigan, Public Schools. Through the services of POHI classes were scheduled so that dialysis patients could enroll in either academic or leisure time classes and receive individual instruction while being dialyzed. The courses selected by the patients covered the gamut from arts and crafts to more academic types of endeavors. Classes selected by patients included painting, sketching, macrame, knitting, holiday decorations, chess, embroidery, sculpturing, crocheting, bookkeeping, psychology, creative writing, the metric system, photography, communication arts, English as a second language, and others. Patients were allowed to select as many as three classes depending upon their dialysis schedules, motivation, and interests. Patients were given the option of earning credits—either high school completion or junior college—for most courses.
The classes were taught by teachers hired by POHI. In most cases teaching was done on an individual basis with one teacher meeting with one patient for a period of one hour per week per course.

After the first few weeks of the program changes in patients' behavior were readily noticeable. In general, patients seemed to be sleeping less and the dialysis units were busy with even more than the usual activity. Patients who had previously been seen as being depressed or withdrawn had become involved in the classes and were much more active. Patients seemed significantly less preoccupied with their illnesses and, anxiety levels, in general, seemed to be reduced. The enthusiasm of some of the teachers spread to all of the teachers and to the patients as well. The dialysis nurses and technicians shared the enthusiasm and assisted in several of the activities.

In an effort to evaluate the effects of the program the following study was done:

Method

Subjects

The subjects for the study were the 16 hemodialysis and six peritoneal dialysis patients who had completed classes in the program. The 16 hemodialysis patients included 11 women and five men. Their ages ranged from 13 to 67 years with their mean age being 41.0. The patients had been on hemodialysis for periods of time ranging from two to 63 months; the mean number of months on hemodialysis was 15.6. The peritoneal dialysis population included three men and three women. The
age range was 43 to 67 years with the mean age being 57.7. The length of time on dialysis ranged from two to 15 months with the mean being 5.8 months.

Staff participating in the study as evaluators included the counseling psychologist and all nurses, technicians, coordinators, and nurses aides who had been employed since the onset of the POHI program. The ten hemodialysis evaluators included the counseling psychologist, the head nurse, five registered nurses, a licensed practical nurse, and two technicians. The seven peritoneal dialysis patient evaluators consisted of the counseling psychologist, the peritoneal dialysis coordinator, three licensed practical nurses, and two nurses aides.

Procedure

Each patient was asked to complete a questionnaire immediately upon the conclusion of the first ten-week term. (See Appendix F, p. 253) The patients were given the following written directions:

Below you will find several questions related to the Community Education Program (POHI) which you have just completed. We would appreciate your responses to the following questions based on your role as a student.

Please circle the response which best answers the questions from your own particular point of view. There are no "right" or "wrong" answers; we want your opinions. Your honest responses will help us to evaluate various aspects of the program.

Read each statement and decide which of the items best describes how you feel now as compared to how you felt just prior to the beginning of the POHI program.
Example: X. My appetite is

1. much better
2. somewhat better
3. about the same
4. somewhat worse
5. much worse

By encircling the 2, the example reflects that your appetite is "somewhat better" now than it was just before the beginning of the POHI program.

Remember: You are comparing how you feel now with how you felt just before the beginning of the classes. Please answer every question.

You are assured that the information given will be kept confidential, and individual responses will not be disclosed.

Each of the evaluators was asked to complete a similar questionnaire at the completion of the term. (See Appendix G, p. 257). Written directions for the evaluators were similar to those for the patients with the only exception being that the evaluators were asked to respond to each question based on their respective roles of nurses, technicians, or supervisors.

Instrument

The evaluation instrument was an experimental questionnaire devised by this writer which consisted of 15 multiple choice statements similar to the one given above in the directions. Responses could range from one to five with one referring to much change for the better, two referring to some change for the better, three referring to no change, four referring to some change for the worse, and five referring to much change for the worse.
Questionnaire items dealt with various aspects of possible changes that patients or the staff felt had occurred since the onset of the program. In brief, the variables were as follows:

1. Activity level on dialysis
2. Activity level off dialysis
3. Relationships with other patients
4. Relationships with dialysis staff members
5. Relationships with family members
6. Skills learned
7. Self-concept
8. Independence
9. Acceptance of illness
10. How fast the time passed on dialysis
11. How productive was the time on dialysis
12. Anxiety and tension
13. Frequency of sleeping on dialysis
14. Depression
15. Physical status

Results

Table 7.1 depicts the peritoneal dialysis patients’ mean responses for the 15 variables. The means ranged from 1.33 for Variables 1 (activity level on dialysis) and 12 (anxiety and tension) to 2.17 for Variable 8 (independence). The mean for all variables was 1.69, a score which suggests that the patients as a group felt that considerable positive changes had occurred since the beginning of the preventive mental health program until the completion of the program.

The mean scores for peritoneal dialysis staff evaluations are shown in Table 7.2. The staff members' evaluations included mean scores which ranged from a low of 1.40 on Variables 4 (relationships with dialysis staff members), 6 (skills learned), and 10 (how fast the time passed on dialysis) to a high of 2.76 on Variable 5 (relationships with family members). The mean for all variables was 2.12, a
TABLE 7.1—Peritoneal dialysis patients' self evaluation scores on the preventive mental health program questionnaire

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Activity level on dialysis</td>
<td>1.33</td>
<td>.516</td>
</tr>
<tr>
<td>2. Activity level off dialysis</td>
<td>1.83</td>
<td>.983</td>
</tr>
<tr>
<td>3. Relationships with other patients</td>
<td>1.83</td>
<td>.752</td>
</tr>
<tr>
<td>4. Relationships with dialysis staff members</td>
<td>1.67</td>
<td>.408</td>
</tr>
<tr>
<td>5. Relationships with family members</td>
<td>1.83</td>
<td>.983</td>
</tr>
<tr>
<td>6. Skills learned</td>
<td>1.83</td>
<td>.752</td>
</tr>
<tr>
<td>7. Self concept</td>
<td>1.50</td>
<td>.836</td>
</tr>
<tr>
<td>8. Independence</td>
<td>2.17</td>
<td>.983</td>
</tr>
<tr>
<td>9. Acceptance of illness</td>
<td>1.83</td>
<td>.752</td>
</tr>
<tr>
<td>10. How fast the time passed on dialysis</td>
<td>1.50</td>
<td>.836</td>
</tr>
<tr>
<td>11. Productivity of time on dialysis</td>
<td>1.83</td>
<td>.752</td>
</tr>
<tr>
<td>12. Anxiety and tension</td>
<td>1.33</td>
<td>.516</td>
</tr>
<tr>
<td>13. Frequency of sleeping on dialysis</td>
<td>1.83</td>
<td>1.329</td>
</tr>
<tr>
<td>14. Depression</td>
<td>1.67</td>
<td>.816</td>
</tr>
<tr>
<td>15. Physical status</td>
<td>1.50</td>
<td>.547</td>
</tr>
</tbody>
</table>
TABLE 7.2—Peritoneal dialysis staff evaluation scores on the preventive mental health program questionnaire

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Activity level on dialysis</td>
<td>1.92</td>
<td>.215</td>
</tr>
<tr>
<td>2. Activity level off dialysis</td>
<td>2.50</td>
<td>.147</td>
</tr>
<tr>
<td>3. Relationships with other patients</td>
<td>2.00</td>
<td>.204</td>
</tr>
<tr>
<td>4. Relationships with dialysis staff members</td>
<td>1.90</td>
<td>.358</td>
</tr>
<tr>
<td>5. Relationships with family members</td>
<td>2.76</td>
<td>.148</td>
</tr>
<tr>
<td>6. Skills learned</td>
<td>1.90</td>
<td>.307</td>
</tr>
<tr>
<td>7. Self concept</td>
<td>2.09</td>
<td>.140</td>
</tr>
<tr>
<td>8. Independence</td>
<td>2.38</td>
<td>.150</td>
</tr>
<tr>
<td>9. Acceptance of illness</td>
<td>2.17</td>
<td>.173</td>
</tr>
<tr>
<td>10. How fast the time passed on dialysis</td>
<td>1.90</td>
<td>.233</td>
</tr>
<tr>
<td>11. Productivity of time on dialysis</td>
<td>1.93</td>
<td>.235</td>
</tr>
<tr>
<td>12. Anxiety and tension</td>
<td>2.15</td>
<td>.174</td>
</tr>
<tr>
<td>13. Frequency of sleeping on dialysis</td>
<td>2.17</td>
<td>.194</td>
</tr>
<tr>
<td>14. Depression</td>
<td>2.02</td>
<td>.286</td>
</tr>
<tr>
<td>15. Physical status</td>
<td>2.07</td>
<td>.328</td>
</tr>
</tbody>
</table>

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score which suggests that while peritoneal dialysis staff members felt that considerable positive changes in patients had occurred since the beginning of the program until its completion, the perceived changes were less than those perceived by the peritoneal dialysis patients. The Pearson Product Moment Correlation between peritoneal dialysis patients' self-evaluations and staff evaluations was .42.

The mean scores for hemodialysis patients' self-evaluations are presented in Table 7.3. The means ranged from 1.63 on Variable 6 (skills learned) to 2.56 on Variable 5 (relationships with family members). The mean for all variables was 2.16, a figure which is considerably higher than that of the peritoneal dialysis patients.

Table 7.4 shows the mean scores for the hemodialysis staff members' evaluations. The staff evaluations ranged from a low mean score of 1.70 on Variable 11 (productivity of time on dialysis) to a high of 2.73 on Variable 5 (relationships with family members). The overall mean score for the staff evaluators was 2.14. The Pearson Product Moment Correlation between the hemodialysis patients' self-evaluations and the hemodialysis staffs' evaluations was .59. The correlation between hemodialysis and peritoneal dialysis self-evaluations was -.15.

The rank orders of the patient and staff evaluations are presented in Table 7.5.

Discussion

After the experimental questionnaire was devised and examined by staff members, it was believed that variables with means of less than 2.50 would indicate some positive changes as viewed by both the
<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Activity level on dialysis</td>
<td>2.31</td>
<td>.793</td>
</tr>
<tr>
<td>2. Activity level off dialysis</td>
<td>2.38</td>
<td>.885</td>
</tr>
<tr>
<td>3. Relationships with other patients</td>
<td>2.25</td>
<td>.930</td>
</tr>
<tr>
<td>4. Relationships with dialysis staff members</td>
<td>2.00</td>
<td>.966</td>
</tr>
<tr>
<td>5. Relationships with family members</td>
<td>2.63</td>
<td>1.147</td>
</tr>
<tr>
<td>6. Skills learned</td>
<td>1.63</td>
<td>.718</td>
</tr>
<tr>
<td>7. Self concept</td>
<td>2.19</td>
<td>.910</td>
</tr>
<tr>
<td>8. Independence</td>
<td>2.25</td>
<td>.856</td>
</tr>
<tr>
<td>9. Acceptance of illness</td>
<td>2.25</td>
<td>.930</td>
</tr>
<tr>
<td>10. How fast the time passed on dialysis</td>
<td>2.06</td>
<td>.928</td>
</tr>
<tr>
<td>11. Productivity of time on dialysis</td>
<td>1.81</td>
<td>.655</td>
</tr>
<tr>
<td>12. Anxiety and tension</td>
<td>2.25</td>
<td>1.064</td>
</tr>
<tr>
<td>13. Frequency of sleeping on dialysis</td>
<td>1.94</td>
<td>.997</td>
</tr>
<tr>
<td>14. Depression</td>
<td>1.94</td>
<td>.853</td>
</tr>
<tr>
<td>15. Physical status</td>
<td>2.56</td>
<td>.892</td>
</tr>
<tr>
<td>Variable</td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>1. Activity level on dialysis</td>
<td>1.73</td>
<td>.471</td>
</tr>
<tr>
<td>2. Activity level off dialysis</td>
<td>2.31</td>
<td>.386</td>
</tr>
<tr>
<td>3. Relationships with other patients</td>
<td>2.37</td>
<td>.340</td>
</tr>
<tr>
<td>4. Relationships with dialysis staff members</td>
<td>2.33</td>
<td>.321</td>
</tr>
<tr>
<td>5. Relationships with family members</td>
<td>2.73</td>
<td>.256</td>
</tr>
<tr>
<td>6. Skills learned</td>
<td>1.94</td>
<td>.529</td>
</tr>
<tr>
<td>7. Self concept</td>
<td>2.09</td>
<td>.503</td>
</tr>
<tr>
<td>8. Independence</td>
<td>2.36</td>
<td>.387</td>
</tr>
<tr>
<td>9. Acceptance of illness</td>
<td>2.59</td>
<td>.328</td>
</tr>
<tr>
<td>10. How fast the time passed on dialysis</td>
<td>1.73</td>
<td>.407</td>
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<tr>
<td>11. Productivity of time on dialysis</td>
<td>1.70</td>
<td>.424</td>
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<tr>
<td>12. Anxiety and tension</td>
<td>2.03</td>
<td>.421</td>
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<tr>
<td>13. Frequency of sleeping on dialysis</td>
<td>1.79</td>
<td>.450</td>
</tr>
<tr>
<td>14. Depression</td>
<td>2.11</td>
<td>.455</td>
</tr>
<tr>
<td>15. Physical status</td>
<td>2.22</td>
<td>.436</td>
</tr>
</tbody>
</table>
TABLE 7.5—Rank orders of staffs' and patients' evaluations on the preventive mental health program questionnaire

<table>
<thead>
<tr>
<th>Hemodialysis Self Evaluations</th>
<th>Hemodialysis Staff Evaluations</th>
<th>Peritoneal Dialysis Self-evaluations</th>
<th>Peritoneal Dialysis Staff evaluations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank Variable</td>
<td>X</td>
<td>Rank Variable</td>
<td>X</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>1.63</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>1.81</td>
<td>2.5</td>
</tr>
<tr>
<td>3.5</td>
<td>13</td>
<td>1.94</td>
<td>2.5</td>
</tr>
<tr>
<td>3.5</td>
<td>14</td>
<td>1.94</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>2.00</td>
<td>5</td>
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<tr>
<td>6</td>
<td>10</td>
<td>2.06</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>2.19</td>
<td>7</td>
</tr>
<tr>
<td>9.5</td>
<td>3</td>
<td>2.25</td>
<td>8</td>
</tr>
<tr>
<td>9.5</td>
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<td>2.25</td>
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</tr>
<tr>
<td>9.5</td>
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<td>12</td>
<td>2.25</td>
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<td>12</td>
<td>1</td>
<td>2.31</td>
<td>12</td>
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<td>13</td>
<td>2</td>
<td>2.38</td>
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<td>15</td>
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<td>14</td>
</tr>
<tr>
<td>15</td>
<td>5</td>
<td>2.63</td>
<td>15</td>
</tr>
</tbody>
</table>
patients and staff. It was further believed that variables with mean scores of 2.25 or less would be even more significant in terms of change, and that those variables with means of less than 2.00 would indicate a great deal of positive change. The experimental scale was not evaluated for other than its face validity. The results indicate that with the exception of the peritoneal dialysis patients' self-evaluations, the means of the groups were relatively evenly distributed in those ranges. The hemodialysis patients' self-evaluations and the hemodialysis staff evaluations included mean scores on five variables which were at or below the 2.00 level, while the peritoneal dialysis staff evaluations had six variables at or below that level.

The results suggested there were areas of change viewed as being of importance to patients and staff alike. All groups of evaluators rated variable 6 (skills learned) positively with the means ranging from 1.63 to 1.94. This suggests that all those involved believed that the patients had learned skills which were beneficial to them. The variable related to productivity on dialysis (variable 11) had mean scores ranging from 1.70 to 1.93, suggesting that there was general agreement that patients had become more productive on dialysis since the beginning of the preventive mental health program. The variable related to activity level on dialysis (variable 1) was below the 2.00 level for all groups except the hemodialysis patients who rated it at 2.31. The higher score for hemodialysis patients may reflect their feelings that their types of activities had changed from such things as self-monitoring of dialysis and some self-care to different types of activities, but that the total activity level was not greatly changed.

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The results also point to areas of general agreement among patients and staff at the other end of the rank orders. All of the groups except for the peritoneal dialysis patients rated changes in family relationships (variable 5) the highest (that is, indicative of the least positive change) with mean scores ranging from 2.63 to 2.76. Peritoneal dialysis patients ranked this variable eleventh. The mean scores on the variable related to independence (variable 8) were also quite high for all but the hemodialysis patients' self-evaluations. Hemodialysis staff evaluations showed this variable being ranked twelfth, peritoneal dialysis patients as fifteenth, and peritoneal dialysis staff as thirteenth.

The mean scores of the peritoneal dialysis self-evaluations were below 2.00 on all but one of the variables. It is believed that in reality these patients did not change that much more than did the hemodialysis patients but that they felt that they had changed significantly. The reasons for these feelings may include several possibilities:

1. The population of peritoneal dialysis patients is smaller than that of the hemodialysis patients. One or two scores in the number one category on each variable could have significantly changed the average.

2. The peritoneal dialysis patients are older (a mean age of nearly 58 compared to 41 for hemodialysis patients) and have been away from the formal educational process for a longer period of time. They may have appreciated the academic intervention more than the other patients.

3. The patients on peritoneal dialysis are, as a group, from a lower socio-economic background and have had less formal education; they therefore appreciated the chance for increased education and learning experiences more.

4. Because the peritoneal dialysis patients were required to be on dialysis for longer periods of time at one stretch,
they therefore appreciated the break from the monotony of dialysis which the classes afforded.

5. Most of the peritoneal dialysis patients had been on dialysis for only a few months. Several of the patients may have been on the borderline of the "honeymoon" and "disenchantment and discouragement" stages of dialysis (Reichsman and Levy, 1972), a point when they were beginning to lose their feelings of confidence and hope and were beginning to feel helpless and sad. The POHI classes provided additional support during this transitional period.

The results of the evaluations revealed some areas in which patients' and staff members' evaluations differed greatly. Hemodialysis staff evaluators rated Variable 1 (patient activity levels on dialysis) as one of the most significant changes (\( \bar{x} = 1.73, \) rank of 2.5), while the hemodialysis patients themselves rated it as being indicative of less positive change (\( \bar{x} = 2.31, \) rank of 12). It is suggested that this difference is a reflection of the staff's feeling that patients should be more active on dialysis—a reflection of the staff's own value system projected onto the patients. The hemodialysis patients rated their changes in their relationships with dialysis staff members (Variable 4) as being quite important (\( \bar{x} = 2.00 \)), whereas the staff members apparently saw the changes as being less dramatic (\( \bar{x} = 2.33 \)). This difference may be the result of the patients seeing staff members in new roles as helpers with the classes and appreciated the subsequent interactions on that level. The staff may have seen these role changes less dramatically and may not have been aware of the impact that the changes had in the patients' perception. This apparently was not the case with the peritoneal dialysis staff members who saw the changes in the patients' relationships with staff as being the area of most positive change (\( \bar{x} = 1.90, \) rank = 2).
The peritoneal dialysis patients and staff differed a great deal in their evaluations of changes in the anxiety levels (Variable 12) of the patients. The patients' responses indicated that they felt that they were much less anxious and tense ($\bar{x} = 1.33$, rank = 1.5), while the staff saw less change in this area ($\bar{x} = 2.15$, rank = 10). No explanations for this difference are offered except that the staff perceptions of the patients' anxiety levels before and after the program were clouded by the patients' use of denial as a defense mechanism to cover their feelings of anxiety. Conversely, the hemodialysis staff evaluations placed more emphasis on this variable ($\bar{x} = 2.03$) than did the hemodialysis patients ($\bar{x} = 2.25$).

In conclusion, it appears, based on the results of the experiment questionnaires, that the preventive mental health program has been of benefit to both hemodialysis and peritoneal dialysis patients as reflected by their evaluations as well as those of the evaluators from the dialysis staffs. The results of the evaluations lead to the following conclusions:

1. Dialysis patients learned skills which both they and the staffs saw as being beneficial.
2. Patients and staffs felt that time on dialysis was spent more productively and that activity levels were generally higher.
3. All patients and the peritoneal dialysis staff felt that patient-staff relationships had improved.
4. Patients' time on dialysis seemed to pass more quickly.
5. Patients felt as if they were less depressed.
6. Patients felt that their self-concepts had improved.
7. Hemodialysis patients and staff felt that patients slept much less while on dialysis.

8. Peritoneal dialysis patients felt much less anxious and tense.

While activity levels on dialysis increased and relationships with individuals within the dialysis environment improved, there seems to have been little carry-over to off-dialysis activity levels and relationships with family members.

In general, based on the results of the experimental questionnaires, the preventive mental health program appears to have been an effective means of helping patients to adjust to the chronic stresses of dialysis.

The preceding description of the Preventive Mental Health Program for dialysis patients at Saint Mary's Hospital is an example of the type of creative intervention which counseling psychologists may make for nephrology services. The counseling psychologist, in this case, served as the creator of the program, the coordinator of the activities offered by the community education program, and the evaluator of the effects of the program. The counseling psychologist also provided training for the community education teachers so that they would be cognizant of the types of stresses which dialysis patients face, and consulted with the teachers when they experienced any types of relationship problems with the patients.

The final chapter of this dissertation reviews the major roles of counseling psychologists in nephrology services as have been presented in chapters four, five, six, and seven, and then discusses some of the additional services which psychologists may be able to offer to patients,
staff, and community. Included in this chapter will be suggestions for consultative services for nursing staffs and physicians, teaching functions, and research development. Suggestions for training programs for counseling psychologists desirous of working in general hospital settings and particularly in dialysis units will be outlined. Resistances and problems expected to be encountered in the development of roles for counseling psychologists in nephrology services will also be discussed. The chapter will conclude with suggestions for counseling psychologists to help them to deal with resistances and problems in adjusting to the hospital setting and in working with dialysis patients.
Summary

Since the time when the early pioneers in the fields of hemodialysis and kidney transplantation demonstrated that patients with chronic renal failure could be kept alive, thousands of individuals have had their lives sustained due to these methods. The quality of life for these patients has been marred by repetitive physical and emotional problems directly related to the necessity for them to live being dependent upon machines and other persons' organs. Scribner (1974) hypothesized as early as 1964 that emotional problems would represent the major cause of disability among hemodialysis patients. His statement seems to have been quite prophetic.

A review of the literature related to the emotional problems of dialysis and transplant patients reveals that there have been many discrepancies and differences of opinion regarding adjustment problems of dialysis patients. The earliest reports presented a rather dismal picture of patients who were forced to live lives interrupted by chronic dialysis. Shortly after these reports had been published, there was a shift in the literature which revealed that some professionals working with dialysis patients found them to be extraordinarily well-adjusted with a minimal number of problems. More recently the reports have again shifted to more of a middle ground in which dialysis
patients have been viewed as experiencing intense life stresses which are directly related to dependence upon artificial means of supporting life.

Given that dialysis patients experience intense stresses and repeated losses related to their lives on artificial kidney machines, it became apparent that these patients needed professional assistance from mental health workers to help them to cope with their problems in life. Despite the urgings of several authors experienced in the treatment of patients with chronic renal failure and the recommendations of the Kidney Advisory Committee (1973) that nephrology services provide comprehensive psychological, psychiatric, and rehabilitative support for their patients, there is still a definite lack of psychiatrists, psychologists, and, to a lesser extent, social workers, providing these types of services. Most of the psychiatrists and psychologists work only on part-time or consultative bases with dialysis units. Social workers, while working in dialysis units more frequently and more often on full-time bases, may be forced to devote much of their energies to assisting patients with financial problems. In addition, although some social workers may have skills which allow them to be of assistance to patients in a variety of ways, few have received the extensive training and supervision in counseling and psychotherapy which typifies that of psychiatrists and doctoral level psychologists.

The reasons why dialysis facilities do not employ psychiatrists and psychologists on a greater basis than now exists are primarily financial and/or that no willing, interested, or capable professionals in these areas are available. With the recent provision for Medicare
insurance coverage for dialysis patients, the financial restrictions may be partially removed. The problem will still remain, however, of finding interested and qualified psychiatrists and psychologists to fill these roles.

Abram (1974a) has reflected on how psychiatrists avoid physically ill patients and feel uncomfortable around physical sickness, believing that these patients have problems which are too "real" for them to understand and treat. The field of counseling psychology, on the other hand, has developed so effectively because of these psychologists' desires and goals to assist people with "real" problems—problems of living which interfere with normal functioning and the ability to cope with the stresses imposed by life and its losses, frustrations, and conflicts. Because of counseling psychologists' orientations and comprehensive and diverse training in the behavioral sciences and, because they have shown that they can be creative and become involved in new mental health related areas, they represent the profession which may be the best to serve the dialysis and transplant populations.

Counseling psychologists as psychotherapists in nephrology services

A primary role which counseling psychologists may assume within nephrology services is that of being counselors and psychotherapists for dialysis and transplant patients and their families. A variety of counseling and psychotherapeutic techniques can be utilized effectively. Crisis intervention techniques may be expected to be utilized frequently because of the many crises which these patients experience.
In addition to the major crises related to learning of the necessity of dialysis as well as the crises which occur when patients are faced with surgery, dialysis patients are faced with the same types of marital, familial, vocational, and developmental problems which create crises among the general population. These "normal crises" are magnified in intensity because of the recurrent dialysis problems. Counseling psychologists may provide valuable psychotherapeutic services to these patients during these periods of crisis because of the patients' increased responsiveness toward help. The interventions may prove to be unusually effective because of the patients' increased potential for growth.

It is suggested that counseling psychologists working full-time with dialysis and transplant patients are in much better positions to adequately meet the emotional needs of patients than are part-time psychological or psychiatric consultants. Full-time counseling psychologists have the advantage of being able to form relationships with patients and to offer supportive and preventive counseling services on an on-going basis. These supportive and preventive services may be provided using a variety of approaches to increase the likelihood that functional and adaptive behavioral patterns can be acquired by patients and that these patterns may positively influence patients' behaviors during stress-producing situations, therefore reducing the chances for major crises to erupt. Preventive mental health programs utilizing occupational therapy or other forms of activities may also be initiated and planned by psychologists to help to reduce the incidence, duration, and intensity of emotional problems among dialysis patients.
It has been shown that the multiple stresses of dialysis are often-times productive of marital discord between patients and their spouses. Dialysis represents a type of radical change among patients which frequently alters their needs and inhibits their abilities to satisfy the needs of their marriage partners. Counseling psychologists affiliated with dialysis programs can offer counseling services to these families to assist them in achieving increased awareness of feelings, needs, expectations, and responses as they are related to marriage and to dialysis, and help them to deal more effectively with the factors causing trouble in the marriages. Counseling psychologists for nephrology services may be able to help marriage partners resolve problems within marriages not only because of their knowledge of interpersonal relations, but also because of their understanding of the types of stresses experienced by other dialysis patients.

Counseling psychologists with nephrology services frequently come into contact with patients who are dying and families who are grieving for the loss of their relatives who had been dialysis and transplant patients. One of the primary roles of counseling psychologists working with dying patients is simply to be available and allow patients the opportunities to talk about their fears with the knowledge that someone is willing to share those concerns. Counseling psychologists, trained to be good empathic listeners, can offer support to these patients but should avoid probing techniques and allow the patients to choose the times to reveal their feelings. Counseling psychologists can also provide support and counseling during periods of grieving by the families of the deceased patients. They may facilitate normal grieving by
acknowledging the realities of the losses without attempting to diminish the significance of the feelings associated with those losses. Counseling psychologists should continue to provide services to family members after deaths of patients, carefully observing their behavior and watching for signs that grief reactions do not become prolonged and develop into depression.

Group counseling sessions, led by counseling psychologists, are effective means of assisting patients in their adaptation to lives on dialysis or with transplanted kidneys. Homogeneous groupings of patients being treated with similar types of medical care have the advantages that all group members are familiar with the medical procedures involved in those treatments and can therefore identify with the problems presented by other members and, hopefully, with the encouragement of the counseling psychologists, offer support and suggestions to their peers. Heterogeneous groupings of patients being treated with different types of therapy for renal failure have the advantages that patients can interact with each other and learn more about treatment modalities which they might consider for the future. Transplant patients, for example, may be able to impart valuable knowledge and insights into the pros and cons of renal transplantation and may be able to help some dialysis patients make decisions regarding potential transplantation.

Counseling psychologists as psychodiagnosticians in nephrology services

Another important function which may be provided by counseling psychologists in nephrology services is that of testing and evaluating
for personality factors, intelligence and achievement levels, and general rehabilitative potential. A review of the literature regarding the use of psychometric techniques in nephrology services has revealed that these techniques have been utilized for primarily three reasons: selection of patients for dialysis and transplantation, assistance to nephrology staffs in understanding the behavior of patients, and research directed at finding personality factors common to patients with chronic renal failure.

With increased dialysis facilities having become available over the past several years, the need to exclude patients from dialysis treatment has diminished. A selection decision must still be reached, however, in nephrology services where several options are available for the chronic treatment of patients with end-stage renal failure. Options may include hemodialysis and peritoneal dialysis, both in-center and at home, as well as renal transplantation. Results gained from thorough psychological evaluations done by counseling psychologists experienced in the interpretations of intelligence and personality tests can serve as valuable predictors of patients’ responses to various types of stresses which will be experienced in each of the treatment settings.

Psychological evaluations have proven to be very useful in helping psychologists, physicians, and other members of the dialysis teams in understanding the behavior of dialysis patients. Results of the evaluations should be shared with appropriate medical and nursing staff members so that they can be aware of patients’ potential strengths and weaknesses, types of stresses which may be the most anxiety producing,
types of health care professionals with whom patients may experience difficulty in interpersonal relations, and typical types of defense mechanisms which may be used. The results of the evaluations can be particularly useful to nurses who will be involved in training for home dialysis because of the intense relationships which often develop in such settings.

Although some of the characteristics of dialysis and transplant patients have been identified, counseling psychologists may utilize the results of personality tests and techniques to produce new and more comprehensive research studies involving larger groups of patients than have previously been investigated in order to better understand these patients. More and better research studies are needed which compare the effects of different types of treatment methods on the emotional changes experienced by patients being treated for chronic renal failure. Because of the backgrounds in data analysis which most doctoral level counseling psychologists receive in their training, these professionals can offer much to the increased research output and ultimate understanding of these patients.

Counseling psychologists as rehabilitation counselors in nephrology services

Because of the training received in the areas of vocational development, career counseling, vocational guidance, and rehabilitation counseling, counseling psychologists, more than any of the other mental health professionals, may be able to assist dialysis and transplant patients in their attempts to reintegrate themselves as productive
members of their families, peer groups, vocational colleagues, and society in general. In order for counseling psychologists to be effective as rehabilitation counselors it is important to identify patients with rehabilitation needs as soon as possible—preferably before dialysis becomes necessary. The counseling psychologists should work with patients to establish rehabilitation goals and should provide support and guidance, but patients should be encouraged to make their own decisions regarding rehabilitation based on information received from the counseling psychologists and other members of the nephrology team. Patients should be encouraged to explore rehabilitation alternatives, and counseling psychologists can serve as valuable liaisons between community agency resources offering rehabilitation assistance and the patients.

In addition to the major roles of providing psychotherapy, psychodiagnostic evaluations, rehabilitative counseling services, and preventive mental health programs, counseling psychologists in nephrology services can provide numerous other activities and services for dialysis and transplant patients, the staff members who treat them, and other colleagues in the areas of nephrology and medical counseling. These services may include providing consultations to other nephrology team members, teaching and training other health care professionals and students, and research regarding psychological factors related to kidney disease.
Counseling psychologists as psychological consultants for nephrology services

It was mentioned in brief previously that counseling psychologists could provide consultations and other services for nursing and technical staffs. One of the most effective ways to do so is to meet with nursing staffs on regular bases to discuss whatever concerns they might have regarding the behavior and adjustment of individual patients. This requires that counseling psychologists not only be aware of the status of each of the patients, but that they have some knowledge related to the nurses' responses to various types of patients and their methods of dealing with dialysis patients' conflicts and overall behavior. Counseling psychologists may be able to assist nurses in their understanding of patients' behavior and to help them to develop their competencies in the areas of interviewing, supportive counseling, and awareness of patient needs. The nurses, in turn, can provide valuable information about the patients to the counseling psychologists. The staff meetings may also be helpful to the nurses on a more personal basis. The nursing staff members may be better able to understand their own behavior by discussing such issues as the effect of nurses' denial on the defense mechanism of denial utilized by patients. Grief reactions by nurses may also be handled effectively in the group settings. Dialysis and its medical and psychological complications also seem to stir up fears and conflicts with which an individual nurse or technician may have trouble coping. Counseling psychologists may be able to work individually with such staff members to help them to work through their areas of conflict.
Counseling psychologists as teachers in nephrology services

Counseling psychologists may also provide teaching services for the nephrology teams and help to inform other medical personnel and students of the emotional reactions to dialysis and renal transplantation. Nursing groups and associations and schools of nursing are eager to have someone experienced and knowledgeable in this area speak to classes, in-service training sessions, and seminars. By so doing counseling psychologists can make the nurses and potential nurses aware of some of the problems experienced by renal patients. This can be helpful not only to the nurses working in the dialysis units or hoping to become dialysis nurses, but also to the nurses on the medical and surgical floors who come into frequent contact with these patients as they are hospitalized. This type of interaction also paves the way for future work between the counseling psychologists and the nurses who are caring for the patients while in the hospital.

Counseling psychologists may also provide teaching services for medical students, interns, residents, and fellows studying the treatment of kidney disease so that these future physicians will have a better understanding of the types of problems experienced by dialysis and transplant patients.

Local interest groups such as the Kidney Foundation may also make periodic requests for counseling psychologists to speak to their members. This type of activity also serves to increase awareness of the nature and problems of kidney disease.
Counseling psychologists as researchers in nephrology services

Another function which counseling psychologists can provide for nephrology services is that of generating research related to the problems of dialysis and transplant patients, their families, and the physicians, nurses, and technicians who treat them. The work done in this area to date has been with relatively small groups of patients and has only touched the surface in terms of problems with these populations. Many more research projects must be generated before we can hope to adequately understand and help patients who are faced with living lives on machines or with other individuals' organs inside them.

Recommendations for Training Programs for Counseling Psychologists in Nephrology Services

At the present time there are relatively few graduate programs available which offer training for students who hope to work in the general area of medical psychology and no training programs for individuals desirous of working specifically with nephrology services. The ideal training program would incorporate broad training in medicine with advanced training in psychology. At the present time such training does exist and the graduates of these programs are called psychiatrists. The obvious question which follows is, "Why not hire psychiatrists to work with kidney patients?" Although there are some psychiatrists working with nephrology services, many others simply choose not to do so. Abram (1974a) has commented on this situation.

It is noteworthy that there are relatively few psychiatrists who involve themselves with studying and treating the psychosocial concomitants and
sequelae of physical illness. Even in other current fields such as myocardial infarction and coronary care, there are less than ten psychiatrists actively doing clinical research; unfortunately, the same is true in the treatment of end-stage renal failure. In general, psychiatrists avoid the physically ill patient, traditionally believing that his problems are too "real" for him to understand or treat. The psychiatrist feels uncomfortable around physical sickness and in his relations with other physicians. It is safer and less anxiety producing to stay in one's office cloistered from the fatally ill, to treat the neurotic patient who is motivated and insightful, and not to be confronted with the often hostile, questioning attitudes of one's colleagues in other specialties. (pp. 70-71)

In addition, the shortage of psychiatrists in many geographical areas, as well as the high cost of hiring psychiatrists on full-time bases make it difficult for nephrology services to obtain this type of assistance.

Counseling psychologists offer feasible alternatives. Because of their training in vocational counseling, research, rehabilitation work, testing and assessment, and group procedures, in addition to their training in psychology and psychotherapeutic theories and techniques, counseling psychologists are able to bring to nephrology services valuable skills and expertise in areas in which even psychiatrists typically lack training. This is not to minimize the value of the medical backgrounds of psychiatrists. It would be helpful if all counseling psychologists working in medical settings would have some background in such areas as chemotherapy, anatomy and physiology, and concepts of physical illness. A useful undergraduate background for counseling psychologists in nephrology services would be nursing or a similar type of training program to orient them to the field of medicine.
Until such time as training programs in medical counseling become available, students wishing to work in hospital based nephrology services should plan their coursework carefully. Some basic courses such as biology, chemistry, and anatomy and physiology would provide some background helpful in understanding some of the basic principles related to kidney disease and dialysis. In addition, counseling psychologists should have sound backgrounds in counseling and psychology courses. Courses or sequences of courses in psychopathology or its equivalent are necessary for counseling psychologists to be able to understand and diagnose emotional problems. Coursework in testing and appraisal would equip counseling psychologists with additional backgrounds helpful in the diagnosis of emotional problems. Testing coursework should include training in the administration, scoring, and interpretation of intelligence tests, measures of vocational interests, non-projective tests, and projective techniques. The study of theories of personality and behavior change should also be a major part of the curriculum for counseling psychologists desirous of working in hospital settings. Because of the working relationships which might develop with psychiatrists and, in that many psychiatrists adhere to dynamically oriented theories of personality and psychotherapy, some background in psychodynamics would be helpful. Broad backgrounds in data analysis and research techniques would be advantageous to the counseling psychologists in their attempts to investigate some of the emotional concomitants to kidney disease and to add to the body of existing literature related to this subject.
Doctoral level degrees are recommended for counseling psychologists for nephrology services. Because of the variety of services which should be made available to the patients and staffs, counseling psychologists should have extensive training and experience in many areas. It is suggested that in order for counseling psychologists to be adequately competent and experienced in the areas of psychotherapy, personality assessment, rehabilitation counseling, research, staff development and training, preventive mental health, administration of counseling and mental health services, and consultative psychology, earned doctorates in psychology or closely related fields are necessary. In addition, counseling psychologists are apt to be more quickly and easily accepted by physicians in the hospital settings if they too have the titles of "doctor."

The emphasis in training for counseling psychologists seeking positions as psychologists for nephrology services should be in the areas of techniques of interviewing, counseling, and psychotherapy. It is necessary that counseling psychologists be able to provide a variety of counseling services to all those involved in the nephrology setting. As the problems encountered may be expected to be diverse and varying in degrees of psychopathology, these counseling psychologists should have the training and background which will allow them to work effectively in many areas. Training and experience, both in individual and group counseling, psychotherapy, and guidance should be extensive. A portion of the counseling psychologists' planned internship experiences should be in hospital settings so as to familiarize them with medical settings and to give them some insight into the ways and means of the medical model.
Resistances to the Development of Roles for Counseling Psychologists in Nephrology Services

While there are many different types of counseling and mental health related services which counseling psychologists can provide for nephrology services, so are there many resistances which these professionals may encounter as they attempt to develop their roles. Resistance to psychotherapy may be expected to be high among dialysis patients. These patients, already having been faced with the physical disabilities related to dialysis, deny emotional problems in their efforts to maintain personal integrity. Patients may convey messages to counseling psychologists and other staff members which in effect say, "I know I've got physical problems and they are difficult for me to accept, but don't tell me now that I'm crazy as well." Dialysis patients will not typically seek out the services of counseling psychologists despite possible urgings from members of the nursing staffs. It is the task of counseling psychologists to be available and go to the patients using their creativeness and flexibility to break through many of these resistances.

Before counseling psychologists begin to work with kidney patients they are apt to be confronted with many other types of resistances from the medical model and the hospital environment. Beginning with the first day of employment, counseling psychologists, probably unfamiliar with the hospital environment, may be lost in the terminology, philosophy, and practices of the hospital system. The terminology, consisting of a plethora of abbreviations seemingly understood only by other hospital employees, can make initial communications difficult.
While this seems to be a minor problem, it is just the type of problem which can delay counseling psychologists' attempts to integrate themselves into the hospital environment. This initial communication problem can be avoided or lessened if the counseling psychologists, as part of their training, have spent some time in hospitals. It is also helpful if it can be arranged for the psychologists to have comprehensive orientations to the hospital, visiting many departments and talking with employees in those departments in order to become familiar with the functions of those areas. Making medical rounds with nephrologists and being given the opportunities to ask questions may also help to orient counseling psychologists to the hospital setting. The counseling psychologists should not hesitate to ask questions and the medical and nursing staffs should be informed that these mental health professionals have not been trained in medicine and, consequently, can not be expected to be knowledgeable of hospital procedures. The more help which can be afforded the psychologists by the medical and nursing staffs, the faster the orientation period to the hospital.

In addition to counseling psychologists not being familiar with hospital settings, many hospitals, especially community hospitals, are unfamiliar with the training and skills which counseling psychologists bring to those settings. By virtue of their positions and titles, the psychologists may have great expectations placed upon them by the nephrology staffs. These staff members may expect that because psychologists have received training in the field of behavior change, patients' behaviors will be immediately and successfully modified and problem patients will somehow quickly change their noncompliant roles.
after only brief interactions with the new staff members. It is the job of the counseling psychologists to orient the staffs to their particular philosophies of personality theory and behavior change and to explain to them the procedures and techniques which they will employ in trying to help patients to adopt better means of coping with the stresses of dialysis. These types of explanations should be on-going ones and may be handled most effectively in group meetings with the staffs.

When mental health professionals are new to particular settings unfamiliar with working with other mental health professionals, questions invariably arise regarding what goes on behind the closed doors of those professionals. This is especially true in hospital settings where physicians typically go to the patients at the bedsides and do their medical problem-solving in full view of nurses, medical students, interns, and residents. The medical problems of dialysis patients are more obvious and typically do not require the degree of confidentiality which is expected of the emotional problems brought by the patients to the counseling psychologists. The nursing staffs may feel uncomfortable with this type of professional secrecy and may question the counseling psychologists about not only what they are doing for the patients, but also about what the patients are sharing with the psychologists. These problems can be resolved in a variety of ways utilizing any one of several approaches. Initially counseling psychologists should explain to the staffs the issues of confidentiality and the rights of patients to talk freely without fear of disclosure in the
presence of the counseling psychologists. In addition, the counseling psychologists should similarly explain this situation to patients and ask that the medical and nursing staffs, because of the team approaches to treatment being employed, be included in the confidentiality networks. The patients should be given the right to tell the psychologists when they do not want specific information shared with some or all of the dialysis teams and those rights must then be honored. In most cases, however, the counseling psychologists may be able to discuss patients' cases with appropriate staff members. Counseling psychologists may also choose to include individual staff members in counseling sessions as resource persons or supportive counselors. These types of arrangements, when appropriate, can serve to take away some of the mystique of the roles of the counseling psychologists with individual patients and may also be beneficial to both the patients and staff members in that individuals who work closely with the patients on dialysis will be fully aware of the problems and will have some thoughts on what might be helpful to the patients.

Another problem which counseling psychologists for nephrology services may face in the hospital setting is related to the lack of professionals with similar backgrounds and interests with which to interact. Because they will undoubtedly be the only psychologist working with the nephrology service, counseling psychologists may find that they are on their own in terms of working with patients and dialysis staffs. The opportunities for discussing cases with other mental health professionals will probably be limited unless the hospital employs
psychologists or psychiatrists to work with other specialty teams or hospitalized patients. For psychologists accustomed to working with teams of other mental health workers this situation may, at times, lead them to feel as if they are working within professional vacuums with no one to turn to in order to discuss impasses in therapy or difficult diagnostic problems. They may also find that because of this isolation it is more difficult to keep abreast of new approaches and developments within their profession. While professional journals and conferences may help to keep counseling psychologists informed, it is wise for them to be active in professional organizations and groups within their communities. As mentioned previously, psychologists may also wish to make contacts with psychiatrists who could provide psychiatric consultations when needed. These interactions may lead to situations where the counseling psychologists and psychiatrists could share information on cases and receive input from each other. Counseling psychologists for nephrology services might also find some professional camaraderie by seeking out clinical teaching positions with area colleges or universities. The possibilities might exist that they could find some other professionals with similar interests among the faculties of such institutions.

Counseling psychologists working with the patients and staffs of nephrology services may become aware of some of their own reactions to the stresses imposed upon them by working with these populations. The work with the patients requires breaking through resistances with people who seemingly do not want to change their behavior and are oftentimes insulted when it is suggested that some form of counseling or
psychotherapy might be helpful. This may trigger some identification in the counseling psychologists who may question their own abilities to handle the stresses of the dialysis patients and may, in turn, tend to withdraw from the patients. Because full-time counseling psychologists for nephrology services typically meet patients prior to the onset of dialysis and follow them as long as they remain on dialysis, friendships with particular patients are often formed. These friendships, while providing means of support for the patients, may interfere with the psychologists' abilities to intervene when behavioral problems do arise. In addition, psychologists feel the losses of these patients even more intensely when complications lead to death.

Another stress for psychologists in nephrology services is created when research and clinical services become contradictory and they are forced to make decisions in one direction or the other. These conflicts may be expected to occur when trying to conduct research studies utilizing treatment and control groups. Invariably there are crises among members of the control groups which necessitate the intervention of the psychologists, thus contaminating the research studies.

Conclusions

Each of these resistances may be overcome with time and effort on the parts of the counseling psychologists, the medical and nursing staffs, and the hospital administration. In so much as the roles of counseling psychologists in nephrology services are relatively new ones, as are the roles of psychologists in general hospitals in any area, it is to be expected that resistances and problems will continue.
to arise until psychologists or counselors carve out places for themselves in the medical community. As the medical community becomes more aware of and focuses more attention on the emotional concomitants of physical illness, and as the field of counseling psychology continues to develop and move into the medical arena, more and more non-medically trained mental health professionals will be called upon to meet the needs of patients faced with chronic illness or disabilities which radically change their lifestyles and previously effective ways of coping with frustrations, losses, and conflicts. At the present time the area of kidney disease and the treatment approaches available for uremia, because of the uniqueness of the problems associated with man's dependence upon a machine or another person's organ to sustain life, is receiving much of the psychological attention. As this area continues to progress it is anticipated that counseling psychologists will be able to offer increasing assistance to patients with other types of chronic illnesses until the point is reached where physicians and other hospital personnel recognize this professional need and begin to make broad range counseling and mental health services available through the hospitals to a wide range of patients, their families, and the other professionals who treat them.
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The prime task of the kidney is to maintain biochemical homeostasis by regulating the concentration of essential metabolites and body fluids and by regulating the volume and distribution of these fluids (Schreiner & Heptinstall, 1971). That is, the kidneys rid the body of its metabolic waste products and maintain the body's internal environment by regulating water and electrolyte balance. The kidneys also play a role in the regulation of blood pressure and in red cell production, as well as other events that are as yet poorly understood (Gutch & Stoner, 1971). Each kidney contains about one million nephrons. Each nephron consists of a cluster of capillaries called a glomerulus and an attached tube called a tubule (deWardener, 1967). From blood entering each glomerular tuft a fluid is separated which does not contain either the cellular elements or large protein molecules of the blood. As this fluid passes along the tubule, approximately all but 1% of the water and most of the small molecules are returned to the blood by a selective series of operations. The remainder is eliminated from the body as urine. Substances needed by the body such as glucose, amino acids, protein, and electrolytes are returned into the blood stream and harmful substances are removed from the urinary system. The 140 miles of filters and tubes in both kidneys perform their life-sustaining job of filtering and returning to the blood stream almost three times the entire body weight in
water and salt every 24 hours — about 200 quarts. Approximately two quarts are sent to the bladder to be flushed out of the body as urine, with the remaining 198 quarts being retained in the body (National Kidney Foundation, 1973). The kidneys, then, are responsible for maintaining the chemical balance in the body. When they are functioning efficiently they dispose of body waste, remove harmful substances from the blood stream, and retain in the blood stream the substances which the body needs.

"Kidney disease" is a general term referring to many known diseases of the kidney. These vary depending upon the nature and cause of the specific disease and the different parts of the kidney which are affected. Usually there is a progressive loss of functioning nephron units. Of the approximately two million nephrons in the two normal kidneys, over half may be lost before there is serious impairment of renal function (Merrill, 1965). As the number of functioning nephrons is reduced, each remaining unit must clear an increased solute load. Eventually there is a limit to the total amount of solute that can be excreted, at which point the concentration in body fluids must rise. The result is azotemia, the retention of nitrogenous products in the blood, and uremia (Gutch & Stoner, 1971). Uremia is symptomatic renal failure (Schreiner & Heptinstall, 1971). Uremia indicates a complex of symptoms resulting from disordered biochemical processes of the entire body when kidney function fails (Gutch & Stoner, 1971). Uremia is not a disease of the kidneys per se, but is a condition that results from the failure of the kidneys from any cause. Symptoms of uremia may include loss of appetite, fatigue,
apathy or lack of interest in external events, swelling of body tissue, decreased urine output, rise in blood pressure, itching, anemia, nausea and vomiting, twitching, and convulsions (Merrill, 1965; Gutch & Stoner, 1971; deWardener, 1967; Schreiner & Heptinstall, 1971; National Kidney Foundation, 1973). The symptoms may develop quickly as in acute renal shutdown or may be slow in developing. A given patient typically does not show all of the above symptoms, nor do these symptoms appear in any specific order.

Chronic renal failure is an end result of damage to the kidneys arising from a variety of causes. Some renal diseases are primarily glomerular while others start as a genetic defect of tubular function. Despite the multiplicity of causes, the end result is clinically very similar (Black, 1967).

Chronic glomerulonephritis is one of the most common causes of chronic renal failure. There is slow but progressive damage to the glomeruli and the inevitable result is uremia. The victim of glomerulonephritis may be unaware of the condition for many years and symptoms may not develop until the amount of functioning renal tissue is down to as much as 50% of normal (Gutch & Stoner, 1971). Although defensive measures such as diet regulation and the use of antibiotics and other drugs may slow down the progression of the disease, there is no known treatment which will eradicate the condition.

Chronic pyelonephritis is another major cause of chronic renal failure. In this disease the kidneys are small, coarsely and irregularly misshapened by scars and areas of abnormal increase in the number of normal cells in the normal arrangement in tissue of widely

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differing dimensions. The extent of the damage is often more pronounced on one side than on the other and is sometimes limited to only one kidney (deWardener, 1967). It is thought to be the result of direct invasion of the kidney's functioning element by bacteria. Like glomerulonephritis, it may be indolent and unrecognized until kidney failure supervenes (Gutch & Stoner, 1971).

Polycystic kidney disease is the result of structural defects in the formation of the nephron. It is a hereditary disease that may affect several members of the same family unit. As a result of this developmental defect, the kidney tissue is filled with cysts or fluid-filled cavities which compress functional renal tissue. When the cysts become large and numerous enough, kidney function is impaired, the ability of the kidneys to excrete urine lessens, and the symptoms of uremia develop (National Kidney Foundation, 1973). Symptoms associated with polycystic kidney disease may include pain over the kidneys, high blood pressure, or noted increasing size of the kidneys. This disease, although present at birth, may remain undetected until the victim is 40 or 50 years of age; if the defect is severe at birth, death for the infant is common.

The nephrotic syndrome, or nephrosis, has been classically defined as being characterized by protein in the urine, edema (swelling), excess lipids in the blood, and excess lipids in the urine. It is a clinical entity having multiple causes and characterized by increased glomerular membrane permeability (Schreiner, 1971). Though existing modes of steroid treatment do not necessarily achieve a cure, suppression of the disease for long periods of time can be obtained (National

Other causes of chronic uremia include diabetic glomerulosclerosis, a disease which may develop as a complication of diabetes mellitus. The victims of this disease are quite often those diabetics whose histories include the onset of diabetes in childhood or adolescence (Churg & Dolger, 1971). Arteriolar nephrosclerosis, caused by severe hypertension (high blood pressure), is a disease in which damage to kidney arterioles causes loss of function from inadequate blood supply. Other less common disorders such as hydronephrosis, renal tubular dysfunction, and atheroembolic renal disease may cause damage to the kidneys to the point of chronic uremia. The following table gives a more thorough listing of diseases of the kidneys:

A CLASSIFICATION OF DISEASES OF THE KIDNEYS
(National Kidney Foundation, 1973, p. 22)

This is one method of classifying the majority of diseases of the kidneys.

INFECTIONOUS DISEASES OF THE KIDNEYS
Pyelonephritis (including cases of "pyelitis")
Focal embolic pyelonephritis (due to septicemia)
Abscess within kidney; perinephric abscess
Tuberculosis of kidney

NON-INFECTIONOUS DISEASES OF THE KIDNEYS
Primary, within the kidney
*Glomerulonephritis, acute or chronic
*Nephrotic syndrome, nephrosis
*Interstitial nephritis
Tumors
Benign
Malignant
Congenital malformations
Polycystic disease
Congenital absence of one kidney

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Specific disorders of tubules
   Fanconi syndrome
   Gystinosis
   Renal tubular acidosis

Secondary to other disease of urinary tract

Renal Stones (nephrolithiasis)
Obstructive disorders (uropathies) leading to
   Hydronephrosis
   Enlargement of prostate
   Congenital or acquired stricture
   Renal artery or vein constriction

Secondary to other disease outside urinary tract

Diseases of blood vessels (vascular diseases)
   Malignant hypertension
   Arteriosclerosis-(Nephrosclerosis)
   Lupus erythematosus and collagen diseases

Metabolic diseases
   Diabetes mellitus
   Parathyroid disease
   Amyloidosis

Acute Renal Failure due to severe injury or shock
Toxic effects on kidneys
   Mercury, carbon tetrachloride and other poisons

Blood disorders
   Sickle cell anemia
   Purpura

*Brights disease is the term formerly used to
cover these and other apparently related intrinsic
disorders of the kidney.

Chronic Kidney Disease: How It Is Treated

At the present time there are three basic means of treating
patients with terminal renal failure. Although the use of diuretic
drugs (to increase the flow of urine and allow more of the fluid to
be filtered through the glomerulus and therefore to be excreted in
the urine) and antibiotic drugs (to control infection by the destruct-
tion of bacteria, thus limiting damage to the kidneys) may control symptoms for an indefinite period of time, those patients with terminal or end-stage renal failure face the options of hemodialysis, peritoneal dialysis, or kidney transplantation in order to maintain life. That is, when conservative approaches to the treatment of chronic kidney disease fail or are no longer efficient, one of these three types of therapy remains as the only alternative to death.

Hemodialysis

Dialysis has been defined by Bluemle (1971) as "the removal of undesirable substances from the body fluids by diffusive transfer across a semipermeable membrane" (p.343). The importance of dialysis in nephrology is that it provides the principle for correcting the chemical and clinical abnormalities of severe uremia (Bluemle, 1971). The word "dialysis" is of Greek origin and means a loosening from something else (Gutch & Stoner, 1971). The prefix "hemo" means blood. Hemodialysis, then, refers to a cleansing action of the blood where the waste materials in the blood are filtered through a semipermeable membrane and eliminated. The apparatus for the process of hemodialysis is the artificial kidney machine, a relatively complex mechanical construct used in removing the metabolic wastes (such as urea, creatinine, uric acid, ammonium, sulfate, and phosphate) and poisons from the body of patients whose kidneys are not functioning adequately. These machines take over the blood purifying function usually performed by the kidneys.
The patient is attached to the kidney machine by means of indwelling cannulas or an internal fistula. The cannulas consist of hollow tubes of Teflon and Silastic which are surgically implanted in the patient's arm or leg. One cannula is attached to an artery, the other to a vein. The two are then connected to permit the blood to flow from artery to vein. During hemodialysis, the appropriate blood tubing from the kidney machine is connected to the arterial and venous tubes, allowing the blood to flow into the cleansing apparatus of the artificial kidney and be returned to the blood stream. Cannula problems and complications are common with hemodialysis patients. Gutch and Stoner (1971) listed the following common problems:

1. They are awkward for the patient. A dressing or protective covering must be worn to protect the shunt from being caught or pulled upon.

2. There is a slight but ever present risk that the shunt may come apart, with heavy bleeding from the artery....

3. Clotting may occur, requiring manipulation and declotting, or revision of the cannulas.

4. Erosion of the subcutaneous tubing through the skin may occur with passage of time.

5. Infection at the skin-exit sight is an ever present danger. Infection is a chief cause of failure of a shunt. (p. 105)

In addition, a patient with a shunt is limited in some activities such as bathing or swimming. Exposure of the shunt to non-sterile water raises the risk of infection.

An alternative to the shunt is the internal arteriovenous (AV) fistula. A fistula is created by surgically joining an artery and a vein under the skin and usually just above the wrist. The flow of the
blood from the artery causes the veins of the forearm to become large and easily seen. Large needles can be inserted into these veins so that sufficient blood flow for dialysis can be obtained. Many patients find the AV fistula to be advantageous because it eliminates most of the infection and clotting problems of the shunt. In addition, there is more freedom of the arm and no special precautions need to be taken when working or bathing. There are disadvantages to the patient with an AV fistula. At least one and usually two needle insertions are necessary for each dialysis. The skin is often times deadened with a local anesthetic such as Xylocaine to reduce the pain. If a needle accidentally goes through the blood vessel, a large hematoma (an accumulation of blood that has escaped from a blood vessel into surrounding tissue) may result, causing pain and making the vessel difficult to use for several days. Nonetheless, the AV fistula appears to be becoming more popular as a means of access to dialysis patients' blood streams.

Once the patient is "hooked up" to the artificial kidney machine, the actual process of hemodialysis takes from four to six hours depending upon the type of machine and semipermeable membrane device used. Patients may lie in beds or sit in recliners while being dialyzed. They may choose to take some part in their dialysis by monitoring the machines, filling in record blanks, and taking temperatures, pulses, and blood pressures. As there is no pain associated with a normal dialysis "run", patients may find various ways to occupy their time. Some patients read, others converse with fellow patients and nursing staff, while other patients might sleep. Some
hospital hemodialysis units have initiated occupational therapy programs for the benefit of their patients (Supler, 1972).

While hemodialysis may seem to be a rather passive type of experience, the possible medical complications of the treatment and the kidney disease itself are many. The literature reveals a long list of well documented medical problems which plague patients maintained by hemodialysis. In addition to the cannula complications noted above, cardiovascular complications, anemia, hepatitis, neuropathy, renal osteodystrophy, itching, insomnia, and a variety of other medical problems have been found among hemodialysis patients. Of the above problems, hepatitis has been one of the more alarming complications. A number of reports have appeared in the literature regarding the frequency of hepatitis in chronic dialysis populations. A study by the National Communicable Disease Center (1969) reported that 10% of patients on chronic hemodialysis had hepatitis and that 23% of the patients with hepatitis died of the disease. Three percent of dialysis nurses and technicians were also reported to have contracted the disease as a direct result of contact with the exposed patients. A study by Hampers and Schupak (1967) reported a 20% incidence of hepatitis in their population, thus the concern for this problem continues to grow. Some hemodialysis units are now taking extreme precautions to prevent the incidence of this disease.

Cardiovascular problems are not uncommon among chronic hemodialysis patients. Individuals' cardiovascular responses to hemodialysis can vary depending on factors such as the type of dialyzer used, the severity of pre-existing hypertension, pre-existing cardiac
disease, medications, state of hydration, and nutritional status (Gutch & Stoner, 1971; Hampers & Schupak, 1967). Although hypertension and hypotension are relatively common among hemodialysis patients, both of these blood pressure abnormalities can usually be controlled with cautious dialysis, careful dietary restrictions, and medication.

Anemia has been a consistent observation in practically all patients maintained on hemodialysis (Morgan, 1971). The causes of anemia center around the failure or reduction of production of erythropoietin, a hormone thought to be produced by the kidney which stimulates bone marrow to produce red cells. These red cells are also thought to have a shortened life span in the uremic patient. Also, blood loss, either due to technical problems such as dialyzer leaks, or to organic loss such as with excessive bleeding of the nose, uterus, or internal organs, contributes to the problem of anemia (Gutch & Stoner, 1971). The treatment for severe anemic symptoms is a blood transfusion. Although this may reduce symptoms, transfusions may in turn create other problems such as hepatitis from unrecognized carriers.

Uremic neuropathy refers to the deterioration of nerve function. The occurrence of peripheral neuropathy is considered to be rather common among dialysis patients. Hampers and Schupak (1967) have described this disease as being characterized by "pain and parathesia of the lower extremities and/or a marked hypersensitivity to touch and a 'burning feeling'" (p.127). Frequent early symptoms are feelings by patients that they cannot sit still but must continually move their legs; there may be a sensation of tingling (Gutch & Stoner, 1971). This condition may develop slowly or quite rapidly. The

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only treatment to prevent worsening is early dialysis when the first
symptoms are present. If the amount and frequency of dialysis is
inadequate, the neuropathy may be expected to worsen (Gutch & Stoner,
1971).

Renal osteodystrophy (defective bone formation) is characterized
by elevation of serum alkaline phosphatase, bone pain, fractures,
and soft tissue calcification (Merrill, 1965; Maher, Freeman, &
Schreiner, 1965). As phosphate ions accumulate in the blood, there
is a resultant drop in serum calcium. The parathyroid glands normally
maintain the proper level of calcium in the body fluid. They respond
to the reduced serum calcium by increasing production of parathyroid
hormone and may enlarge. This parathyroid hormone exerts an influence on bone, causing calcium to be resorbed from it. The result
may be loss of bone density and strength (Gutch & Stoner, 1971).
Multiple fractures of bones, compression of vertebral bodies, and
pain are common consequences. Medical or surgical treatments may be
able to control the disease process.

Many patients on hemodialysis are bothered by itching. Although
the causes of the itching are not always evident, oral medications
may give occasional help or relief. Sleep disturbances among dialysis
patients are common and have proven to be perplexing problems for
physicians and investigators (Hampers & Schupak, 1967). No definitive
answers to the problems of insomnia or fitful sleeping have been
isolated, but it is suspected that both organic and psychological
problems may be causative.
Despite the complications associated with hemodialysis, patients are maintained by this treatment modality for years. Hemodialysis has progressed to the point where many patients are trained to operate artificial kidney machines within their own homes. This procedure requires that patients must meet pre-established program criteria that vary among training centers. Generally, medical implications are of major concern; the presence of chronic irreversible renal failure is an understood and obvious criterion. Other medical complications such as heart diseases, diabetes mellitus, lupus erythematosus, and severe chronic organic brain syndromes may be used to judge the prognosis of the patients being considered. Age of patients is considered by many training centers. Some centers may choose not to train the very young or very old, depending upon individual philosophies, staffs, and facilities. Patients must have places of residence which are capable of handling the equipment necessary for hemodialysis. There must be space available to house the artificial kidney machine and the necessary supplies. Also, electricity and water supplies must meet up to the standards needed to operate the equipment. Usually it is necessary for patients to be living in a residence that is owned or being purchased rather than rented or leased because of the necessary electrical and plumbing modifications that must be made. Few managers or owners of rental property seem ready to allow these changes. It is also necessary that a family member — typically a spouse or parent — be willing and able to assist the patient with the operation of the artificial kidney machine. Many dialysis training centers investigate the emotional stability of both the patient
and the "backup" person. Psychiatrists, psychologists, and social workers may be used to assess these individuals' potential adjustment to life with the kidney machine within the home. Once again the weight placed on these factors varies among centers.

The time necessary to train a patient-backup team to do dialysis at home varies depending upon the individuals involved and the particular training instructor and center. Six to twelve weeks is estimated to be a reasonable training time, although some patients may take either more or less depending upon the situation. The training is usually done on a one-to-one or one-to-two basis, with one nurse or instructor teaching the patient and the backup person. Some training centers initially train the patient alone and then include the backup person at a later date, thus giving the patient the primary responsibility for his or her own dialysis. Other centers take more of a team approach, training both the patient and the backup person at the same time, thereby creating two individuals with approximately equal knowledge about dialysis. Some training centers have reportedly concentrated their training on the more stable and reliable of the two trainees, allowing the other trainee to take a more passive role.

The advantages of home dialysis center around the ability of the patient and the backup person to schedule the treatments and thereby increase the feelings of independency. Patients can arrange their dialysis schedules to fit around working hours or recreational activities. Furthermore, the chances for vocational rehabilitation of the patient are increased due to the flexibility of scheduling.
Instead of being forced to meet the time schedule of the hemodialysis units, the patients arrange their own schedules. Also, home dialysis patients often seem to take pride in the fact that they have learned to master what initially might have appeared to be an insurmountable task of operating and understanding the functioning of the artificial kidney machine.

Home dialysis is not, however, without disadvantages. The training program is often quite vigorous and demanding of both the patient and the backup. Considerable training time and effort is extended by all involved. Also, by being physically away from the clinical dialysis setting, emergency equipment and personnel are not as readily available as in the hemodialysis unit. This situation may, in turn, lead to increased anxiety and tension for either of the home dialysis team. Because of this anxiety, marital discord and resentment may result and threaten the continuance of the home dialysis situation. Again, a careful psychological evaluation of the patient and the backup person as well as an evaluation of the marital relationship may be useful in the selection of patients.

**Peritoneal Dialysis**

Another method of dialysis is peritoneal dialysis. Like hemodialysis it is a technique used to restore the normal chemical composition of the blood when the kidneys have failed to function adequately. In principle it is similar to the process of hemodialysis. However, in place of an artificial semipermeable membrane, peritoneal dialysis employs the use of the patient's own peritoneum -- the serous
membrane lining the abdominal cavity and covering the abdominal organs—as the means of removing metabolic products from the body. The procedure of peritoneal dialysis involves the use of a prepared fluid (dialysate) which is adjusted to approximate that of extracellular body water. The fluid flows from a bottle or machine through tubing and into a surgically implanted catheter in the abdominal wall. The other end of the catheter lies free in the peritoneal cavity. When the dialysate fluid is put into the abdomen, the chemicals in the blood and in the fluid can cross back and forth across the peritoneal membrane and equilibrate with each other so that the toxic chemicals which accumulate in uremia can be removed. The greater the volume of dialysate placed in the abdomen at any one time, the greater is the amount of toxic chemicals removed from the body. Generally, two liters of dialysate are slowly placed in the abdomen at one time. The dialysate is allowed to "dwell" in the abdomen for ten to 15 minutes. The fluid is then allowed to drain from the catheter, a process which typically takes from ten to 20 minutes. One peritoneal dialysis exchange, then, takes about 30 to 40 minutes. Twenty exchanges are usually required for the chronic peritoneal dialysis patient each treatment. The procedure is typically done two or three times a week in order to consistently remove the necessary metabolic waste products.

As with hemodialysis, peritoneal dialysis may be done either in the hospital or clinic setting, or in the home. When done in the hospital, patients typically receive overnight dialysis and are able to sleep much of the required 12 to 15 hours. Patients may also be
trained to operate peritoneal dialysis machines within the home. There are a variety of machines on the market at the present time. These machines are generally less complicated than the hemodialysis machines and therefore require a shorter training period than is required for home hemodialysis. In addition, the peritoneal dialysis machines may be operated by the patient alone, thereby eliminating the need for a backup person. This feature alone has made peritoneal dialysis attractive for the patient who has no family member who is willing or able to assist with the dialysis process.

Like hemodialysis, peritoneal dialysis has its complications and drawbacks. The key to the reduction of complications in peritoneal dialysis is sterility. Scrupulous attention to sterile techniques must be paid. Prior to beginning or terminating dialysis the nurse or patient must wear a sterile mask and use sterile gloves. The catheter exit site must be scrubbed and sterilly cleansed thoroughly using iodine or betadine. Sterile techniques must be continued throughout the dialysis and the catheter exit site must be sterilly cleansed once or twice daily between dialyses. When these sterile techniques are not adhered to, peritonitis — an infection in the abdominal cavity — may develop and become life-threatening. This infection can lead to a thickening of the abdominal membrane and, therefore, to a loss of the membrane as a dialyzing surface. When detected, peritonitis may be treated by continuous dialysis with antibiotics until the infection is cleared. Other complications of peritoneal dialysis include infections of the skin exit site, catheter malfunctions, and excess fluid in the abdomen. Due to the
fact that the blood is not exposed as in hemodialysis, the risk of hepatitis, bleeding problems, and anemia is greatly reduced.

The evidence to support chronic peritoneal dialysis as an alternative to hemodialysis is increasing. Chronic peritoneal dialysis centers are being created to augment and support existing hemodialysis centers and transplant programs. Tenckhoff (1972) listed the following indications for chronic peritoneal dialysis for patients' groups:

1. Older patients, especially those with cardiovascular instability
2. Prepubertal or small children with growth retardation
3. Single patients
4. Patients in whom reliable blood access cannot be established or maintained
5. Patients for whom hemodialysis is considered too hazardous
6. Patients who refuse blood transfusions
7. Holding actions for hemodialysis or transplantation (p.y-II)

It is also suggested that peritoneal dialysis may be advantageous for patients who lack the necessary intelligence or emotional stability to complete home hemodialysis training, but who still wish to dialyze within the home. As mentioned above, the training period for peritoneal dialysis is less complicated; in addition, the procedure of peritoneal dialysis itself is less life-threatening than is hemodialysis. The cases where immediate acute medical care are necessary appear to be reduced significantly. Although studies which investigate the anxiety levels of chronic peritoneal dialysis patients compared with the anxiety levels of chronic hemodialysis patients are not available, it is suspected that peritoneal dialysis patients may have less anxiety about the dialysis procedure itself.
Both hemodialysis and peritoneal dialysis patients are usually placed on some type of diet that restricts their intake of fluids, sodium, and potassium. Fluid restriction depends on the nature and stage of the kidney disease. There is considerable variation in fluid requirements and restrictions due to residual urine production, loss of fluid related to environmental temperature, and fecal losses (Gutch & Stoner, 1971). Fluid restrictions for patients must also take into account the fact that all foods contain a certain amount of fluid. Some items such as ice cream, gelatin desserts, and gravy are nearly 100% fluid; fruits are about 90% fluid, and meat about 60%. A well-rounded diet should contain about 500 to 700 ml. of fluid content of solid foods each day. The quantity of water or fluid should be balanced by the daily fluid losses. Patients, then, may be allowed to have 400 to 700 ml. of fluid per day and still keep their weight gain within adviseable limits even in the absence of any urine output (Gutch & Stoner, 1971). Individuals without kidney impairment may typically have a fluid intake of approximately 2,000 ml. each day.

The protein intake of uremic patients just prior to dialysis is generally restricted to a range of 20 to 40 grams of protein per day. After dialysis has been initiated, the protein restriction is lifted to the point where patients may be allowed to consume 60 to 80 grams per day. If patients are to develop and maintain stable body masses, the protein intake should be approximately one gram per kilogram of ideal body weight, based on weight and age (Gutch & Stoner, 1971).

Some degree of sodium restriction is necessary for all patients to prevent extracellular fluid overload. If the sodium is not care-
fully monitored and restricted, hypertension and heart failure may develop. Many patients must restrict their sodium intake to a bare minimum, adding no table salt to food and purchasing foods that are low in sodium content. This diet may prove to be a difficult adjustment for patients who are used to heavily salting their food. The intake of foods that are high in potassium must also be watched carefully. While almost all foods contain some potassium, fresh fruits and vegetables are extremely high in potassium, and these foods must be avoided by most dialysis patients.

These dietary restrictions may present drastic changes from the diets that patients may have been on prior to dialysis and kidney disease. Reactions to dietary controls have been reported to be varied. Curtis, Eastwood, Smith, Storey, Verroust, deWardener, Wing, and Wolfson (1969) reported that patients' reactions to diet restrictions depended heavily on the stability of each of the individual patients. They concluded that patients, on the whole, gradually came to accept the dietary regime. Shea, Bogdan, Freeman, and Schreiner (1965) reported that 75% of the patients in their study used a considerable amount of dietary indiscretion. They noted a preoccupation among patients on the topic of food. They linked diet control to stress and commented, "Dietary indiscretions have been manifestations of stress, since they usually occur during periods of anxiety" (p. 561).

Many patients learn how to "cheat" on their diets so that they may occasionally allow themselves favorite foods or additional fluids without putting themselves into any major health predicament. These patients typically learn early what their particular limits are in
terms of fluid, sodium, or potassium. Patients, for example, may learn that they can eat salted nuts although they have been warned against eating this particular food. They may test their hypothesis that nuts will not greatly alter their body chemistries by eating a portion and then watching laboratory results to see if the indiscretion is noticeable to the medical or dietary staff. If there is no great change in the results, the patients may continue to eat this food despite warnings from dieticians. If the indiscretion does show up on the lab results, or if patients feel any symptoms related to their diet abuse, they may learn to continue to avoid this type of food.

The key to successful dietary controls for patients rests heavily with the dietician working with the dialysis patients and their families. Instruction and interaction with the nursing personnel of the dialysis units are also highly advantageous. The nursing staffs may be able to support patients when it becomes noticeable that they are having trouble adjusting to their diets. It is the dietician's role to instruct the patients as to what foods and fluids they may or may not consume. Help in meal planning may be given to the individuals who do the cooking in the family in order to help control the diet of the patient. Oftentimes, this instruction begins long before the patient is maintained by dialysis. Constant reminders and instruction must be given to patients to avoid serious medical complications such as congestive heart failure, hypertension, bone disease, and gastrointestinal symptoms (Gutch & Stoner, 1971).
Kidney Transplantation

A third method of treating chronic renal failure is that of kidney transplantation. Kidney transplantation refers to the technique in which a diseased kidney from a patient is surgically replaced by a healthy kidney from someone else. It seems to be generally agreed that recipients of transplanted kidneys should be terminally uremic and no longer manageable by conservative means (Mannick & Egdahl, 1971). Prior to transplantation potential renal transplant recipients are given complete, detailed physical examinations with accompanying appropriate laboratory studies and consultations. Any abnormalities found are pursued with additional studies and/or treatment. Ideally, patients are sought who, except for uremia, are generally healthy and free of major medical complications.

The next step is to seek a kidney donor for the transplant. There are two types of kidney donors. A kidney may be donated by a living related donor -- a brother, sister, mother, father, or adult child. Generally, this type of donor is preferred. Family members are given a thorough explanation of and orientation to chronic renal failure, dialysis, and transplantation. If there are willing donors within the family, these relatives will be given blood tests to ascertain the compatibility to be a kidney donor. All donor-recipient pairs must be blood group compatible for the major blood groups, ABO (Klein, 1970). If a family member is found to be a suitable donor on the basis of the preliminary blood tests, further tests and studies are required to determine compatibility. Also, potential donors are
given careful physical examinations in order to make certain that they are in sound health. Once again, the potential donors are given information about what will be required of them if selected as the donor. The risk to the donor is an important consideration. The potential donor is often relieved to find that the mortality risk to the healthy donor involved in having only one remaining kidney is "very similar to the vehicular accidental death of the United States male driver who drives less than 8,000 miles per year" (Merrill, 1973, p. 289). The evaluating transplant team may also wish to evaluate the donor's reasons for wanting to donate a kidney. Sometimes rational decision-making processes have not been utilized by the donor. Fellner and Marshall (1970) reported that none of the 20 donors in their study had weighed alternatives and rationally decided to give up one of his or her kidneys. Their study also indicated that 25% of those interviewed following transplants had just gone along with the tests but hoped that someone else would be selected as the donor. Potential donors should, at any point in the evaluative process, be given the opportunity to change their minds and not give a kidney with the assurance that the reason given to the patient and the remainder of the family for a particular relative not being selected would simply be "incompatibility". Many hospital transplant programs distribute a flier or brochure explaining the requirements to be a kidney donor.

The alternate type of kidney donor is the cadaveric donor. Cadaver kidneys are those donated by a person or his family to use at the time of his death. The selection of this type of donor has historically involved many medical, moral, administrative, emotional, and ethical
considerations (Conn, Bowen, McCleave, & Wright, 1969). Simmons and Najarian (1971) explained that cadaveric organs are usually obtained from persons dying following head injury or spontaneous cerebrovascular accidents. In the past few years a definition of cerebral death based on neurological and electrophysiological parameters has been established and accepted by many medical and lay communities. In some institutions a committee of physicians acts to determine cerebral death. This committee is typically independent of the transplant team or referring physicians. In such a way it has been possible to eliminate the ethical considerations in donor selection among cadavers.

Most states have now passed the Uniform Anatomical Gift Act which permits individuals to donate their organs after death without concurrence of the next of kin. The National Kidney Foundation is actively participating in the distribution of these organ donor cards.

The chances of a transplanted kidney functioning effectively vary depending upon the type of donor. With a living related donor the chances of the transplanted kidney functioning after one year are approximately 80 to 90%. With a cadaver donor the chances of the kidney functioning after one year are approximately 50 to 60%. The possibility that the kidney may be rejected is greatest shortly after surgery, although rejection may occur at any time, even years later.

When it has been determined that a patient is acceptable as a transplant recipient and when a suitable donor has been found, the patient is typically maintained on hemodialysis or peritoneal dialysis for an indefinite period of time. The length of time that the patient remains on dialysis is dependent upon several factors such as general
medical condition, the availability of a transplant date, and the need for a nephrectomy. Some patients require a nephrectomy prior to the transplant surgery; others may have the kidneys removed at the time of the transplant. Also, it may be decided to leave the original kidneys intact.

The transplant surgery itself is typically done by a team of surgeons specializing in kidney transplantation. If the transplant involves a living related donor, another team of surgeons will remove one of the donor's kidneys and immediately transplant it into the recipient. In the case of a cadaveric transplant the kidney will generally have been removed from the donor and prepared for transplantation prior to the time that the recipient is in the operating room. In either case, the transplant procedure typically takes from four to six hours.

Following surgery patients are typically taken to the hospital's intensive care unit where they remain under very close supervision for several days. If all goes well they may then be transferred to another room in the hospital where they may be expected to remain for approximately 30 days.

Immediately following transplantation patients are given very high doses of immunosuppressive drugs in order to suppress the body's natural attempt to reject the new kidney. The dosages are very high at this point in time because the chances of rejection are then the greatest; the dosages are slowly reduced with time depending upon the status of the transplanted kidney. These drugs are never discontinued as long as the kidney is functioning at an adequate level and no major

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side effects have developed; discontinuing the drugs would result in automatic rejection of the transplanted organ.

Following discharge from the hospital patients are typically required to return for clinic visits on a frequent basis until medical stabilization has been shown. When this occurs, the visits to the clinic are made less frequently, although the patients receive instruction in order to watch for any complications or signs that might suggest that the body is rejecting the new kidney.

As with the other forms of treatment for chronic renal disease, transplantation is not without its own complications. Although several sources on transplantation cite the failure of the transplanted kidney to function as the most serious complication of transplantation, the even more serious complication is death (Callender, 1974). Kountz, Marguies, and Belzer (1972) classified the deaths among their transplant patients into the following four categories:

1) patients who die of intercurrent disease although they have normal renal function and are taking safe and low doses of immunosuppressive drugs; 2) patients who die from infection without ever experiencing a rejection crisis while on low doses of immunosuppressive drugs; 3) patients who die from infection during or after a rejection crisis during which large doses of immunosuppressive drugs were used; and 4) patients who die after being returned to hemodialysis. (pp. 2-3)

The mortality rate reported by the above authors (Kountz et al., 1972) has been about 7% during the first year after transplantation and less than 3% per year thereafter.

A number of complications can lead to the failure of the transplanted kidney to function effectively. Renal graft failure may be early (within the first 24 to 72 hours), delayed (between three and
14 days), or late (after three weeks). The transplanted kidney, therefore, may never function, may have a delayed onset of function, may fail to function after a brief prolonged period of time, or may gradually lose its function over a period of months or years (Callender, 1974).

Early renal failure may be due to immunologic reasons caused by hyperacute rejection or accelerated acute rejection, or by non-immunologic factors such as acute tubular necrosis (ATN) or mechanical and technical factors such as arterial, venous, or uretal thromboses (Callender, 1974). The delayed complications of kidney transplantation again may be either immunologic or non-immunologic; acute rejection is normally a reflection of cellular immunity. Delayed non-immunologic complications consist of infections, pulmonary emboli, viruses, technical problems, hematomas, seroma and lymphocele, ischemic trauma, hypertension and postural hypotension (Callender, 1974).

Late complications of renal transplantation are relatively common. Fifty per cent of all transplant recipients have at least one rejection episode within the first 90 days. Most of these episodes are reversible with the use of antirejection procedures. Callender (1974) cited various other late complications which include infections, Cushing's syndrome, steroid diabetes, hypertension, gastrointestinal bleeding, cataracts, azothioprine toxicity, hypercalcemia, pancreatitis, musculoskeletal complications, malignancy, and thromboembolic phenomena.

The necessary usage of immunosuppressive drugs to combat rejection is the cause of many of the complications related to kidney transplantation. Imuran, Prednisone, and antilymphocytic globulins are the
drugs most frequently used. Imuran may produce depression of the bone marrow, lowering the resistance to infection. It may also cause jaundice and loss of hair. Prednisone may increase the incidence of bacterial, viral, protozoan, and fungal infections, and cause gastrointestinal bleeding, ulcerations and perforations as well as aseptic necrosis of the hip. Prednisone may also impair growth in children, cause cushinoid features, diabetes, cataracts, and psychological disorders. Antilymphocytic globulins may be painful if given intramuscularly and may cause hypersensitivity reactions. Pulmonary infections may also be more common (Kountz et al., 1972).

The following table lists many of the complications of kidney transplantation:

<table>
<thead>
<tr>
<th>I. Complications Associated with Poor Quality Donor Kidneys</th>
<th>II. Complications Associated with the Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Living Donor</td>
<td>A. Wound</td>
</tr>
<tr>
<td>1. Diseased kidney</td>
<td>1. Hematomas</td>
</tr>
<tr>
<td>2. Spasm and ischemic damage during nephrectomy</td>
<td>2. Disruption</td>
</tr>
<tr>
<td>3. Damaged artery, vein, or ureter during nephrectomy</td>
<td>3. Infection</td>
</tr>
<tr>
<td>4. Post-operative donor complications</td>
<td>4. Lymphocele</td>
</tr>
<tr>
<td>B. Cadaver Donor</td>
<td>5. Testicular necrosis and hydroceles</td>
</tr>
<tr>
<td>1. Diseased kidney</td>
<td>5. Delayed healing</td>
</tr>
<tr>
<td>2. Ischemic damage prior to nephrectomy</td>
<td>B. Renal Artery</td>
</tr>
<tr>
<td>3. Spasm and ischemic damage during nephrectomy</td>
<td>1. Stenosis</td>
</tr>
<tr>
<td>4. Damage to artery, vein, or ureter during nephrectomy</td>
<td>2. Aneurysm</td>
</tr>
<tr>
<td>5. Inadequate preservation</td>
<td>3. Infection with rupture</td>
</tr>
<tr>
<td></td>
<td>C. Renal Vein</td>
</tr>
<tr>
<td></td>
<td>1. Obstruction from thrombus</td>
</tr>
<tr>
<td></td>
<td>2. Associated iliac vein obstruction with leg</td>
</tr>
<tr>
<td></td>
<td>stasis and edema</td>
</tr>
<tr>
<td></td>
<td>D. Ureteral</td>
</tr>
<tr>
<td></td>
<td>1. Reflux</td>
</tr>
<tr>
<td></td>
<td>2. Stricture</td>
</tr>
<tr>
<td></td>
<td>3. Fistula</td>
</tr>
</tbody>
</table>

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4. Stones

E. Bladder
1. Fistula
2. Infection

F. Urethral (from catheter)
1. Stricture
2. Infection

G. Kidney
1. Spontaneous rupture
2. Partial infarction
3. Spontaneous rupture of calyx
4. ATN

III. Complications of Rejection
A. Hyperacute rejection
1. ABO incompatibility
2. Preformed antibodies against donor lymphocytes or kidney cells
3. Cold agglutinins
B. Rejection of ureter with fistula

IV. Complications of Immunosuppressive Therapy
A. Infections
1. Bacterial—mostly gram negative
2. Viral (varicella, herpes zoster, herpes simplex, and mumps)
3. Fungal (nocardia, cryptococcus, mucormycosis)
4. Toxoplasmosis
5. Tuberculosis

B. Pulmonary
1. Cytomegalovirus
2. Pneumocystis
3. "Transplant Lung"
4. Pulmonary Emboli
5. Pneumonia

C. Hepatic
1. Hepatitis
   a. Infections
   b. Toxic Hepatitis
   c. Cholestasis
   Jaundice (Imuran)

D. Pancreatitis
1. Pseudocyst formation

E. Gastrointestinal
1. Stomatitis
2. Esophagitis
3. Bleeding
4. Ulcerations
5. Performations

F. Eye
1. Cataracts
2. Infections

G. Musculoskeletal
1. Avascular necrosis of hip
2. Secondary parathyroid disease
3. Arthralgia and myalgia

H. Neurological
1. Steroid Psychosis

I. Dermatologic
1. Loss of hair
2. Increased bruisability
3. Infections

J. Impaired Growth in Children

K. Diabetes

L. Cushingoid Features

M. Serum Sickness from Anti-lymphocyte Serum, Occasional Hypersensitivity Reaction
APPENDIX B

QUESTIONNAIRE REGARDING THE ROLES OF MENTAL HEALTH WORKERS IN DIALYSIS UNITS

A. GENERAL INFORMATION

Name and address of your center _____________________________________________
                                                                                   _____________________________________________

Title of the person completing this form: _______________________________________

1. Indicate the approximate number of people within your immediate catchment area; that is, the population from which you draw your patients. (Please check (✓) the appropriate response.)

   a) 0 - 20,000 people
   b) 20,001 - 50,000 people
   c) 50,001 - 100,000 people
   d) 100,001 - 250,000 people
   e) Over 250,000 people

2. How many bed or chair spaces do you have for hemodialysis? (Combined total)

3. Yes No Are you actively engaged in a kidney transplant program?

4. Yes No Are you presently training patients for home hemodialysis?

5. How many home hemodialysis patients have you trained in the past twelve (12) months?

6. How many kidney transplants have been performed at your center site in the past twelve (12) months?

7. How many dialyses have you had in your center in the past twelve (12) months?

8. How many full-time (or full-time equivalent) registered nurses are on your staff?

9. How many full-time (or full-time equivalent) technicians are on your staff?

10. How many full-time (or full-time equivalent) physicians are on your staff?
B. **PSYCHIATRIC**

1. Yes  No  Do you have a psychiatrist associated with your program?  
   (If more than one, please indicate number.)

   IF YOUR ANSWER TO THE ABOVE QUESTION WAS "NO", PLEASE ANSWER ONLY THE  
   FOLLOWING QUESTION AND STOP.

   1b. The major reason we do not have a psychiatrist associated with our  
   program is:

   a. ___ We do not feel a need for a psychiatrist.
   b. ___ We do not have the financial resources to hire a  
      psychiatrist.
   c. ___ It is not our responsibility to provide this type of  
      service.
   d. ___ There are no psychiatrists available in our area.
   e. ___ Other (please specify)______________________________

   IF YOUR ANSWER TO THE ABOVE QUESTION WAS "YES", PLEASE ANSWER THE  
   FOLLOWING QUESTIONS:

2. The psychiatrist associated with our program has been hired to  
   work... (Please check (✓) the appropriate response.)

   a) _____ Full-time    b) _____ Three-quarter time
   c) _____ One-half time  d) _____ One-quarter time
   e) _____ Less than one-quarter time

3. Is your psychiatrist Board certified?  Yes  No

4. On the first line preceding each item, please check activities  
   with which the psychiatrist is typically involved. (For the  
   present, leave the second line blank.)

   a) _____ Individual counseling or psychotherapy with "in-  
      center" patients.
   b) _____ Individual counseling or psychotherapy with home  
      hemodialysis patients.
   c) _____ Individual counseling or psychotherapy with transplant recipients.
   d) _____ Individual counseling or psychotherapy with kidney  
      donors.
   e) _____ Counseling or psychotherapy with staff members.
   f) _____ Consultation or training with staff members.
   g) _____ Group counseling or psychotherapy with "in-center"  
      patients.
   h) _____ Group counseling or psychotherapy with home dialysis patients.
   i) _____ Group counseling or psychotherapy with transplant patients.

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PLEASE REVIEW THE ABOVE CHECKED ITEMS AND PLACE THEM IN RANK ORDER IN TERMS OF PRIORITY OF SERVICES (as you view them) WITH #1 BEING THE HIGHEST PRIORITY, #2 BEING THE SECOND HIGHEST, ETC. PLACE THIS RANK ON THE SECOND LINE PRECEDING THE ITEM. RANK ONLY THOSE ACTIVITIES WHICH YOU HAD PREVIOUSLY CHECKED LEAVING THE OTHERS BLANK. WHEN FINISHED YOU SHOULD HAVE A RANK ORDER NUMBER FOR EACH ITEM CHECKED; BOTH LINES SHOULD BE BLANK FOR THE REMAINING ITEMS.

C. PSYCHOLOGICAL

1. Yes No Do you have a psychologist associated with your program? (If more than one, please indicate number.)

IF YOUR ANSWER TO THE ABOVE QUESTION WAS "NO", PLEASE ANSWER ONLY THE FOLLOWING QUESTION AND STOP:

lc. The major reason we do not have a psychologist associated with our program is:

a) _____ We do not feel a need for a psychologist.
b) _____ We do not have the financial resources to hire a psychologist.
c) _____ It is not our responsibility to provide this type of service.
d) _____ There are no psychologists available in our area.
e) _____ Other (please specify)________________________________

IF YOUR ANSWER TO THE ABOVE QUESTION WAS "YES", PLEASE ANSWER THE FOLLOWING QUESTIONS:

2. The psychologist associated with our program has been hired to work... (Please check (✓) the appropriate response.)

a) _____ Full-time b) _____ Three-quarter time
c) _____ Half-time d) _____ One-quarter time
e) _____ Less than one-quarter time

3. What are the highest academic degrees earned by each of your psychologists?

a) _____ B.A. b) _____ M.A.
c) _____ Ph.D., Ed.D., or equivalent
4. On the first line preceding each item, please check activities with which the psychologist is typically involved. (For the present, leave the second line blank.)

a) ____ ____ Individual counseling or psychotherapy with "in-center" patients.
b) ____ ____ Individual counseling or psychotherapy with home dialysis patients.
c) ____ ____ Individual counseling or psychotherapy with transplant patients.
d) ____ ____ Individual counseling or psychotherapy with kidney donors.
e) ____ ____ Counseling or psychotherapy with staff members.
f) ____ ____ Consultation or training with staff members.
g) ____ ____ Group counseling or psychotherapy with "in-center" patients.
h) ____ ____ Group counseling or psychotherapy with home dialysis patients.
i) ____ ____ Group counseling or psychotherapy with transplant patients.
j) ____ ____ Psychological testing of kidney patients.
k) ____ ____ Psychological testing of potential kidney donors.
l) ____ ____ Family counseling or psychotherapy with the families of kidney patients.
m) ____ ____ Community consultations or speaking engagements.
n) ____ ____ Research regarding hemodialysis or transplant patients.
o) ____ ____ Other (please specify)
p) ____ ____ Other (please specify)

PLEASE REVIEW THE ABOVE CHECKED ITEMS AND PLACE THEM IN RANK ORDER IN TERMS OF PRIORITY OF SERVICES (as you view them) WITH #1 BEING THE HIGHEST PRIORITY, #2 BEING THE SECOND HIGHEST, ETC. PLACE THIS RANK ON THE SECOND LINE PRECEDING THE ITEM. RANK ONLY THOSE ACTIVITIES WHICH YOU HAD PREVIOUSLY CHECKED LEAVING THE OTHERS BLANK. WHEN FINISHED YOU SHOULD HAVE A RANK ORDER NUMBER FOR EACH ITEM CHECKED; BOTH LINES SHOULD BE BLANK FOR THE REMAINING ITEMS.

D. SOCIAL WORK

1. Yes No Do you have a social worker associated with your program? (If more than one, please indicate number.)

IF YOUR ANSWER TO THE ABOVE QUESTION WAS "NO", PLEASE ANSWER ONLY THE FOLLOWING QUESTION AND STOP:

1d. The major reason we do not have a social worker associated with our program is:
a) ____ We do not feel a need for a social worker.
b) ____ We do not have the financial resources to hire a social worker.
c) ____ It is not our responsibility to provide this type of service.
d) ____ There are no social workers available in our area.
e) ____ Other (please specify)_______________________________

IF YOUR ANSWER TO THE ABOVE QUESTION WAS "YES", PLEASE ANSWER THE FOLLOWING QUESTIONS:

2. The social worker associated with our program has been hired to work... (Please check (√) the appropriate response.)
   a) ______ Full-time  b) ______ Three-quarter time
   c) ______ One-half time  d) ______ One-quarter time
   e) ______ Less than one-quarter time

3. What are the highest academic degrees earned by each of your social workers?
   a) ______ Less than B.A.  b) ______ B.A.
   c) ______ M.A. or M.S.W.  d) ______ Ph.D., Ed.D., or equivalent

4. On the first line preceding each item, please check activities with which the social worker is typically involved. (For the present, leave the second line blank.)
   a) _____ _____ Financial evaluations of patients.
   b) _____ _____ Financial counseling with patients.
   c) _____ _____ Psychosocial counseling with home dialysis patients.
   d) _____ _____ Psychosocial counseling with transplant patients.
   e) _____ _____ Psychosocial counseling with "in-center" patients.
   f) _____ _____ Psychosocial counseling with the families of patients.
   g) _____ _____ Staff training.
   h) _____ _____ Social work evaluations of patients.
   i) _____ _____ Home visits with patients.
   j) _____ _____ Consultations with the local Kidney Foundation Chapter.
   k) _____ _____ Consultations with community agency resources.
   l) _____ _____ Community consultations or speaking engagements.
   m) _____ _____ Research regarding hemodialysis or transplant patients.
   n) _____ _____ Occupational therapy with hemodialysis or transplant patients.
   o) _____ _____ Other (please specify)
   p) _____ _____ Other (please specify)
PLEASE REVIEW THE ABOVE CHECKED ITEMS AND PLACE THEM IN RANK ORDER IN TERMS OF PRIORITY OF SERVICES (as you view them) WITH #1 BEING THE HIGHEST PRIORITY, #2 BEING THE SECOND HIGHEST, ETC. PLACE THIS RANK ON THE SECOND LINE PRECEEDING THE ITEM. RANK ONLY THOSE ACTIVITIES WHICH YOU HAD PREVIOUSLY CHECKED LEAVING THE OTHERS BLANK. WHEN FINISHED YOU SHOULD HAVE A RANK ORDER NUMBER FOR EACH ITEM CHECKED; BOTH LINES SHOULD BE BLANK FOR THE REMAINING ITEMS.
APPENDIX C

LETTER OF EXPLANATION:
QUESTIONNAIRE REGARDING THE ROLES OF
MENTAL HEALTH WORKERS IN DIALYSIS UNITS

Director of Hemodialysis Services

Dear Sir:

We are taking a survey of the hemodialysis centers across the country to attempt to determine the roles of psychiatric, psychological, and social work intervention in the rehabilitation of hemodialysis and kidney transplant patients. It is our present plan to accumulate the data gained from this survey, formulate hypotheses, and publish the results into one monograph; it will then be distributed free of charge to all centers that participated in the research.

We would greatly appreciate it if you would take the time to answer the following questions and return the questionnaire to us by We have provided a self-addressed envelop for your convenience.

Information received will be kept confidential, and the names of specific centers and personnel will remain anonymous. We do ask that you record the name of your center to assist us in our record keeping.

We will look forward to your cooperation.

Sincerely,
APPENDIX D

FOLLOW-UP LETTER:
QUESTIONNAIRE REGARDING THE ROLES OF
MENTAL HEALTH WORKERS IN DIALYSIS UNITS

Director of Hemodialysis Services

Dear Sir:

Recently we sent you a questionnaire and asked you to respond to items regarding the roles of social workers, psychologists, and psychiatrists within your hemodialysis unit. To date we have not received your response.

As we are using the entire population of hemodialysis units in the United States as our research population, it is critical to our study that we receive as many responses as possible. Therefore, we are enclosing another copy of the questionnaire and are again asking for your cooperation in returning the completed form to us by . We have enclosed a self-addressed, stamped envelop for your convenience.

We will look forward to receiving your response.

Sincerely,
APPENDIX E

HEMODIALYSIS EMPLOYMENT QUESTIONNAIRE

NAME ______________________________________ AGE _____

1. When did you start on home hemodialysis?
   Month ____________________ Year _______

2. Prior to the onset of hemodialysis, how many hours per week were you working? ________

3. For whom were you working? _______________________________

4. What were your job responsibilities?

5. Are you presently working?  Yes  No

6. If so, how many hours per week? _________

7. For whom are you presently working? ___________

8. What are your present job responsibilities?

9. Since beginning home hemodialysis, has your income: (circle one)
   a. Increased at approximately the same rate it did prior to hemodialysis.
   b. Increased somewhat, but at a lower rate than it did prior to hemodialysis.
   c. Stayed approximately the same.

251

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HEMODIALYSIS EMPLOYMENT QUESTIONNAIRE
Page Two

d. Decreased somewhat.
e. Decreased significantly.

10. Is your wife employed?  ____Yes  ____No

11. If so, how many hours per week?  ____

12. Please list what you feel to be the major limitations on your ability to work due to hemodialysis.

________________________________________

________________________________________

________________________________________

________________________________________

13. Additional comments?

________________________________________

________________________________________

________________________________________

________________________________________

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APPENDIX F

QUESTIONNAIRE:
PATIENTS' SELF-EVALUATION FORM FOR
THE PREVENTIVE MENTAL HEALTH
PROGRAM FOR DIALYSIS PATIENTS

NAME________________________
DATE________________________

Below you will find several questions related to the Community Education Program (P.O.H.I.) which you have just completed. We would appreciate your responses to the following questions based on your role as a student.

Please circle the response which best answers the question from your own particular point of view. There are no "right" or "wrong" answers; we want your opinions. Your honest responses will help us to evaluate various aspects of the program.

Read each statement and decide which of the items best describes how you feel now as compared to how you felt just prior to the beginning of the POHI program.

Example:

X. My appetite is __________

1. much better
2. somewhat better
3. about the same
4. somewhat worse
5. much worse

By encircling the 2, the example reflects that your appetite is "somewhat better" now than it was just before the beginning of the POHI program.

Remember: You are comparing how you feel now with how you felt just before the beginning of the classes. Please answer every question.

You are assured that the information given will be kept confidential, and individual responses will not be disclosed.

A. My activity level while on dialysis has been.....

1. much greater
2. somewhat greater
3. about the same
4. somewhat less
5. much less

B. My activity level while not on dialysis has been.....
1. much greater
2. somewhat greater
3. about the same
4. somewhat less
5. much less

C. I feel that my relationships with other patients are.....
1. much better
2. somewhat better
3. about the same
4. somewhat worse
5. much worse

D. I feel that my relationships with dialysis staff members are.....
1. much better
2. somewhat better
3. about the same
4. somewhat worse
5. much worse

E. I feel that my relationships with my family members are.....
1. much better
2. somewhat better
3. about the same
4. somewhat worse
5. much worse

F. I feel that the material or skills that I have learned as a result of this program have been.....
1. very beneficial
2. somewhat beneficial
3. O.K., but not really significant
4. somewhat detrimental
5. very detrimental

G. In general, I feel.....
1. much better about myself
2. somewhat better about myself
3. approximately the same about myself
4. somewhat worse about myself
5. much worse about myself

H. I feel that I am now....

1. much more independent
2. somewhat more independent
3. about as independent as before
4. somewhat less independent
5. much less independent

I. I feel that I now accept my illness....

1. much more readily
2. somewhat more readily
3. about the same
4. somewhat less readily
5. much less readily

J. During the POHI program, time seemed to pass....

1. much faster
2. somewhat faster
3. about the same
4. somewhat slower
5. much slower

K. During the POHI program, my time spent on dialysis was....

1. much more productive
2. somewhat more productive
3. about as productive as before
4. somewhat less productive
5. much less productive

L. During the POHI program, I generally felt....

1. much less anxious and tense
2. somewhat less anxious and tense
3. about as anxious and tense as before
4. somewhat more anxious and tense
5. much more anxious and tense

M. During the program, I slept....

1. much less frequently
2. somewhat less frequently
3. about as frequently as before
4. somewhat more frequently
5. much more frequently
N. During the POHI program, I generally felt.....

1. much less depressed
2. somewhat less depressed
3. about the same regarding being depressed
4. somewhat more depressed
5. much more depressed

O. During the POHI program, I generally felt.....

1. much better physically
2. somewhat better physically
3. about the same physically
4. somewhat worse physically
5. much worse physically

The next time POHI classes are offered, I would would not (circle one) be interested in taking a class (or classes).

I would be interested in taking.....

1. one class
2. two classes
3. three classes
APPENDIX G

QUESTIONNAIRE:
NURSE, TECHNICIAN, AND SUPERVISOR EVALUATION FORM FOR
THE PREVENTIVE MENTAL HEALTH PROGRAM FOR DIALYSIS PATIENTS

NAME_____________________________ TITLE__________________________

PATIENT'S NAME___________________________

Below you will find several questions related to the Community Education Program (POHI). We would appreciate your responses to the following questions based on your respective role as nurse, technician, or supervisor.

Please circle the response which best answers the questions from your own particular point of view. There are no "right" or "wrong" answers; we want your opinions. Your honest responses will help us to evaluate various aspects of the program.

Read each statement and decide which of the items best describes how you see the patient functioning or feeling now as compared to how you saw the patient functioning or feeling prior to the beginning of the POHI program.

Example:

X. The patient's appetite is.....

1. much better
2. somewhat better
3. about the same
4. somewhat worse
5 much worse

By encircling the 2, the example reflects that you view the patient's appetite as being "somewhat better" now than it was before the beginning of the POHI program.

Remember: You are comparing how you see the patient functioning or feeling now with how you saw him functioning or feeling before the beginning of the classes.

Please be sure to answer every question.

A. The patient's activity level while on dialysis has been.....

1. much greater
2. somewhat greater
3. about the same
4. somewhat less
5. much less

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B. The patient's activity level while not on dialysis has been....
   1. much greater
   2. somewhat greater
   3. about the same
   4. somewhat less
   5. much less

C. The patient's relationships with other patients are....
   1. much better
   2. somewhat better
   3. about the same
   4. somewhat worse
   5. much worse

D. The patient's relationships with dialysis staff members are....
   1. much better
   2. somewhat better
   3. about the same
   4. somewhat worse
   5. much worse

E. The patient's relationships with his family members are....
   1. much better
   2. somewhat better
   3. about the same
   4. somewhat worse
   5. much worse

F. The patient's skills or materials learned as a result of the program seem to have been....
   1. very beneficial
   2. somewhat beneficial
   3. O.K., but not really significant
   4. somewhat detrimental
   5. very detrimental

G. In general, the patient seems to feel....
   1. much better about himself/herself
   2. somewhat better about himself/herself
   3. approximately the same about himself/herself
   4. somewhat worse about himself/herself
   5. much worse about himself/herself

H. It seems as if the patient is now....
   1. much more independent
2. somewhat more independent  
3. about as independent as before  
4. somewhat less independent  
5. much less independent

I. The patient seems to accept his illness.....

1. much more readily  
2. somewhat more readily  
3. about the same  
4. somewhat less readily  
5. much less readily

J. During the POHI program, time seemed to pass for the patient.....

1. much faster  
2. somewhat faster  
3. about the same  
4. somewhat slower  
5. much slower

K. During the POHI program, the patient's time spent on dialysis seemed to be.....

1. much more productive  
2. somewhat more productive  
3. about as productive as before  
4. somewhat less productive  
5. much less productive

L. During the POHI program, the patient appeared to be.....

1. much less anxious and tense  
2. somewhat less anxious and tense  
3. about as anxious and tense as before  
4. somewhat more anxious and tense  
5. much more anxious and tense

M. During the program, the patient slept.....

1. much less frequently  
2. somewhat less frequently  
3. about as frequently as before  
4. somewhat more frequently  
5. much more frequently

N. During the POHI program, the patient appeared to be.....

1. much less depressed  
2. somewhat less depressed  
3. about the same regarding being depressed
4. somewhat more depressed
5. much more depressed

0. During the POHI program, the patient generally seemed to feel....

1. much better physically
2. somewhat better physically
3. about the same physically
4. somewhat worse physically
5. much worse physically

Please make any additional comments that you feel to be significant regarding this patient:

_________________________________________

_________________________________________

_________________________________________