
2002 Annual Report



End-Stage Renal Disease
(ESRD) –12 Network
Coordinating Council, Inc.
Contract # 500.00.NW12

Providing data management, quality improvement, and grievance mediation services for kidney dialysis and transplant patients in Iowa, Kansas, Missouri, and Nebraska.

Prepared by ESRD Network #12
7505 NW Tiffany Springs Parkway Suite 230
Kansas City, Missouri 6415

Prepared for Centers for Medicare and Medicaid Services
Baltimore, Maryland

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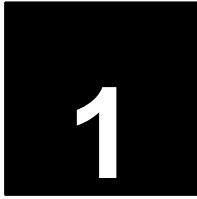
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Preface

Introductory Statement

Despite troubling world events where war and conflict abound, the provision of quality in the world of renal dialysis and transplantation did not cease. The purpose of this introductory statement is to summarize ESRD Network #12's annual accomplishments and highlight achievements.

The Network's primary goals continue to be assisting facilities to improve the quality of patient care, managing and improving database integrity, and successful mediation of patient grievances. Activities toward fulfilling the goal of improved patient care included the completion of the hemodialysis adequacy quality improvement project and the continuation of the vascular access stenosis monitoring quality improvement project. These projects are developed and overseen by the Medical Review Board.

The data personnel continued to work during the year to incorporate new information into the databases while rectifying issues resulting from the REBUS to REMIS conversion. As in past years, this report contains the "Data Champions" and "Data Stars," lists of those facilities having achieved excellence in accuracy and timeliness of forms submission.

The Network continues to publish a quarterly patient education newsletter. Each newsletter focuses on an aspect of care related to ESRD treatment and includes associated articles, recipes, and games. Topics have included fluid management, renal dietary information, rights and responsibilities, and permanent vascular access. In addition to the quarterly patient newsletter, this year launched the Network's semiannual staff newsletter encompassing all aspects of Network activities. Grievance mediation activity remained a priority this year, although a decline was noted in the number of grievances, while the complaint complexity and intensity increased.

Finally, I would like to thank the staff of Network #12 for continued success in upholding quality patient care. The provision of ESRD services is becoming increasingly complex as the population in the ESRD environment ages. I commend the staff on their dedication and commitment to beneficiaries, families and dialysis professionals.

Robert Saylor, M.D.
Chair, Executive Committee



Introduction

Network Description

ESRD Network #12 encompasses the four states of Iowa, Kansas, Missouri, and Nebraska covering approximately 285,604 square miles with a population base of 12.9 million persons. The geography in the four-state region varies from the bluff terrain bordering the Mississippi River on the eastern borders of Iowa and Missouri to the hardwood forests of the Ozark mountains. In contrast, gentle, rolling farmland is found in central Iowa and Missouri, while prairies and grasslands predominate in Kansas and Nebraska. The Missouri River, which separates Iowa from Nebraska and parts of Missouri from Kansas, and the Mississippi River, which separates Iowa from Illinois, are the natural waterways of the area.

The climate of the area is typical of the Midwest with hot, humid summers and dry, cold winters. Snowfall is moderate to heavy. Heavy ice and snow accumulation in the winter and flooding in the spring and summer can be obstacles to transportation. Although dormant for more than a century, the New Madrid fault runs through the southeast corner of Missouri. Remarkable storms can disrupt dialysis services; e.g., flooding of water treatment plants producing water shortages, tornadoes demolishing the physical dialysis unit, and loss of electrical power or telephone service.

Population Demographics

The population of the Network area reported in the 1990 census was 11.7 million with an increase to 12.9 million reported in the 2000 census. Estimated and actual counts for the four state area are as follows:

July 1, 2000	12,920,000
July 1, 2001	12,959,000
July 1, 2002	12,987,000

Overall population increased 0.22% during the past year. Females make up over half of the area population, 51% with 49% being males. This percentage has shifted since 2000 when 52% of the population was reported to be female. Racially, 88 of the population is White, down 1% from 2001; 7% are Black; less than 1% are American Indian; a little over 1% are Asian or Pacific Islander, and 2% are listed as Other. Sixty-eight percent (68%) of the people live in an urban setting.

Table A

Demographic Characteristics by State July 1, 2002					
	Iowa	Kansas	Missouri	Nebraska	Totals
White	2,748,000	2,343,000	4,818,000	1,541,000	11,430,000
Black	62,000	154,000	636,000	69,000	921,000
American Indian	9,000	25,000	23,000	15,000	72,000
Asian/Pacific Islander	39,000	50,000	64,000	23,000	176,000
Other	72,000	28,000	96,000	72,000	266,000
Male	1,437,000	1,324,000	2,762,000	843,000	6,366,000
Female	1,491,000	1,378,000	2,875,000	877,000	6,621,000
Rural	1,165,000	802,000	1,696,000	526,000	4,189,000
Urban	1,763,000	1,900,000	3,941,000	1,720,000	8,797,000
State Total	2,928,000	2,702,000	5,637,000	1,720,000	12,987,000

U.S. Census Bureau, Population Division, Time Series of State Population Estimates; April 1, 2000, to July 1, 2002. Release Date: December 27, 2002.

“Other” is included in the Census for respondents who are unable to identify with the five Office of Management and Budget race categories. Respondents who provide write-in entries such as Moroccan, South African, Belizean, or a Hispanic origin (for example, Mexican, Puerto Rican, or Cuban) are included in the other race category as well as bi-racial (two or more races) in the other race category.

Table B

Total Population by State			
	2000	2001	2002
Iowa	2,926,000	2,923,000	2,928,000
Kansas	2,688,000	2,694,000	2,702,000
Missouri	5,595,000	5,629,000	5,637,000
Nebraska	1,711,000	1,713,000	1,720,000
Totals	12,920,000	12,959,000	12,987,000
2002 Total U.S. Population		285,317,000	

U.S. Census Bureau, Population Division, Time Series of State Population Estimates; April 1, 2000, to July 1, 2002. Release Date: December 27, 2002.

ESRD Population Demographics

Incidence

Three thousand, eight hundred and thirteen (3,813) persons initiated chronic renal replacement therapy including transplantation at a facility located within the Network #12 region during 2002. Adjusted incidence rates per 100,000 persons for the four-state region are as follows:

Iowa	24.10
Kansas	25.26
Missouri	33.80
Nebraska	30.61

When analyzed by race, disparities in adjusted incidence rates become quite noticeable with an almost 3-fold difference between white and black (see Figure 1). The adjusted incidence rate for Native Americans varies widely by state. Possible influences include cultural and genetic difference between tribes.

Figure 1

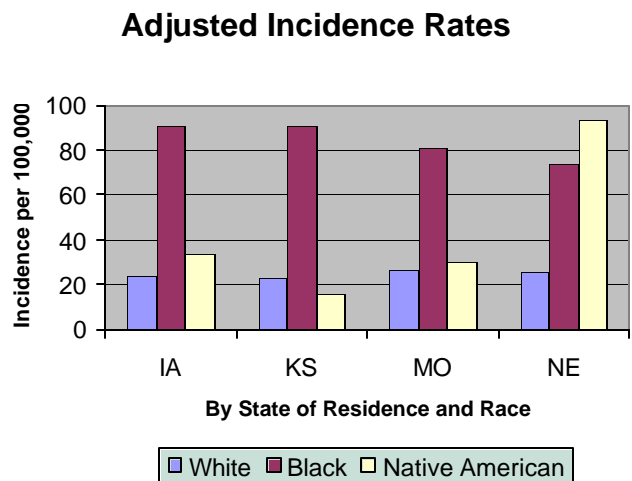
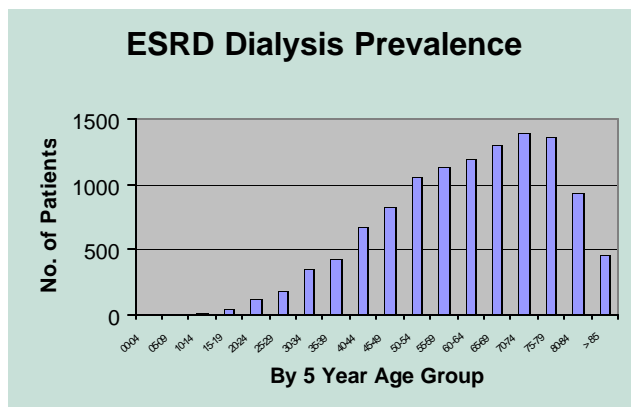


Figure 2



Diabetes has eclipsed all other diseases as the primary cause of renal failure. For 43% of the patients starting renal replacement therapy in 2002, it was identified as the primary cause of kidney failure. Hypertension was the second-leading reported primary cause in 26% of all new patients. Combined these two diseases accounted for 69% of the renal failure leading to initiation of dialysis or transplantation during 2002. Please refer to Table #1 on page 45 for detailed demographics.

As in past years, over half of the newly diagnosed ESRD patients were 65 years of age or older—55%. Of the dialysis patients prevalent on December 31, 2002, 47% were 65 years of age or older.

Dialysis Prevalence

At the end of 2002, there were 11,587 patients actively dialyzing at a facility in Network #12. Of the 11,587 persons, 1,990 resided in Iowa, 2,085 in Kansas, 5,766 in Missouri, and 1,304 in Nebraska with 442 patients living in contiguous states while receiving treatment from a Network #12 facility. The heaviest

concentration of dialysis patients continues to be around Missouri's major metropolitan areas, St. Louis and Kansas City.

A relatively high percentage of patients being treated at Network #12 dialysis units continue to choose home therapies. State percentages range from 7.69 to 37.03 % with a Network-wide total of 11.69% (See Figure 2). Of the different home modalities, Continuous Cyclic Peritoneal Dialysis (CCPD) is the most common with 693 patients (51% of the home population). Five hundred, eighty-one patients (43% of the home population) were receiving Continuous Ambulatory Peritoneal Dialysis and 80 were on home hemodialysis (6% of the home population).

Transplantation

Figure 4

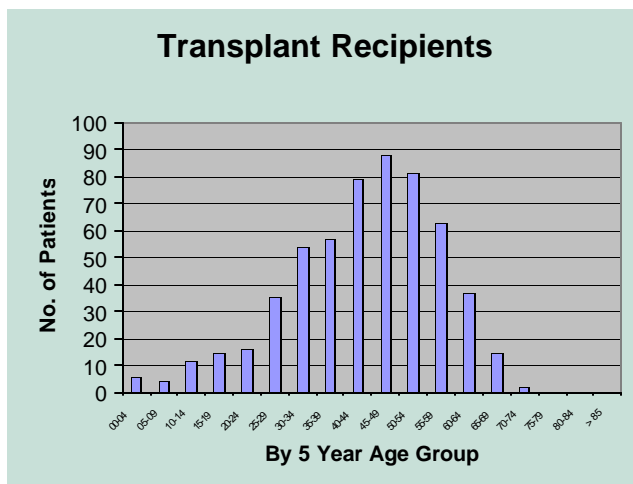
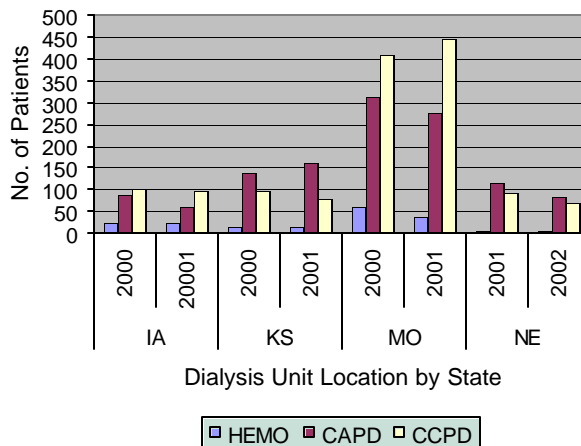


Figure 3

Dialysis at Home

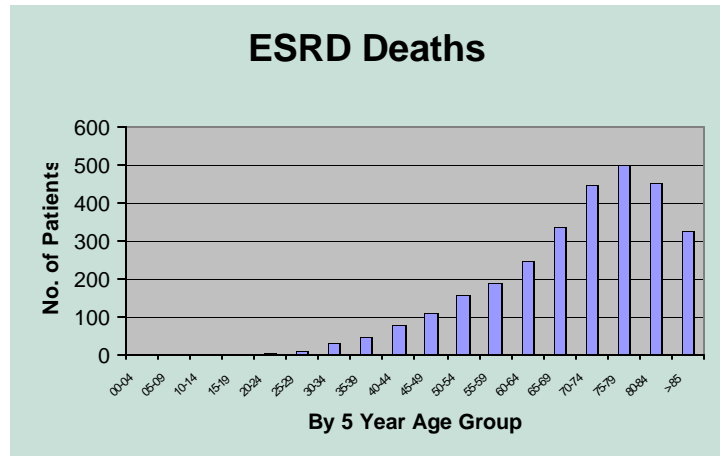


Centers located in the four-state region performed 654 kidney transplants during 2002. Distribution of the recipients is interesting with a relative high occurrence of transplantation in the pediatric population. Proportionally, younger persons are more likely to receive a transplant than older patients (See Figures 3 and 4). Racial distribution of transplants also differs from the ESRD population. A disproportionately high number of persons in the categories of Whites, Asian/Pacific Islander, and Other/Multiracial are transplant recipients. Many factors including blood type, antigen typing,

concomitant disease, and overall health may account for this inequitable distribution.

As of the end of 2002, area transplant centers reported 940 patients are awaiting transplantation. (Patients may be listed with more than one transplant center located in the four-state region, and the number may represent patients who live and dialyze outside of the area.)

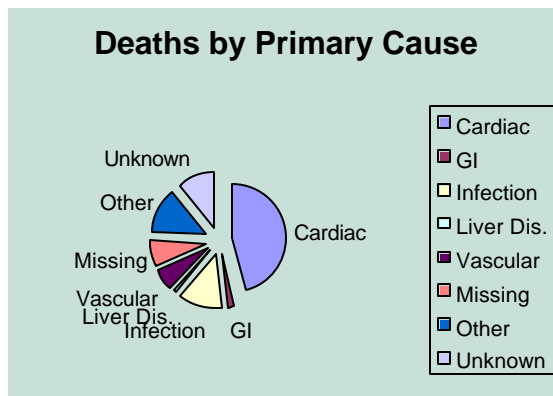
Figure 5



Deaths

Two thousand, nine hundred, and twenty-nine patients died while receiving care at a Network #12 facility last year.

Figure 6



The group in which the largest number of persons died was the 75-79 years old range, which is also disproportionate for this age group's population (see Figures 3, 6). As in past years, the leading causes of death were cardiac related accounting for 49% and infection accounting for 14% (see Figure 5).

Please refer to Section 6 Data Tables, beginning on page 44 for specific information on the ESRD population receiving treatment within Network #12.

Network Structure

ESRD Network #12 Staff

December 31, 2002 (with responsibilities)

<p>Lisa F. Taylor, B.S.N., R.N. Executive Director</p>	<p>Financial Management CMS Liaison Renal Community Liaison Daily Operations Personnel Management</p>
<p>Sarah Yelton, R.N., C.N.N. Quality Improvement Coordinator Cathy Long, B.A., R.H.I.T. Quality Improvement Specialist</p>	<p>Quality Improvement Activities USRDS Studies Coordination Core Indicators Data Collection</p>
<p>Kimberly Thompson, R.N., C.N.N. Patient Services Specialist</p>	<p>Patient Grievances and Concerns Patient Newsletters and Education</p>
<p>Jeff Arnall, M.C.S.E. Data Manager</p>	<p>SIMS Database Management Computer System Integrity Management CMS Data Contact Data Request Processing</p>
<p>Glenda Whittle, B.S., C.I.S. Data Specialist</p>	<p>Processing of 2728 and 2746 Forms Forms Compliance Reporting Facility Education on Forms</p>
<p>Marilyn K. Graham Data Clerk</p>	<p>Monthly Patient Rosters Annual Survey Facility Education on Rosters</p>
<p>Yolanda Y. Thomas Administrative Assistant</p>	<p>Accounts Payable and Receivable Board Travel Arrangements Office Supplies Management New Facility Information Books</p>
<p>Rosalie Littlejohn Receptionist and Staff Support</p>	<p>Office Equipment Management Correspondence and Communications</p>
<p>Katrina Tickle Meeting Specialist</p>	<p>Coordinate Annual Meeting Staff Travel/ Meeting Arrangements</p>

Corporate Description

The organization currently known as End-Stage Renal Disease (ESRD) 12 Network Coordinating Council, Inc., registered as a not-for-profit corporation in Missouri November 7, 1975. (Please note, the name at that time was Network #9). The original officers of the corporation included Warren P. Sights, M.D.; Fredrick C. Whittier, M.D.; Herschel R. Harter, M.D.; Thomas Crouch, M.D.; Jack Glover, M.D.; Karl D. Nolph, M.D.; Shirley Melton; and Juanita Johnson.

Membership in the Network #12 Council is extended to a representative of every ESRD facility located within the four-state region. Delineated in the bylaws, council representatives have rights and responsibilities similar to shareholders. The Council determines its committee representatives responsible for implementing the corporation's bylaws and overseeing the company's business. The three standing committees of the Council are as follows: the Executive Committee, the Finance Subcommittee (a subcommittee of the Executive Committee), and the Medical Review Board.

The Executive Committee has the full authority of the Council. It manages the business and administrative affairs of the Network. During 2002, the Executive Committee was involved in the following activities:

Fiscal oversight of the organization

Planning the educational portion of the Annual Council Meeting

The Medical Review Board is composed of ESRD professionals and patients: nephrologists; a registered nurse; a renal social worker; a renal dietitian; a transplant surgeon; a pediatric nephrologist; a facility administrator; a nephrology technician, and four patient representatives. The Board is responsible for carrying out all functions related to assessing and improving ESRD patient care. During 2002, these activities included the following:

- Patient grievance reviews
- Development of all projects designed to improve the quality of health care delivered to ESRD patients
- Vocational rehabilitation activities
- Oversight of the Clinical Performance Measures data collection (part of a national project)
- Implementation of a vascular access stenosis monitoring project

ESRD Network #12

The Finance Subcommittee is responsible for detailed oversight of the Network office and finances. These duties include review and development of personnel policies, staffing requirements, job descriptions, salary evaluations, fringe benefits, and oversight of general corporate financial affairs. During 2002, the Finance Subcommittee was involved in the following:

- Continuous monthly oversight of the accounting procedures
- Cash flow management review
- Review and replacement of outdated office equipment

The Network utilizes three ad hoc committees: the Nominating Committee appointed by the Executive Committee; the Grievance Committee, appointed by the Medical Review Board; and the QI Data Committee, appointed by the Medical Review Board. These committees met on an as-needed basis during 2002.

The Nominating Committee is integral to the Board election process. Nominations are solicited from all listed personnel in the Network #12 facility database. Nominees are contacted and a resume or curriculum vitae is requested. The Nominating Committee, consisting of Executive Committee members, reviews the requested documents of interested nominees and prepares the slate of final candidates. The Nominating Committee members consider geographic composition and professional expertise when selecting the candidates.

The Grievance Committee reviews and makes determinations formal grievances. See Section 3, Grievances, page 40 for more information on grievance investigations and actions.

The QI Data Committee reviews and analyzes data generated from previous quality improvement projects to produce scientific papers and presentations. These papers allow for additional and broader analysis and interpretation of the existing data than required in the federal final project reports.

Executive Committee Membership

December 31, 2002

M. Walid Al-Sheikha, M.D.
Nephrologist
Genesis Medical Center
Davenport, Iowa

Jan Dudley, M.S., R.D.
Registered Dietician
Dialysis Clinic, Inc.
Omaha, Nebraska

Jerry L. Fischer, M.D., Ph.D.
Nephrologist
Omaha Nephrology, P.C.
Omaha, Nebraska

Linda Francisco, M.D., F.A.C.P.
Nephrologist
Wichita Nephrology PA
Wichita, Kansas

Mary E. Gellens, M.D., Vice Chair
Nephrologist
St. Louis University Hospital
St. Louis, Missouri

Robert Dunlay, M.D.
Nephrologist
Dialysis Clinic, Inc.
Omaha, Nebraska

Norma Knowles, MSW
Patient Representative
Dialysis Clinic, Inc.
Columbia, Missouri

Stan Langhofer, B.S.N., R.N., C.N.N.
Unit Administrator
Kansas Dialysis Services
Topeka, Kansas

Theresa M. Lane, R.N., B.S.N., C.N.N.
Registered Nurse
Kidney Care, P.C.
Des Moines, Iowa

John E. Whalen, M.D.
Nephrologist
Tri-State Dialysis
Dubuque, Iowa

Anne L. Voigts, M.D.
Medical Review Board, Chair
Internists, P.C.
Cedar Rapids, Iowa

Robert Saylor, M.D., Chair
Nephrologist
Kidney Disease Center of the Ozarks
Springfield, Missouri

Cory L. Sise, M.D.
Nephrologist
Cotton O'Neil Clinic
Topeka, Kansas

John L. Smith, M.D.
Transplant Surgeon
Via Christi Regional Medical Center
Wichita, Kansas

Lisa VanHoose, M.S.W.
Social Worker
Dialysis Clinic, Inc.
Columbia, Missouri

Lisa F. Taylor, B.S.N., R.N.
Ex-Officio Member
Executive Director, ESRD Network #12

Medical Review Board Membership

December 31, 2002

Ardyth Boucher
Patient Representative
Mercy Medical Center
Des Moines, Iowa

Robert Dickerson
Patient Representative
Research Medical Center
Kansas City, Missouri

Douglass T. Domoto, M.D., J.D.
Nephrologist
DaVita, Inc.
St. Louis, Missouri

Ageseleos J. Meares, M.D.
Nephrologist
Creighton Nephrology Associates
Omaha, Nebraska

Michael Flanigan, M.D.
Nephrologist
University of Iowa Hospital and Clinics
Iowa City, Iowa

Francis Ivanovich, B.S., C.H.T.
Technician
Cape County Regional Dialysis
Cape Girardeau, Missouri

Martin Jendrisak, M.D., F.A.C.P.
Transplant Surgeon
Washington University
St. Louis, Missouri

Sheila Kiesey, R.N.
Unit Administrator
Southeastern Renal Dialysis, L.C.
Mount Pleasant, Iowa

Judy Helmer, B.A., M.A., R.D.
Dietitian
East Wichita Dialysis
Wichita, Kansas

Dennis Ross, M.D., F.A.C.P., Past Chair
Nephrologist
Renal Care Group, Inc.,
Wichita, Kansas

Patrick Krogman
Patient Representative
Renal Care Group
Wichita, Kansas

Thomas V. Neumann, M.D.
Nephrologist
Omaha Nephrology P.C.
Omaha, Nebraska

Sue Donaldson
Patient Representative
Dialysis Center of Lincoln
Lincoln, Nebraska

Craig C. Porter, M.D.
Pediatric Nephrologist
University of Iowa Hospital and Clinics
Iowa City, Iowa

Donovan C. Polack, M.D.
Nephrologist
St. Louis University School of Medicine
St. Louis, Missouri

Traci Simpson, R.N., B.S.N.
Registered Nurse
Renal Care Group, Inc.
Wichita, Kansas

Jason Taylor, M.D., Vice Chair
Nephrologist
Kansas Nephrology Physicians
Wichita, Kansas

Anne L. Voigts, M.D., Chair
Nephrologist
Internists, P.C.
Cedar Rapids, Iowa

Anne Greer, B.A., M.S., M.S.W.
Social Worker
Renal Care Group, Inc.
Joplin, Missouri

Michelle L. Carver, R.N., C.N.N.
Registered Nurse
Dialysis Center of Lincoln
Lincoln, Nebraska

Finance Subcommittee

A Subcommittee of the Executive Committee

Stan Langhofer, B.S.N., R.N., C.N.N, Committee Chair
Robert Saylor, M.D., Executive Committee Chair
Mary E. Gellens, M.D.
Norma Knowles, Patient Representative
Lisa Taylor, B.S.N., R.N.

Nominating Subcommittee

An ad-hoc Subcommittee of the Executive Committee

Robert Saylor, M.D., Executive Committee Chair
Jan Dudley M.S., R.D., L.D.
Anne L. Voigts, M.D., Medical Review Board Chair
Theresa M. Lane, R.N, B.S.N., C.N.N.
Lisa VanHoose, M.S.W.
Mary E. Gellens, M.D.
Lisa Taylor, B.S.N, R.N.

Grievance Committee

An ad-hoc Subcommittee of the Medical Review Board

Jason Taylor, M.D., Committee Chair
Ardyth Boucher, Patient Representative
Robert Dickerson, Patient Representative
Angie Greer, B.A., M.S., M.S.W.
Tracy Simpson, R.N., B.S.N.
Kimberly Thompson, R.N., C.N.N.
Lisa Taylor, B.S.N., R.N.

QI Data Committee

An ad-hoc Subcommittee of the Medical Review Board

DANIEL COYNE, M.D., CHAIR
Andrew Hartley, Dr. P.H., Consultant
Lou Polish, M.D.
John L. Smith, M.D.
Les Spry, M.D.
Sarah Yelton, R.N., C.N.N.
Cathy Long, B.A., R.H.I.T.



CMS National Goals and Network Activities Summary

Network #12's purpose continues to be the provision of data management, quality improvement initiatives, and grievance mediation services to ESRD Medicare beneficiaries and the facilities that serve them in our four-state region. Although CMS has accorded ESRD Networks with quasi-regulatory authority over the facilities, the Network #12 Board and staff are committed to acting in an educational role, supplying information and tools to improve data integrity and patient care. This section will provide an overview of Network #12 activity toward meeting CMS' ESRD Program goals.

CMS Goal #1 Improving the Quality of Health Care Services and Quality of Life for ESRD Beneficiaries

Improving patient care is the overarching goal of all Network #12 activities, Accomplishments toward this are grouped into the following six categories:

- Quality improvement projects (QIPs)
- Quality of care initiatives
- Provider community education
- Patient education
- Education through the Network #12 website
- Assistance to facilities and patients related to care issues

Quality Improvement Projects

Hemodialysis Adequacy Final Report

Introduction

In 1998, the National Kidney Foundation (NKF) published its Dialysis Outcomes Quality Initiative (DOQI) Hemodialysis Adequacy Guideline. This consensus-based practice guideline is supported by many studies citing the relationship between the adequate delivery of hemodialysis and subsequent mortality and morbidity in ESRD patients. To support this important aspect of ESRD care, HCFA set the minimal goal

that 80% of applicable patients should achieve a URR of $\geq 65\%$. This project was focused on the improvement of quality care rather than control group research.

Simply stated, the overarching goal of the End Stage Renal Disease (ESRD) Network 12 project (encompassing Iowa, Missouri, Kansas, and Nebraska) was to improve patient care by insuring that each of the approximately 8,500 Medicare patients within the Network receives adequate dialysis treatments.

Additionally, compliance with the physician ordered dialysis prescription and adherence to the DOQI guidelines for blood urea nitrogen (BUN) sampling were established as short-term goals (STG). Long-term goals (LTG) included continuation of continuous quality improvement (CQI) efforts related to hemodialysis (HD) adequacy by the facility post-study and evidence that improvements made were attributed at least in part to the interventions made during the study.

Methods

All End Stage Renal Disease (ESRD) Network 12 (NW12) outpatient adult hemodialysis dialysis facilities were included in this study. This project followed an A-B-A design. The facilities in the Network were divided into 2 groups ("Group 1" and "Group 2") by random allocation. Approximately one-third of the facilities were included in Group 1 (n= 70) and the remaining two-thirds were assigned to Group 2 (n= 130). Group 2 contained approximately twice the number of facilities as Group 1 so that, in the later intervention period, any lessons learned while intervening with Group 1 could be applied in a larger setting, impacting more patients.

The study was to be conducted such that during Months 1 and 7 ("A-B"), Group II will serve as the control for Group 1, establishing the effectiveness of the interventions and reflecting any background trend present among providers in general. During Months 7 and 13 ("B-A"), Group 1 was monitored to establish the sustainability of the intervention effects, and Group II was monitored to demonstrate the repeatability of these effects. The quality indicators for Month 1 were tabulated for all the Network's facilities, as well as for Groups 1 and II.

Interventions Chosen

Intervention materials were chosen on the basis of anticipated effectiveness. Several data collection tools (i.e.: monthly data collection forms, flow sheet audits, and facility questionnaires) served the dual purpose of data collection and intervention instruments. Particular attention was given to requiring only imperative data thereby easing the completion burden on the already over-worked facility staff.

Each facility was required to submit monthly data collection forms (a one-page data gathering tool showing patient URR results). Month 1 information served as the baseline for both groups. A facility goal (a 10% relative improvement over baseline) was established for the project. We chose to utilize a rapid cycle feedback (RCF) format consisting of monthly graphs illustrating facility specific goals and current status. During Month 7 comparative graphs (by group, facility, and NW12) were forwarded to the Group 1 facilities. This provided incentive for self-directed improvement based on peer performance. At the conclusion of the project a final comparative graph was forwarded to both groups.

Low performing facilities (defined as those facilities which showed a negative URR trend), were provided with intensive educational materials consisting of articles, posters, videos, brochures, and URR tracking information. These materials (developed by various nephrology organizations, other ESRD Networks, and renal product vendors) had been incorporated into “*HD Adequacy In-A-Box*” by ESRD Network 5. (This box had been used successfully by ESRD Network 5 in a similar project in the past.)

Dialysis Flow Sheet Audit

To assess compliance with the dialysis prescription, the Network staff reviewed 100% of patient dialysis flow sheets from a day in which URR labs were drawn in one selected month. Additionally, the BUN sampling policy from each participating facility was compared to the DOQI Guidelines for adherence. The facility flow sheet audit was a 100% sampling of the roughly 7,000 participating patients. Facility compliance in delivering the prescribed dialysis treatment was determined using the following measurements: time on dialysis, dialyzer used, and blood flow rate delivered. The facility was considered compliant if: the patient received 90% of the ordered treatment time; the dialyzer was the ordered type and size; the flow sheet contained the required signatures assuring correctness of reused dialyzers; and the blood flow rate was within 50 ml/min of the prescribed rate. Possible causes for deviation from the prescription were noted. Reports were forwarded to the facility Unit Administrator and Medical Director.

Facility Policies and Practices Assessment Form

In study month 2, Group 1 was asked to complete the Facility Policies and Practices Assessment Form. This questionnaire was in the Likert scale format and assessed BUN sampling procedures, the patient dialysis prescription, and possible barriers relating to machinery, patient factors, and staff factors which might prevent achievement of the dialysis prescription. In Month 8, Group 2 completed the form. Both groups completed the same questionnaire in Month 13 which was post-intervention.

Post Study Questionnaire

During Month 14, all participating facilities were requested to complete a post-study questionnaire. This was a one-page, ten question form that could easily be completed and faxed back to the Network. The questions were an evaluation of the study and its impact.

Project Support

The Network Quality Improvement staff was available during normal working hours to assist facilities with questions or help with technical issues. This project entailed frequent telephone contact with the facilities for clarification and guidance.

Statistical Analysis

Analyses included the use of the Fischer’s Exact test and Two-tailed independent T-tests.

Results

Baseline data

We anticipated a baseline URR value of ~ 70%, but observed higher values. The baseline values for month 1 of patients with URR Adequacy for Groups 1 and 2, respectively, were 88.2% and 93.7% . These high values were maintained for both groups for the entire duration of observation, signifying that the quality of hemodialysis care was better than expected (Figure 7) (All figures for this project report can be found in the appendix beginning on page 19.) The “response” in terms of improvement in URR scores to interventions is non-linear at extremes. With a high baseline, “improvement” becomes asymptotic, i.e., progressively smaller increases are observed (See Figure 11). Note also that the number of months that centers meet the target of relative URR improvement of 10% is negatively correlated with baseline URR values (See Figure 12; Group 1 is clearer because of a longer observation window). Despite the high baseline values, we were able to demonstrate a sustained and statistically significant improvement in URR ratios for both Group 1 and 2.

Interim data

For Group 1, raw URR adequacy values increased from 84.025% ($\pm 1.605\%$) in April 2001 to 87.55% ($\pm 1.41\%$) in March 2002. This is not statistically significant ($t = 1.65042$; $p = 0.10122$). For Group 2, however, there was a statistically significant ($t = 2.10517$; $p = 0.03627$) increase in URR from 85.48% ($+0.94\%$) in April 2001 to 88.24% (0.92%) in March 2002. Noteworthy is the progressive and sustained increases in values for both groups (Fig. 2).

Remeasurement data

A. URR Adequacy: Although the study was initially designed to be of an A-B-A type with B (Group 2) serving as control for A (Group 1), data was not collected for Group 2 from month 2-6. Therefore, although a strict Group 1 versus Group 2 comparison or remeasurement could not be performed, the two groups could be treated as quasi-independent cohorts with data from month 1 serving as historical baseline/controls.

B. Hemodialysis Prescription Compliance: Parameters pertaining to compliance of centers with regard to hemodialysis prescription included self-reported measures of time on dialysis, type of dialyzer used, and blood-flow rate achieved. Although it was originally planned to obtain a baseline and post-intervention values for both groups, this did not prove to be feasible because of the inordinately high burden that data collection posed on the centers. A one-time cross-sectional data survey was therefore implemented, and data were collected for Groups 1 and 2 in April and November 2001, respectively. The results are shown in Fig. 3. With the exception of blood-flow rate compliance for Group 2, all values are above 90%.

Discussion/Conclusion

Evaluation of projects success

Despite greater-than-expected URR adequacy baselines, there was a demonstrable and statistically significant increase in the proportion of patients receiving satisfactory hemodialysis as defined by the fraction of patients with a URR \geq 65% post-dialysis (Fig. 4). Furthermore, it is also clear that the improvements resulting from the interventions can be repeated in different groups of similar facilities, attributed, at least in part, to the interventions, and sustained over a 6-month time frame (Fig. 2, Fig. 4). A single, cross-sectional analysis showed that compliance of NW12 centers with hemodialysis prescriptions is uniformly very high (Fig. 3). Thus, given the above caveats, virtually all of the short-term and long-term goals of this project have been met.

Outcome or impact evaluations

Group I: Relative improvement in URR increased from 0% (baseline) in April 2001 to 5.38% (\pm 1.2%) in March 2002. This is statistically significant both by Fischer's Exact test and by the two-tailed independent T-test.

Group II: Relative improvement in URR increased from 0% (baseline) in April 2001 to 4.24% (\pm 1.2%) in March 2002. This is statistically significant both by Fischer's Exact test and by the two-tailed independent T-test. Not only were the differences between baseline and endpoint URR values statistically significant for both groups, the increases were progressive, consistent, and sustained for the entire duration of the study suggesting that the intervention measures had the desired impact on the steady increase in the proportion of patients receiving satisfactory hemodialysis (Fig. 4). For quantification of absolute increases in URR adequacy, please refer to "Interim Data" and Fig. 2.

Important observations:

There were demonstrable increases in absolute and relative URR adequacy measures in both study groups; the increase in relative URR adequacy was statistically significant for both groups.

The baseline URR adequacy was considerably higher than expected. Although the degree of relative (or absolute) increase in URR adequacy is positively correlated to the starting baseline values (Pearson's R value = 0.821 and 0.589 for Groups 1 and 2, respectively; see Pearson Correlation Matrix in Appendix), the increase is asymptotic as mentioned in Results. This means that progressively smaller increases are observed when the baseline values are high (See Fig. 5 in Appendix). Furthermore, the number of months that centers meet the target of relative URR improvement of 10% is negatively correlated with baseline URR values (See Fig. 6 in Appendix). Despite the high baseline values, we were able to demonstrate a sustained, and statistically significant improvement in URR ratios for both Groups 1 and 2.

A cross-sectional analysis of hemodialysis prescription compliance revealed that about 90% of centers are compliant.

Lessons learned

Because many facilities prefer the adequacy marker KT/V rather than URR's, resistance was encountered initially to a mandatory study focusing on the URR. The prevailing perception in the NW12 Nephrology community at the initiation of the project was that KT/V was a more accurate measure of HD Adequacy. Some facilities expressed the opinion that a great deal of effort had already been put into achieving HD Adequacy making the study redundant in their opinion. We overcame these obstacles by accepting the facility data, discussing issues with facility staff during telephone conversations, and accepting KT/V results in those facilities that did not perform URR's. KT/V data was not included in the statistical analysis however.

The burden of data gathering for the participating facilities was great. Careful attention to facility data burden is beneficial in promoting a spirit of good will between the NW and the participating facilities.

Group 1 demonstrated a better understanding of the project overall, although identical methods of study introduction were used in both groups. Instructions may not be clear to all participants. Time lapse in participation could have contributed to confusion for Group 2.

Facility "buy-in" is directly related to the success of any project. It would seem that facilities provide more accurate and timely data when they feel that the study is pertinent to their practice and assists them in improving patient care. Medical Director involvement is important as it further reinforces their responsibility in the provision of quality medical care. Comparative reports which illustrate facility, NW, and state achievements serve as gentle peer-pressure to low-performers and encouragement to high-performers.

What we would have done differently

Completion of the Flow-sheet Audit required approximately two hundred and twenty four (224) NW12 man-hours to complete. If the study were to be repeated, reviewing the smallest sample that maintains statistical power would be a recommendation. Despite the labor intensity of the data gathering on behalf of the facility, 35% of the participating facilities reported that it was a helpful tool.

Post-intervention measurement data

The post-study questionnaire results indicated that the majority of respondents perceive that the Medical Directors are regularly attending to HD Adequacy issues, the educational materials were considered helpful, fourteen (14) facilities changed their practices directly because of the study, and 1/3 of the facilities utilized the monthly rapid cycle feedback graphs and the Flow Sheet Audit report in their CQI meetings. The majority of the respondents indicated that they were very aware of the need for HD Adequacy prior to the study, however, it did emphasize the importance.

Vascular Access Stenosis Monitoring

Introduction

According to the USRDS 1997 Annual Data Report, Medicare spending for vascular access in hemodialysis patients represents between 14% and 17% of total spending for hemodialysis patients per year at risk. The combined cost for inpatient and outpatient procedures approached \$1 billion using the broadly defined vascular access procedure codes by 1994 data. This financial burden has not diminished. It has been reported that access-related morbidity is responsible for 25% of all hospitalizations for ESRD patients. It is well known that the best form of permanent vascular access is the native arteriovenous fistula (AVF). For many reasons, synthetic internal AV fistulas, or AV grafts are more often placed in the ESRD patients. These AV grafts can be placed in many more access sites. However, they have a much greater tendency for venous outflow stenosis. The stenoses and related complications are responsible for many of the vascular access hospitalizations and procedures. (References for these assertions can be found in the Narrative Project Plan (NPP) document.)

As noted in the 2000 Annual Report ESRD Clinical Performance Measures Project only forty five percent (45%) of patients with an arterio-venous graft (AVG) (n = 3911) had this graft routinely monitored for the presence of stenosis during October-December 1999. This number reflects the entire United States. The same data for ESRD Network #12 indicates that forty eight percent (48.9%) of the patients with grafts as their primary access were monitored for stenosis.

According to the 2001 Clinical Performance Measures Study (CPM) it was noted that 54.8% of the grafts of NW 12 patients surveyed in the random sample were monitored according to DOQI Guidelines. Since the CMS goal for vascular access monitoring is 100%, Network 12 had a potential for improvement.

We recognized that the CMS goal is 100% of patients with AV grafts being monitored for stenosis, however, the initial goal for this project was to be a 5% relative increase from baseline in vascular access surveillance.

Study Goals

The short-term goals (STG) for this project were to decrease the incidence of clotted grafts, increase monitoring of vascular accesses--specifically grafts, and that 100% of NW 12 dialysis facilities would monitor for indicators of stenosis. The long-term Goals (LTG) were to: decrease morbidity and mortality associated with access failure, to preserve the patient's remaining vascular access sites for as long as possible, improve the quality of life for patients by preventing access loss, and to reduce costs to the Medicare program, private insurers and to the Medicare beneficiary.

Simply stated, the overarching goal of the End Stage Renal Disease (ESRD) Network 12 project (encompassing Iowa, Missouri, Kansas, and Nebraska) was to improve patient care by insuring that Medicare beneficiaries utilizing grafts as their primary dialysis access would be monitored for stenosis.

Methods

Thirty (30) in-center out-patient hemodialysis facilities located in Iowa, Missouri, and Kansas were chosen for participation in this project. Facilities included in the study self-reported on the pre-QIP survey that they did not follow the DOQI guidelines for stenosis monitoring techniques. They may or may not have had a written policy for stenosis monitoring.

The participating facilities must provide dialysis services to at least fifteen (15) patients who met the population inclusion criteria. The study population selected for participation in this project included one thousand one hundred fifty eight (1,158) in-center hemodialysis patients over the age of eighteen (18) utilizing AV grafts as their primary access.

This project was focused on the improvement of quality care rather than control group research. Thus, a pre/post design was used for the study. Baseline values for vascular access surveillance were computed from data collected from all participating centers from Months 1(one) to 3(three), and intervention commenced thereafter in all centers.

Interventions Chosen

Intervention materials were chosen on the basis of anticipated effectiveness. Some data collection tools (i.e.: Monthly Data Collection Forms, Stenosis Monitoring Barrier Identification Questionnaire, and the Pre and Post Study Stenosis Monitoring Practices Questionnaire) served the dual purpose of data collection and intervention instruments. Particular attention was given to requiring only imperative data thereby easing the completion burden on the already over-worked facility staff.

Pre and Post Study Stenosis Monitoring Practices Questionnaire

Prior to the outset of this project in 10/01 a stenosis monitoring practice questionnaire was distributed to all NW 12 facilities for completion. The tool requested information such as: the number of patients treated at the facility, the number of patients with grafts as their primary access, whether or not the facility had a written policy for vascular access monitoring for stenosis, and choices of eleven types of access monitoring methods that the facility might be utilizing. This allowed the NW QI staff to determine which facilities had stenosis monitoring programs in place and what methods were being utilized. In Month 12 all NW 12 facilities (including those not participating in this study) were again requested to complete the same questionnaire in order to compare the initial results with those post-study.

Monthly Data Collection Forms

Each facility was required to submit monthly data collection forms (a one-page data gathering tool showing the number of: patients utilizing grafts, episodes of clotted grafts, patients who had stenosis monitoring performed, patients showing positive indicators of stenosis, patients referred to an interventional radiologist or surgeon, and patients receiving treatment for the stenosis). We chose to utilize a rapid cycle feedback (RCF) format consisting of monthly graphs illustrating facility specific goals and current status relative to that goal. During Months 8 (six-month data) and 14

(final) colorful, 8.5" x 11" comparative graphs (facility and NW12) were forwarded to the participants. This provided incentive for self-directed improvement based on peer performance.

Sample Policies and Procedures

Critical Pathway Flow Charts

Prior to the initiation of the study, the NW requested that facilities could send copies of their policies and procedures for stenosis monitoring to the QI staff on a strictly voluntary basis. The response was very positive and provided the NW with several samples for the study participants (unit managers and Medical Directors) to view and evaluate. Critical Pathway Flow Charts were obtained from NW 5, who had conducted a similar study in the past. When combined, these educational materials provided strong and easily adapted stenosis monitoring tools. By not having to "re-invent the wheel" the NW staff anticipated that facilities would be able to quickly strengthen or establish a stenosis monitoring program. The following disclaimer was added to each of the facility-submitted policies and procedures:

"A dialysis provider has kindly shared this policy. This is a sample policy, which may be modified and used in the development of facility vascular access stenosis monitoring policies. The originators of this policy are responsible for the content."

Inclusion of this statement allowed the NW to remain neutral with regard to content and prevented the perception that the NW had mandated use of these policies and procedures.

Policy and Procedure Writing Education

Power-point presentations were given to each participating facilities on the topics of policy and procedure writing. This provided the unit managers with new material, or served as a reminder on the intricacies of policy and procedure development. Our goal was to aid the facilities in writing complete and understandable policies and procedures for their staff members to follow. The assumption being that if the stenosis monitoring P&P's were properly developed, the staff members would be more apt to follow them.

Stenosis Monitoring Barrier Identification Questionnaire

During Month 1 of the study, a questionnaire was circulated requesting information about facility utilization of the top three DOQI recommended stenosis monitoring methods (intra-access flow monitoring, static venous pressure, and dynamic venous pressure). The facilities were asked to identify barriers that prevented them from utilizing at least one of the three preferred monitoring methods. The barriers were listed as the following: corporate policies, reimbursement issues, equipment costs, staffing, no physician order, lack of policy, and other. Insights gleaned from this questionnaire can be found in the Appendix section (tables I - IV).

DOQI Guidelines #10 & 12

Because these particular guidelines deal with stenosis monitoring of AV grafts, we provided these to each participating unit administrator, Medical Director, and

corporate QI contact if applicable. This served as a review and the colorful one-sheet 8 1/2" x 11" format was suitable for display in the facility.

One-Day Educational Seminar

A one-day educational seminar was held in Kansas City, Missouri during Month 3. Each participating facility was asked to send a representative to the seminar. This format allowed the NW staff to answer questions face-to-face, provide educational materials, and give an overview of the project. Dr. Jeffrey Sands, who is well known in the field of nephrology, gave a special lecture. Dr. Sands has published extensively on the subject of stenosis monitoring and vascular access issues. Additionally, Julie Smirl, RN, lectured from the prospective of a facility manager and provided down-to earth, hands-on information about initiating a stenosis monitoring program. A ten-question pre and post-test was given to the participants to determine the effectiveness of the teaching provided.

Project Support

The Network Quality Improvement staff was available during normal working hours to assist facilities with questions or help with technical issues. This project entailed frequent telephone contact with the facilities for clarification and guidance.

Results

Baseline data

Stenosis Monitoring: Only 31% of the patients in this study were monitored for stenosis during month 1. Of the 30 facilities participating in the project, eighteen (60%) indicated that no stenosis monitoring was performed at baseline. (See Figure 7 in the appendix)

Post-intervention measurement data

The One-Day Educational Seminar was held in May 2002 (study month 4). Stenosis monitoring increased from 45% in May to 65% in November.

Interim data

Stenosis Monitoring: At the six-month marker, the number of patients monitored had increased to 53%. Twelve facilities (40%) did not perform monitoring.

Remeasurement data

Stenosis Monitoring: The highest percentage of stenosis monitoring was reported during month 10 of the project at 65%. When compared to the baseline measurement of 31%, this is a dramatic increase. Only eight facilities (26.7%) did not monitor for stenosis.

Discussion/Conclusion

Evaluation of project's success

This project has been successful in meeting its primary goal of increasing routine stenosis monitoring of AV grafts. This can be demonstrated by the following:

- Although the initial goal for this project was to be a 5% relative increase from baseline in vascular access surveillance, we realized an increase of 109%.
- A 55.5% decrease in the number of facilities not performing stenosis monitoring
- The number of facilities performing 100% monitoring increased from 7 at baseline to 16 at month 10 (128% increase)

Outcome or impact evaluations

The following questions have been answered by this project:

- Does the frequency of stenosis monitoring improve clot detection?..... Yes.
- Does identifying positive indicators for stenosis have a potential prognostic value?..... Yes
- Does the frequency of diagnostic evaluation improve clot detection?..... Yes
- (Graphic representations can be found in the appendix in Figures 8, 9, & 10 .

Important observations:

This project has additionally uncovered data indicating that stenosis monitoring may have prognostic value in predicting future clots thus preserving the life of the access.

A computation of Poisson event-rates for observed clot incidences was performed. (n= 360 center months.) The distribution of clot-rates follow a quasi-Poisson distribution. It is not a true Poisson distribution since the assumption that each event (clot) is independent and sporadic; high-risk patients who develop one clot have a higher propensity to develop subsequent clots.

Since the observed clot-rates follow a quasi-Poisson distribution, computation of the Poisson μ parameter (event-rate) performed conventionally by taking the mean event rate ($\mu = 2.45$) leads to a poor fit.

Fitting was therefore carried out by non-linear least squares using a combination of the Simplex and Quasi-Newton Algorithms. Simulations with μ values between 1.0 and 2.0 are shown in colored dotted lines for visual assessment of fit. The best-fit estimate of μ is 1.4 clots/center/month. Note that this best-fit estimate still overestimates low-frequency clots (0, 1), and underestimates high-frequency events

(>5 clots) because of the caveat mentioned above. The degree of violation of the basic Poisson assumption cannot be formally accounted for because data was not acquired in such a way as to reflect whether an observed high incidence of clots in a given center at a given time was due to individual clots in individual patients, or multiple clots in the same patient.

Taking into consideration this caveat, assuming a grand-mean of 36.4722 patients per month per center, a μ value of 1.4 corresponds to a clot-rate of 38 per 1000 patients per month.

Since the absolute numbers of clot-events per center per month are small, Poisson values for each month cannot be computed reliably. However, this figure should serve as a valuable baseline for future interventional studies. (See Figure 11 in the appendix)

Lessons learned

Facility “buy-in” is directly related to the success of any project. It would seem that facilities provide more accurate and timely data when they feel that the study is pertinent to their practice and assists them in improving patient care. Medical Director involvement is important as it further reinforces their responsibility in the provision of quality medical care. Reports comparing individual facility achievements and entire project participants serve as gentle peer-pressure to low-performers and encouragement to high-performers.

By including the Medical Directors and the Corporate QI Contacts from the outset of the project we were able to gain additional facility acceptance. Comparative graphs were sent to the facility and also to the Medical Director and the Corporate QI Contact.

The facility managers indicated that they enjoyed the one-day educational seminar. It was beneficial for both the participants and the Network staff to interact with one another in person and form working relationships. Being able to put a face with a name aided in the facility buy-in of the project.

The pre-printed educational materials (policies & procedures, flow charts) were well received by the facilities and allowed the management team and Medical Director a smorgasbord of options to choose from. The facility was then encouraged to customize the materials to fit the individual needs of the unit. This approach was beneficial in avoiding the perception by the Medical Directors that the Network was “telling them how to practice medicine”.

The data validation portion of the study proved difficult for some of the participants to understand. There were expressed misconceptions that the Network did not trust their original data. Several of the facilities required a “walk through” the validation process in order to grasp the significance of this portion of the project.

Working with a smaller study group (30 facilities) allowed the Network staff more time to concentrate on the individual needs of the participants.

Quality of Care Initiatives

Hepatitis B Vaccination

This initiative was a QIP that was completed in 1999. The Medical Review Board requested additional intervention with facilities continuing to demonstrate low performance at the end of the project. In January 2002, the MRB voted to discontinue any further intervention with the remaining two low-performing facilities. Letters were sent to each facility's Medical Director encouraging use of the vaccine with copies sent to the appropriate state survey agency.

Vascular Access Infection

Using data gathered during the Vascular Access Infection QIP completed in 2000, members of the QI Data Committee are writing two articles for publication in a peer-reviewed journal. The topics of these articles will be vascular access infection and vascular access selection.

Needle-Stick Safety

This project was designed in response to recent legislation on needle-stick safety for healthcare employees. Manufacturer's information along with forms and sample policies developed by Network #12 were distributed to all dialysis units in the four-state region. The facility staff used these materials to develop their unique needle-stick safety policies and procedures and to contact vendors for associated products.

Patient Care Technician Curriculum Development *Pilot Project*

Many states have passed legislation mandating minimum training requirements for patient care technicians (PCTs) in dialysis units. The programs range from short seminars to college-level courses. The purpose of this pilot project was to ascertain the feasibility of developing a standardized patient care technician training curriculum. The curriculum would be used by a junior college to relieve facilities of the training burden.

The Network staff met with Kansas City-area Unit Administrators to assess interest in this initiative, which was strong. During this meeting, the administrators provided a broad outline of subjects that would ideally be included in such a course. Subsequent to the meeting, the Network staff reviewed and compiled submitted PCT training and orientation materials. This information was provided to all administrators for comment and revision.

In 2003, the Network staff plans to summarize the curriculum; it's potential benefits and PCT market data for the area junior and technical colleges. Unfortunately, recent changes to state education budgets make it much less likely there will be any interest in offering the program. However, follow-up phone calls will be made to the appropriate school personnel to assure receipt of the information and answer any questions.

Provider Community Education

Annual Meeting

The Annual Education and Business Meeting, originally scheduled for September 13-14, 2001, was held January 17-18, 2002. Attendance at the meeting was overwhelming with over 350 participants. This marked the first year in which there were concurrent sessions available. Topics addressed included the following:

- Vascular Access Care
- Water Treatment for Hemodialysis
- Preventing Diabetic Complications in ESRD; Allied Health and Physicians
- Pre-ESRD Care, Facilitating Transition
- Facilitating Adjustment, Health and Life Issues
- Addressing the Nursing Shortage

Participant evaluations were very positive.

The Business Meeting held on Friday was well attended. The Council reviewed activities for the previous year including financial information and major accomplishments. The Executive Director presented an overview of future goals and activities. The Executive Committee Chair recognized retiring Board members. No new business was brought before the Council and the meeting adjourned.

Staff Newsletter

The Network produced and distributed facility staff newsletters. Printed semi-annually, the newsletter serves to update renal professionals on current issues effecting the facility-Network relationship with articles from each of the Network's functional groups; e.g., quality improvement, data, patient services, meetings, and administration. Additionally, the newsletters are available on the Network #12 website.

Distribution of Materials

The Network office houses a large variety of materials that it distributes upon request to primarily facility personnel. Over [insert table here]

Patient Education

Patient Newsletters

In 2002, Network #12 continued distribution of a quarterly newsletter for patients and family members via facility personnel. "Nephron News and You" focuses on timely topics related to dialysis and transplant care. Newsletters printed during 2002 focused on nutrition, fluid intake management, and self-management and

empowerment. Each newsletter includes a seasonal recipe with a disclaimer for all patients to please consult their dietitian prior to use, other resources available such as web sites, and a puzzle based on words related to the newsletter's overall theme. The purpose of the puzzle is to familiarize the reader with technical terms important to their care.

Patients who work and return (via facility personnel) three of the puzzles receive a patient education certificate of achievement. The three facilities with the most patient certificate participation are presented with a certification of appreciation at the Annual Meeting.

All newsletters are available for download at the Network #12 website.

Education Through the Network Website

In March of 2002, ESRD Network #12 launched its new website. Located at www.network12.org, activity increased dramatically over the next few months with the new address and design. Content includes information of interest to patients, professionals, corporations, vendors, CMS, and the general public.

In 2001, the Network #12 website consisted of a single page and had 1,525 visits and pages requested (visits are requests for web pages from another PC. Multiple requests are still considered one visit, unless they occur after the 30-minute timeout, at which point it is considered a new visit. Pages, also known as "page views" or "page impressions," are URLs that would be considered an actual page being requested.) In 2002, the number of visits increased to 4,064 and the number of pages requested increased to 9,687, an increase of 166% and 535% respectively.

Consistently, the most downloaded material is the Annual Report. The most popular downloads are as follows (number of requests):

- 2000 Annual Report (1,308)
- 2002 Summer Patient Newsletter (813)
- Facility Directory (778)
- 2002 Spring Patient Newsletter (632)
- 2001 Fall Patient Newsletter (306)
- 2002 Facility Staff Newsletter (260)
- 2001 Winter Patient Newsletter (222)
- Prevalence Reports (140)

Assistance to Facilities and Patients Related to Care Issues

Outreach to New and Existing Patients and Staff

In October 2002, the Centers for Medicare and Medicaid Services (CMS) began distributing a packet of basic information to every new ESRD patient via their home address. The packet includes a cover letter from the Network #12 Executive Director that contains the following information:

- An introduction to the Network’s grievance process
- Instructions on contacting the Network #12 office including our toll-free number maintained for patient use—**800-444-9965**
- Complaint intake phone numbers for the four state survey agencies

In addition to this packet, facility personnel are required by the Medicare regulations to provide new patients with information on contacting the Network. Previously distributed to all existing facility, the Network provides all new facilities with a poster advertising the Network’s toll-free number for display in the patient waiting room or another appropriate area.

Overview of Activity

Figure 23

Number of Calls by Category, 2002	
Formal Grievance	9
Patient Complaint	15
Patient Inquiry	52
Facility Concerns	38
Facility Inquiry	206
State Agency	15
Other	178

During 2002, the office received 1,035 calls from patient, family members, facility staff, and others on a variety of issues. As displayed in Figure, 23 206 calls were from facility personnel, of which 25 were requests for information addressing challenging patient behaviors. Additionally, there were 15 calls from State Survey Agency personnel requesting information related to grievances filed against facilities. Figure 24 lists the type of questions and concerns related to patient

care received during 2002.

In response to calls involving challenging patient behaviors, the Network Patient Services and Quality Improvement Staff review the ESRD Conditions of Coverage with the caller, in particular, Condition §405.2138, Patient Rights and Responsibilities, paragraph 2 under Standard B states that all patients treated in the facility “are transferred or discharged only for medical reasons or for the patient’s welfare or that of other patients, or for nonpayment of fees (except as prohibited by title XVIII of the Social Security Act), and are given advance notice to ensure orderly transfer or discharge.”

Second, the Network staff inquires about the process that the facility has undergone to identify the problem with the patients. The following questions are raised:

- Have there been any care planning meetings? If so, who attended? Was the entire renal team present so that the team is able to be consistent in the message presented to the patient?
- Has the patient received a written description of the facility's expectations and the patient's rights?
- What support system does the patient have that might affect the situation?
- Importantly, does the facility have a policy regarding transfer or termination of patients and is that process being followed?
- If there was a situation that involved violence, was a police report filed?
- If there were threats of violence, have appropriate measures been taken to protect other patients' and staff members' safety?
- Have staff acted inappropriately and have steps been taken to rectify the behavior?
- Has the facility's legal representation been notified?

If a dismissal is imminent, the Network staff ascertain whether or not the patient has been notified in writing, how long the patient has to transfer, and how has the facility helped the patient in transferring. If necessary, we facilitate a transfer. Unfortunately, an increasing number of patients have been dismissed from different facilities and are relying on hospital emergency rooms to receive care.

Figure 24

Type of Complaints and Questions

Related to Patient Care, 2002

Care Practices

- Dialysis Adequacy
- Vascular Access QIP
- Unit cleanliness
- Unit temperature

Insurance and Billing Problems

- Costs not covered by Medicare
- Billing questions
- Transplant medication coverage

Other Concerns

- Inappropriate patient behavior
- Transfer policies
- Patient rights
- Patient Behavior Contracts
- Transportation
- Respect and dignity issues
- Patient education
- Location of other facilities

CMS Goal #2 Improving Data Reporting, Reliability, and Validity between ESRD Facilities, Network #12, and CMS

Summary of Activities

Efforts to improve the reliability and validity of ESRD data were two-fold. Primarily, internal Network #12 processes were reviewed and improved to increase efficiency and effectiveness. Secondly, the Network focused on reconciling patient-specific data inconsistencies between Social Security Administration, CMS billing, and previously reported Network data. This large data cleanup effort is part of the preparation for migration to the new national renal registry, REMIS (Renal Management Information System)

Annual Facility Survey

The first quarter of the year was dedicated to completion and submission of the annual facility survey. Last fall, the data personnel reviewed the process they use to complete this deliverable and made some small yet effective changes. This year's facility survey was completed on time with minimal disruption to the facilities or Network personnel.

REBUS (Renal Beneficiary Utilization System) to REMIS (Renal Management Information System) Migration

One of the opportunities for improvement identified by the Office of Inspector General's report of 2000 was REBUS with its inaccuracies. Due to many different problems including lack of follow-up to the problems created by merging many different databases, the registry contained many inaccurate and invalid records.

Prior to the OIG report, CMS had identified a need for a better system and began planning creation of a new system called REMIS. After much discussion and debate, CMS decided to base the patient information portion on the SIMS (Standardized Information Management System) data and platform because of the Networks' proven reputation for validity and reliability of patient information.

Regardless of the quality of the Networks' current data, many records remained in REBUS that warranted investigation. As such, the data personnel and facility staff spent countless hours researching and verifying thousands of records during the year. CMS anticipates moving to REMIS in July 2003.

SIMS, VISION, and CROWN: A Meta-integration Project

SIMS is the Standardized Information Management System implemented during 1999-2000. This database and software package standardized patient and facility data collection and management for all ESRD Networks. Implementation included establishing a central repository for the majority of patient and facility records and a wide-area computer network via the internet. Because all Networks use the same software, the Networks maintain a patient's treatment history in one national file that is accessible for viewing and transfer by any other Network. Also, the WAN (wide-

area network) is appropriately protected to prevent access by unauthorized users and allows safe exchange of confidential information within the network.

VISION (Vital Information System to Improve Outcomes in Nephrology) is an internet-based software package that allows facilities to file forms and make changes to patient tracking data electronically. The information is delivered to the Network office and is cleaned and verified before uploading to the SIMS database.

CMS moved into the facility training and implementation phase of this project during 2002. Exclusive to hospital-based and free-standing, independent facilities, each Network was asked to train twelve percent of its facilities meeting these criteria by December 1, 2002. Network #12 was one of the nation-wide leaders in training and implementing VISION use in facilities. Network staff held a two-day workshop with SIMS personnel providing the presentations on October 15-16, 2002. Personnel from 15 facilities received training with thirteen units actively using the system at the end of the year.

2002 Data Champions	
Advanced Renal Svcs McCook, NE	Mary Greeley Medical Center Marshalltown, IA
Box Butte Dialysis Unit Alliance, NE	Milton & Ethel Warner Dialysis Unit Spencer, IA
Buena Vista County Hospital Storm Lake, IA	Nebraska Health System Kearney, NE
Covenant - MercyCare Dialysis Vinton, IA	North Iowa Mercy Dialysis Center Charles City, IA
Covenant Waverly Dialysis Center Waverly, IA	North Iowa Mercy Dialysis Center Algona, IA
DePaul Health Center Bridgeton, MO	Northeast Nebraska Dialysis Center Norfolk, NE
Dialysis Center of South Omaha Omaha, NE	Ozarks Dialysis Services Branson, MO
Dialysis Center of St. Joseph St. Joseph, MO	Renal Care Group – Marshall Marshall, IA
Farmington Dialysis Center Farmington, MO	RMI Dialysis Center of Maryville Maryville, MO
FMC Midwest Dialysis Sioux City, IA	Saline County Dialysis Junction City, KS
Gambro Healthcare - St. Louis West PD St. Louis, MO	St. Anthony's Hospital Carroll, IA
Kidney Care PC – Atlantic Atlantic, IA	V. A. Medical Center Kansas City, MO
Lutheran Hospital - La Crosse West Union, IA	Warner Dialysis Center Spirit Lake, IA
	Wayne County Hospital ESRD Corydon, IA

CROWN (Consolidated Renal Operations in a Web-enabled Network) is the platform and secure wide-area computer network that allows protected exchange of confidential patient information via the internet.

Data Champions and Stars

The Network provides facilities with reports on accuracy and timeliness of submitted CMS forms. Distributed semi-annually these compliance reports provide feedback on the facility’s data reporting performance. The calculation is a simple percentage of forms received divided by the number of forms completed accurately and the number submitted on time.

Beginning in 1999, we have been distributing certificates of merit for quarterly forms compliance. Additionally, we honor our “Data Champions”—facilities that exceeded the CMS compliance goals—and “Data Stars”—facilities that met the CMS compliance guidelines—with certificates.

ESRD NETWORK #12

2002 Data Stars	
Saline County Dialysis Salina, KS	Renex Dialysis Clinic of University City University City, MO
Poplar Bluff Dialysis Center Poplar Bluff, MO	Advanced Renal Services Hastings, NE
Mercy Dialysis Center Mason City, IA	Mercy Medical Center Cedar Rapids, IA
Johnson County Dialysis Lenexa, KS	Mercy Hospital Medical Center Des Moines, IA
Dialysis Center of Lincoln Northwest Lincoln, NE	Advanced Renal Services Fremont, NE
Southeastern Renal Dialysis, L.C. West Burlington, IA	Gambro Healthcare - Hospital Hill Kansas City, MO
Wyandotte County Dialysis, L L C Kansas CityM KS	Kidney Disease Ctr of the Ozark Mountain Grove, MO
Blessing Hospital ESRD Center Hannibal, MO	Bio-Medical Applications of Leawood Leawood, KS
Genesis Medical Center Davenport. IA	Dialysis Center of Lincoln Lincoln, NE
Dialysis Center of North Omaha Omaha, NE	Gambro Healthcare Washington, MO
Kidney Disease Ctr of the Ozarks Branson ,MO	Hope Again Dialysis Kennett, MO
Renal Treatment Centers Independence, KS	Renex Dialysis Center of St. Louis St. Louis, MO
Gambro Healthcare - Wyandotte West Kansas City, KS	Covenant Medical Center Waterloo, IA
Dialysis Center of Cameron Cameron, MO	Gambro - St Louis West St. Louis, MO
Renex Dialysis Clinic of Maplewood St. Louis, MO	University of Iowa Hospital & Clinics Iowa City, IA
Renal Treatment Centers Derby, KS	Quad Cities Kidney Center Davenport, IA
Dialysis Center of West Omaha Omaha, NE	Gambro Healthcare Overland Park, KS
Dialysis Clinics, Inc. Omaha, NE	Gambro Healthcare Rolla, MO
Siouxland Dialysis Sioux City, IA	Renal Treatment Centers Parsons, KS
Affiliated Hospital Dialysis – South Fenton, MO	Southeastern Renal Dialysis, L.C. Mt. Pleasant, IA
Renal Center of Storm Lake, LLC Storm Lake, IA	Dialysis Clinics, Inc – Baptist Kansas City, MO
Saline County Dialysis Concordia, KS	Cedar Valley Dialysis Center Waterloo, IA
Samaritan Memorial Hospital Macon, MO	Garden City Dialysis Center Garden City, KS
Kidney Care, P. C. Des Moines, IA	Dialysis Clinics, Inc. - St. Joseph Kansas City, MO
Dialysis Clinics, Inc West Plains, MO	Dialysis Clinics, Inc. Mexico, MO
Jefferson County Dialysis Center Festus, MO	Cape County Regional Dialysis Center Cape Girardeau, MO
Kidney Disease Ctr of the Ozarks Bolivar, MO	Dialysis Center of Atchison Atchison, KS
Pella Regional Health Center Pella, IA	Salem Memorial Hospital Salem MO
Deaconess Medical Center – West St. Louis, MO	Southeastern Renal Dialysis-Lee County Keokuk IA
Covenant - MercyCare Dialysis Independence. IA	Susan B. Allen Dialysis Center El Dorado KS
Dialysis Specialists of Topeka, Inc. Topeka, KS	Dialysis Clinics, Inc. - West Omaha Omaha, NE
Renal Care Group - Joplin West Joplin, MO	Dialysis Clinics, Inc.- Jefferson City East Jefferson City, MO
University of Iowa Hospital & Clinics North Liberty, MO	Nebraska Health System Shenandoah, IA
BMA of Lee's Summit Lee's Summit, MO	Renex Dialysis Clinic of Bridgeton Bridgeton, MO
Dialysis Center of Council Bluffs Council Bluffs, IA	Blue Springs Dialysis Center Blue Springs, MO
Mary Greeley Medical Center Ames, IA	Affiliated Hospital Dialysis Creve Coeur, MO
Renal Treatment Centers Wichita, KS	Renex Dialysis Clinic of Creve Coeur Creve Coeur, MO
East Wichita Dialysis Center Wichita, KS	Great Plains Medical Center North Platte, NE
Dialysis Center of Fremont Fremont, NE	Metro Dialysis Center Normandy, MO
St Louis Renal Care - Forest Park St. Louis, MO	Barnes Hospital St. Louis
Kidney Care – Newton Newton, KS	Dialysis Center of Columbus Columbus
Kidney Care, P. C. – East Des Moines, NE	Kansas Dialysis Services Ottawa
Pratt Dialysis Center Pratt, KS	Renal Care Group Arkansas City
University of Iowa Hospital & Clinics Washington, IA	Samaritan Dialysis Unit Clinton
Dialysis Center of Beatrice Beatrice, NE	Bluff City Dialysis Poplar Bluff
Penn Valley Dialysis Center Kansas City, MO	Trinity Regional Hospital Ft. Dodge
Cardinal Glennon Children's Hospital St. Louis, MO	Gambro Healthcare Lake St Louis
Dialysis Clinics, Inc. Columbia, MO	Gambro Healthcare – Northland North Kansas City
Renal Treatment Centers Scottsbluff, NE	Gambro Healthcare - St. Louis West St. Louis, MO
Tri- State Dialysis Dubuque, IA	RMI Dialysis Center of Chillicothe Chillicothe, MO
Chromalloy American Kidney Center St. Louis, MO	Dialysis Clinics, Inc. Moberly, MO
Advanced Renal Services Lincoln, NE	

CMS Goal #3 Establishing and Improving Partnerships and Cooperative Activities among and between Network #12, Quality Improvement Organizations (QIOs), State Survey Agencies (SSAs), and ESRD Facilities

Summary of Activities

Routine collaborative activities during 2002 include the following:

- Informal exchanges of information between Network staff and state surveyors prior to routine, recertification surveys
- Informal consultations between Network staff and state surveyors in regard to questions arising from grievances or surveys
- Referral of a grievance to the appropriate Quality Improvement Organization for peer review services
- Referral of grievances to the appropriate state survey agency when the matter was directly related to the regulations

Network #12 began quarterly teleconferences inviting representatives from each State Survey Agency (SSA) and CMS Region VII office, including the Certification and Survey Division personnel, to attend. Issues discussed included Network QI initiatives and area survey trends.

The QI Director and QI Specialist attended a meeting hosted by CMS in Williamsburg, Virginia, for the purpose of beginning collaboration activities between ESRD Networks and SSAs. Communication between the state and Network #12 has improved with sharing of Network projects and survey results.

CMS Goal #4 Evaluating and Resolving Patient Grievances

Overview of the Grievance Process

The following is a general overview of the Network #12 Grievance Procedure, steps of which are primarily dictated by the CMS contract:

- A written grievance is received at the Network office.
- Network staff ascertains what steps the patient has taken previously to resolve the problem and the patient's goal(s).
- Network staff notifies the ESRD provider or physician's office of the grievance and request a response to the concern that may include a request for specific records.
- Network staff removes all identifiers from information provided by all parties.

- The Grievance Committee reviews the case and either makes a determination regarding patient care, asks for additional information, or refers the case to the Medical Review Board.
- Network staff drafts a response to the grievant, which is sent to the facility or physician for review and comment.
- The grievant is notified of the Grievance Committee's decision including facility or physician comments and their appeal rights.

A facility visit may be necessary at any time during this process due to the nature of the complaint. Matters serious enough to be an immediate threat to the patient's or other patients' health and safety are referred immediately to the appropriate State Survey Agency.

If care problems are found, the Medical Review Board may request an improvement plan from the facility. If the facility is not successful in correcting the identified problem within the time frame of the improvement plan, the MRB with support of the Executive Committee may recommend that CMS sanction the facility. A grievant who is not satisfied with the Network's findings in a case may appeal the decision to CMS Region VII office.

Figure 25

2002 Grievances Allegations	
Type of Allegation ¹	No.
Policy adherence	3
Quality of care ²	3
Patient transfer or discharge	3

¹ Allegation types are restricted to those available within the Standardized Information Management System software contacts module. Grievances are recorded according to type that best categorizes the complaint of those categories listed.

² Allegations in these cases involved nurse licensure, patient-to-staff ratios, and overall poor care.

2002 Grievance Activity

Figure 26

2002 Grievances Resolutions	
Type of Resolution	No.
Staff education on facility policies and procedures	3
Facility encouraged to uniformly enforce policies and procedures	3
Patient education on changes in policies, including annual updates	1
Referral to State Survey Agency	1

procedures. The corrective action plan was followed and the grievance is now closed.

Network #12 investigated five formal grievances during 2002, four filed during 2002, with one filed at the end of 2000. Grievances by type are illustrated in Figures 25 and 26. All grievances filed during 2002 were resolved at the end of year. The Medical Review Board requested and received corrective action plans from one facility addressing adherence to patient care policies and



Sanction Recommendations

No sanctions were recommended or imposed by Network #12 during 2002.

5

Recommendations for Additional Facilities

There was much activity in opening and closing dialysis units during 2002. As of December 31, 2002, Network #12 consisted of the following types of facilities:

4 Organ Procurement Agencies

20 Medicare-certified Transplant Centers

226 Medicare-certified Dialysis Providers (including units offering outpatient, home training, and acute-only services)

5 Veterans Administration or Federal Prison System Dialysis Providers

Compared to 2001, net growth for dialysis units, including veterans and federal prison providers, consisted of four facilities. Figure 27 below tracks a decade of facility growth in the four-state region showing fairly conservative growth through 1995 followed by three years of double-digit expansion. Theoretically, the rapid expansion may reflect a delayed market response to increased consumer demand. Relative slowing for the past three years may reflect market saturation.

Figure 27

Dialysis Facility Counts and Growth by Calendar Year		
Year	Facility Count	Average Percent Growth
1992	113	6.60%
1993	123	8.84%
1994	130	5.69%
1995	137	5.38%
1996	159	16.05%
1997	184	15.72%
1998	204	10.87%
1999	205	00.49%
2000	215	4.88%
2001	219	1.86%
2002	226	3.20%

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Data Tables

2002 Network #12 Incidence Data

Incidence reflects the number of persons who were newly diagnosed as having ESRD during a calendar year. The data show the number of newly diagnosed patients who started renal replacement therapy (dialysis or transplant) in 2001. Patients are not included if they are returning to dialysis following rejection of a kidney transplant or if they are existing ESRD patients transferring into the Network #12 area.

Incidence rates, standardized on the same unit of population, are useful for future population projections, long-range health care planning and for comparison among regions. Caution is required in interpreting data where there is a small population base. In such areas, a difference of only a small number of patients can make the rates in different years appear to vary considerably. Incidence rates become more analogous as the population base increases in size.

2002 Network #12 Prevalence Data

Prevalence reflects the number of people on chronic maintenance dialysis in the Network on December 31, 2002. Patients are reported as to their geographic residence to determine and compare prevalence rates. These data do not include individuals with functioning renal transplants or those patients who are treated in a contiguous state. A prevalence rate will indicate if a certain disease is significantly more commonplace in some areas than in others. It can be applied to future population projections, used for long-range health care planning.

Special Note on Data Tabulation

The data tables and charts include only patients who are dialyzing or received a renal transplant at a facility located within the Network's four-state area. Also, tabulations are exclusive to those patients for whom the necessary documents have been filed; i.e., Medical Evidence Reports (CMS 2728 forms) or ESRD Death Notifications (CMS 2746). Patient modality or status changes are confirmed with the Annual Facility Survey and the Renal Beneficiary and Utilization System (REBUS) database prior to being reported in these tables.

ESRD Network #12

Table #1

Newly Diagnosed Chronic ESRD Patients (ESRD Incidence)

Newly diagnosed chronic ESRD patients by state of residence, age, gender, race, and primary diagnosis for calendar year 2002.

Age Group	IA	KS	MO	NE	Other	Total
Others						
00-04	1	0	2	1	0	4
05-09	2	1	2	1	1	7
10-14	4	3	3	6	2	18
15-19	4	0	10	2	2	18
20-24	8	2	9	4	4	27
25-29	10	14	25	2	1	52
30-34	11	20	48	11	2	92
35-39	19	18	47	11	4	99
40-44	39	34	88	18	6	185
45-49	25	38	106	25	9	203
50-54	55	57	149	22	12	295
55-59	63	74	161	48	12	358
60-64	63	57	201	40	6	367
65-69	81	77	205	57	14	434
70-74	93	91	237	62	23	506
75-79	97	106	225	70	14	512
80-84	87	67	187	48	11	400
>=85	58	35	101	38	4	236
Missing	0	0	0	0	0	0
Total	720	694	1806	466	127	3813
Gender						
Others						
Female	336	311	829	198	57	1731
Male	384	383	977	268	70	2082
Missing	0	0	0	0	0	0
Total	720	694	1806	466	127	3813
Race						
Others						
Asian	6	5	9	2	1	23
Black	56	139	512	51	17	775
Indian subcontinent	1	0	3	0	0	4
Mid-East Arabian	0	7	4	0	0	11
Native American	3	4	7	14	2	30
Other/Multiracial	0	1	4	0	0	5
Pacific Islander	0	2	3	1	0	6
White	653	535	1264	397	107	2956
Missing	0	0	0	0	0	0
Unknown	1	1	0	1	0	3
Total	720	694	1806	466	127	3813

Table #1

Primary Diagnosis	IA	KS	MO	NE	Other	Total
Others						
Cystic Kidney	18	17	42	15	7	99
Diabetes	295	316	790	191	36	1628
Glomerulonephritis	83	74	125	36	9	327
Hypertension	164	151	516	122	40	993
Other	118	91	222	63	16	510
Other Urologic	10	9	41	7	3	70
Missing	0	0	0	0	0	0

ESRD Network #12

Unknown	32	36	70	32	16	186
Total	720	694	1806	466	127	3813

Source of information: Network SIMS Database

Date of Preparation: June 2003

Race: The categories are from the CMS-2728 Form.

Diagnosis: Categories are from the CMS-2728. A diagnosis of 'unknown' is ICD-9 code 7999.

This table cannot be compared to the CMS facility survey because the CMS Facility Survey is limited to dialysis patients receiving outpatient services from Medicare approved dialysis facilities.

This table includes 77 patients with transplant therapy as an initial treatment.

This table includes 45 patients receiving treatment at VA facilities.

ESRD Network #12

Table #2

Living ESRD Dialysis Patients (ESRD Prevalence)

All active Dialysis Patients by state of residence, age, race, gender and primary diagnosis as of 12/31/2002 .

	IA	KS	MO	NE	Other	Total
Age Group						
Others						
00-04	1	2	3	0	1	7
05-09	2	1	3	2	3	11
10-14	4	6	9	4	1	24
15-19	11	7	26	4	7	55
20-24	23	17	59	15	8	122
25-29	29	39	92	19	10	189
30-34	42	61	194	42	11	350
35-39	67	70	228	54	19	438
40-44	102	111	350	78	37	678
45-49	102	160	442	89	45	838
50-54	150	191	583	96	44	1064
55-59	178	221	562	133	44	1138
60-64	185	232	631	117	41	1206
65-69	224	240	638	161	42	1305
70-74	267	248	700	142	47	1404
75-79	282	250	626	161	41	1360
80-84	219	155	415	120	31	940
>=85	102	74	205	67	10	458
Missing	0	0	0	0	0	0
Total	1990	2085	5766	1304	442	11587
Gender						
Others						
Female	924	974	2731	580	175	5384
Male	1066	1111	3035	724	267	6203
Missing	0	0	0	0	0	0
Total	1990	2085	5766	1304	442	11587
Race						
Others						
Asian	28	26	41	14	2	111
Black	192	532	2346	210	140	3420
Indian subcontinent	2	2	8	1	0	13
Mid-East Arabian	1	7	9	3	0	20
Native American	15	28	29	51	6	129
Other/Multiracial	5	33	15	6	2	61
Pacific Islander	0	9	12	2	1	24
White	1745	1443	3301	1015	282	7786
Missing	0	0	0	0	0	0
Unknown	2	5	5	2	9	23
Total	1990	2085	5766	1304	442	11587
	IA	KS	MO	NE	Other	Total
Primary Diagnosis						
Others						
Cystic Kidney	68	82	157	48	9	364
Diabetes	797	906	2313	533	125	4674
Glomerulonephritis	275	315	631	148	58	1427
Hypertension	455	427	1735	302	126	3045
Other	253	228	571	154	62	1268
Other Urologic	68	44	138	36	9	295
Missing	0	0	0	0	0	0
Unknown	74	83	221	83	53	514
Total	1990	2085	5766	1304	442	11587

Source of information: Network SIMS Database

Date of Preparation: June 2003

Race: The categories are from the CMS-2728 Form.

Diagnosis: Categories are from the CMS-2728. A diagnosis of 'unknown' is ICD-9 code 7999.

This table cannot be compared to the CMS facility survey because the CMS Facility Survey is limited to dialysis patients receiving outpatient services from Medicare approved dialysis facilities.

The numbers may not reflect the true point prevalence due to different definitions for transient patients.

This table includes 109 patients receiving treatment at VA facilities.

ESRD Network 12

Table #3

Dialysis Modality

Number of living patients by modality by dialysis facility self-care

Self-Care Settings - Home

Provider	HEMO		CAPD		CCPD		IPD		TOTAL	
	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
160005	0	0	0	0	1	0	0	0	1	0
160016	0	0	0	0	0	1	0	0	0	1
160030	0	0	3	2	1	0	0	0	4	2
160033	0	0	0	0	0	0	0	0	0	0
160044	0	0	0	0	0	0	0	0	0	0
160048	0	0	0	0	0	0	0	0	0	0
16004F	0	0	1	1	0	0	0	0	1	1
160058	24	22	3	3	12	7	0	0	39	32
160064	0	0	0	0	6	4	0	0	6	4
160066	0	0	0	0	0	0	0	0	0	0
160067	0	0	2	0	1	1	0	0	3	1
160079	0	0	5	5	8	4	0	0	13	9
160080	0	0	0	0	0	0	0	0	0	0
160083	1	1	28	7	16	25	0	0	45	33
160089	0	0	0	0	1	1	0	0	1	1
160112	0	0	0	0	0	0	0	0	0	0
160113	0	0	0	0	0	0	0	0	0	0
162500	0	0	9	8	9	7	0	0	18	15
162501	0	0	20	15	23	25	0	0	43	40
162506	0	0	0	0	0	0	0	0	0	0
162507	0	0	0	0	0	0	0	0	0	0
162508	0	0	0	0	0	0	0	0	0	0
162509	0	0	2	0	1	2	0	0	3	2
162511	0	0	0	0	0	0	0	0	0	0
162512	0	0	0	0	0	0	0	0	0	0
162513	0	0	0	0	0	0	0	0	0	0
162514	0	0	0	0	0	0	0	0	0	0
162515	0	1	16	19	14	10	0	0	30	30
162516	0	0	0	1	5	5	0	0	5	6
162517	0	0	0	0	0	0	0	0	0	0
162518	0	0	1	0	2	3	0	0	3	3
162519	0	0	0	0	0	0	0	0	0	0
162520	0	0	0	0	0	0	0	0	0	0
162521	0	0	0	0	0	0	0	0	0	0
162522	0	0	0	0	0	0	0	0	0	0
162523	0	0	0	0	0	0	0	0	0	0
162524#	0	0	0	0	0	0	0	0	0	0
162525#	0	0	0	0	0	1	0	0	0	1
163500	0	0	0	0	0	0	0	0	0	0
163501	0	0	0	0	0	0	0	0	0	0
163502	0	0	0	0	0	0	0	0	0	0
163503	0	0	0	0	0	0	0	0	0	0
163504	0	0	0	0	0	0	0	0	0	0
163505	0	0	0	0	0	0	0	0	0	0
163506	0	0	0	0	0	0	0	0	0	0
163507	0	0	0	0	0	0	0	0	0	0
163508	0	0	0	0	0	0	0	0	0	0
163509	0	0	0	0	0	0	0	0	0	0
163510	0	0	0	0	0	0	0	0	0	0
163511	0	0	0	0	0	0	0	0	0	0
163512	0	0	0	0	0	0	0	0	0	0

ESRD Network 12

Table #3

Dialysis Modality

Number of living patients by modality by dialysis facility self-care

Self-Care Settings - Home

Provider	HEMO		CAPD		CCPD		IPD		TOTAL	
	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
163513#	0	0	0	0	0	0	0	0	0	0
IA Total	25	24	90	61	100	96	0	0	215	181

ESRD Network 12

Table #3

Dialysis Modality

Number of living patients by modality by dialysis facility self-care

Self-Care Settings - Home

Provider	HEMO		CAPD		CCPD		IPD		TOTAL	
	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
170017	0	0	0	0	0	0	0	0	0	0
170040	5	4	12	6	6	9	0	0	23	19
172501	0	1	1	4	0	0	0	0	1	5
172502	2	1	9	5	6	5	0	0	17	11
172503	0	0	57	60	7	10	0	0	64	70
172504	6	6	30	49	35	12	0	0	71	67
172505	0	0	0	0	0	0	0	0	0	0
172506	0	0	0	0	0	0	0	0	0	0
172507	0	0	0	0	0	0	0	0	0	0
172508	1	1	15	22	17	10	0	0	33	33
172509	0	0	9	10	18	27	0	0	27	37
172510	0	0	0	0	0	0	0	0	0	0
172511	0	0	0	0	0	0	0	0	0	0
172512	0	0	0	0	0	0	0	0	0	0
172514	0	0	0	0	0	0	0	0	0	0
172515	0	0	0	0	0	0	0	0	0	0
172516	0	0	0	0	0	0	0	0	0	0
172517	0	0	0	0	0	1	0	0	0	1
172518	0	0	0	0	0	0	0	0	0	0
172519	0	0	0	0	0	0	0	0	0	0
172520	0	0	0	0	0	0	0	0	0	0
172521	0	0	0	0	0	0	0	0	0	0
172522	0	0	0	0	0	0	0	0	0	0
172523	0	0	0	0	0	0	0	0	0	0
172524	0	0	0	0	0	0	0	0	0	0
172525	0	0	0	0	0	0	0	0	0	0
172526	0	0	0	0	0	0	0	0	0	0
172527	0	0	5	4	7	4	0	0	12	8
172528	0	0	0	0	0	0	0	0	0	0
172529	0	0	0	0	0	0	0	0	0	0
172530	0	0	0	0	0	0	0	0	0	0
172531	0	0	0	0	0	0	0	0	0	0
172532	0	0	0	0	0	0	0	0	0	0
172533	0	0	0	0	0	0	0	0	0	0
172534	0	0	0	0	0	0	0	0	0	0
172535	0	0	0	0	0	0	0	0	0	0
172536	0	0	0	0	0	0	0	0	0	0
172537	0	0	0	0	0	0	0	0	0	0
172538	0	0	0	0	0	0	0	0	0	0
172540#	0	0	0	0	0	0	0	0	0	0
172541#	0	0	0	0	0	0	0	0	0	0
KS Total	14	13	138	160	96	78	0	0	248	251

ESRD Network 12

Table #3

Dialysis Modality

Number of living patients by modality by dialysis facility self-care

Self-Care Settings - Home

Provider	HEMO		CAPD		CCPD		IPD		TOTAL	
	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
260008	0	0	0	0	5	0	0	0	5	0
260020	0	0	0	0	0	0	0	0	0	0
260021	0	0	11	0	0	0	0	0	11	0
260027	0	0	0	0	0	0	0	0	0	0
260040	0	0	0	2	0	0	0	0	0	2
26004F	0	0	2	3	9	11	0	0	11	14
26009f	0	0	3	3	0	1	0	0	3	4
260100	0	0	0	0	0	0	0	0	0	0
260113	0	0	1	0	1	1	0	0	2	1
260141	0	0	0	0	0	1	0	0	0	1
260172	0	0	0	0	0	0	0	0	0	0
260176	0	0	0	0	0	0	0	0	0	0
260179#	0	0	0	0	0	0	0	0	0	0
262501	1	1	17	15	23	36	0	0	41	52
262502	0	0	0	2	0	0	0	0	0	2
262503	0	0	0	0	2	0	0	0	2	0
262504	0	0	4	5	29	29	0	0	33	34
262505	0	0	0	0	0	0	0	0	0	0
262506	11	9	22	24	10	4	0	0	43	37
262507	0	0	2	0	8	11	0	0	10	11
262508	1	1	26	24	23	27	0	0	50	52
262509	0	0	0	0	0	0	0	0	0	0
262511	0	0	0	0	0	1	0	0	0	1
262513	0	0	0	0	0	0	0	0	0	0
262514	4	3	23	18	11	16	0	0	38	37
262515	0	0	0	0	0	0	0	0	0	0
262516	0	0	0	0	0	0	0	0	0	0
262517	5	7	3	3	24	18	0	0	32	28
262520	0	0	0	0	0	1	0	0	0	1
262521	0	0	0	0	0	0	0	0	0	0
262522	0	0	0	0	0	0	0	0	0	0
262523	0	0	0	0	0	0	0	0	0	0
262524	0	0	0	1	0	0	0	0	0	1
262526	0	0	0	0	0	0	0	0	0	0
262527	0	0	0	0	0	0	0	0	0	0
262528	0	0	3	3	14	11	0	0	17	14
262530	0	0	0	0	0	0	0	0	0	0
262531	0	0	0	0	0	1	0	0	0	1
262534	1	1	0	0	2	0	0	0	3	1
262535	0	0	0	0	0	0	0	0	0	0
262536	0	0	5	2	8	12	0	0	13	14
262537	0	0	0	0	0	0	0	0	0	0
262538	0	0	0	0	0	0	0	0	0	0
262539	0	0	0	0	0	0	0	0	0	0
262540	0	0	10	1	15	11	0	0	25	12
262541	0	0	12	4	7	21	0	0	19	25
262542	0	0	0	0	0	0	0	0	0	0
262543	0	0	2	4	15	13	0	0	17	17
262544	0	1	2	1	3	1	0	0	5	3
262547	0	0	34	29	26	29	0	0	60	58

ESRD Network 12

Table #3

Dialysis Modality

Number of living patients by modality by dialysis facility self-care

Self-Care Settings - Home

Provider	HEMO		CAPD		CCPD		IPD		TOTAL	
	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
262548	0	0	0	0	0	0	0	0	0	0
262549	1	1	3	2	16	23	0	0	20	26
262550	0	0	0	0	0	0	0	0	0	0
262551	0	0	0	0	0	0	0	0	0	0
262552	0	0	0	0	0	0	0	0	0	0
262553	0	0	0	0	0	1	0	0	0	1
262554	0	0	0	0	1	1	0	0	1	1
262555	0	0	0	0	0	0	0	0	0	0
262556	0	0	0	0	0	0	0	0	0	0
262557	0	0	0	0	1	0	0	0	1	0
262559	0	0	1	0	0	0	0	0	1	0
262560	31	1	5	2	0	1	0	0	36	4
262561	0	0	1	3	2	3	0	0	3	6
262562	0	0	3	5	7	5	0	0	10	10
262563	1	1	1	0	1	0	0	0	3	1
262564	0	0	8	8	37	28	0	0	45	36
262565	5	6	50	33	13	16	0	0	68	55
262567	0	0	2	5	1	0	0	0	3	5
262568	0	0	0	0	0	0	0	0	0	0
262569	0	0	2	2	0	2	0	0	2	4
262570	0	0	0	0	0	0	0	0	0	0
262571^	0	0	0	0	0	0	0	0	0	0
262572	0	0	5	4	4	3	0	0	9	7
262573	0	0	0	0	0	1	0	0	0	1
262574	0	0	0	1	0	0	0	0	0	1
262575	0	0	0	0	0	0	0	0	0	0
262576	0	0	6	10	7	9	0	0	13	19
262577	0	0	0	0	0	0	0	0	0	0
262578	0	0	0	0	0	0	0	0	0	0
262579	0	0	1	0	5	1	0	0	6	1
262580	0	0	0	0	0	0	0	0	0	0
262581	0	0	0	0	0	0	0	0	0	0
262582	0	0	0	0	0	0	0	0	0	0
262583	0	0	0	0	0	0	0	0	0	0
262584	0	0	0	0	0	0	0	0	0	0
262585	0	0	4	8	36	40	0	0	40	48
262586	0	6	0	0	0	1	0	0	0	7
262587	0	0	0	0	0	1	0	0	0	1
262588	0	0	0	0	0	0	0	0	0	0
262589	0	0	0	0	0	0	0	0	0	0
262590	0	0	0	0	0	0	0	0	0	0
262591#	0	0	0	4	0	5	0	0	0	9
262592	0	0	0	0	0	0	0	0	0	0
262593#	0	0	0	5	0	3	0	0	0	8
262594#	0	0	0	0	0	0	0	0	0	0
262595#	0	0	0	0	0	0	0	0	0	0
262596#	0	0	0	0	0	0	0	0	0	0
262597#	0	0	0	1	0	8	0	0	0	9
262598#	0	0	0	0	0	0	0	0	0	0
263300	0	0	1	1	2	3	0	0	3	4
263301	0	0	0	0	8	9	0	0	8	9

ESRD Network 12

Table #3

Dialysis Modality

Number of living patients by modality by dialysis facility self-care

Self-Care Settings - Home

Provider	HEMO		CAPD		CCPD		IPD		TOTAL	
	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
263302	1	1	1	2	9	6	0	0	11	9
263503	0	0	0	0	0	0	0	0	0	0
263504	0	0	0	0	0	0	0	0	0	0
263505	0	0	0	0	0	0	0	0	0	0
263506	0	0	36	37	26	21	0	0	62	58
263508	0	0	0	1	0	0	0	0	0	1
263510	0	0	0	0	0	1	0	0	0	1
MO Total	62	39	312	278	411	448	0	0	785	765

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Table #3

Dialysis Modality

Number of living patients by modality by dialysis facility self-care

Self-Care Settings - Home

Provider	HEMO		CAPD		CCPD		IPD		TOTAL	
	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
280065	0	0	8	3	6	2	0	0	14	5
28006F	0	0	0	0	0	0	0	0	0	0
280088	1	2	13	13	1	4	0	0	15	19
280118	0	0	0	0	0	0	0	0	0	0
280125	0	0	0	0	0	0	0	0	0	0
281329#	0	0	0	0	0	0	0	0	0	0
281341	0	0	0	0	0	0	0	0	0	0
281344#	0	0	0	0	0	0	0	0	0	0
282500	1	0	10	10	19	15	0	0	30	25
282501	0	0	29	16	29	28	0	0	58	44
282502	0	0	0	0	0	0	0	0	0	0
282503	1	1	15	17	22	16	0	0	38	34
282504	0	0	10	3	3	0	0	0	13	3
282505	0	0	0	0	0	0	0	0	0	0
282506	0	0	0	0	0	0	0	0	0	0
282507	0	0	0	0	0	0	0	0	0	0
282508	0	0	3	0	1	0	0	0	4	0
282509	0	0	0	0	0	0	0	0	0	0
282510	0	0	0	0	0	0	0	0	0	0
282511	0	0	0	0	0	0	0	0	0	0
282512	0	0	0	0	0	0	0	0	0	0
282513	0	0	0	0	0	0	0	0	0	0
282514	0	0	0	0	0	0	0	0	0	0
282515	1	1	9	11	7	5	0	0	17	17
282516	0	0	17	9	3	1	0	0	20	10
282517#	0	0	0	0	0	0	0	0	0	0
283501	0	0	0	0	0	0	0	0	0	0
283503	0	0	0	0	0	0	0	0	0	0
NE0003#	0	0	0	0	0	0	0	0	0	0
NE Total	4	4	114	82	91	71	0	0	209	157
Network										
Total	105	80	654	581	698	693	0	0	1457	1354

Source of Information: Facility Survey (CMS 2744) and Network SIMS Database

Date of Preparation: June 2003

This table cannot be compared to the CMS Facility Survey because the CMS Facility Survey is limited to dialysis patients receiving outpatient15 Veterans Affairs Facility patients for 2001 and 19 Veterans Affairs Facility patients for 2002.

services from Medicare approved dialysis facilities. This table includes

Provider not operational in 2001

ESRD Network 12

Table #3

Dialysis Modality

Number of living patients by modality by dialysis facility self-care

Self-Care Settings - Home

Provider	HEMO		CAPD		CCPD		IPD		TOTAL	
	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
^ Provider not operational in 2002										

ESRD Network 12

Table #4

Dialysis Modality

Number of living patients by modality by dialysis facility
In-Center

Provider	HEMO		PD		TOTAL		TOTAL OF HOME & IN-CENTER	
	2001	2002	2001	2002	2001	2002	2001	2002
160005	17	19	0	0	17	19	18	19
160016	39	48	0	0	39	48	39	49
160030	32	32	0	0	32	32	36	34
160033	123	122	0	0	123	122	123	122
160044	24	25	0	0	24	25	24	25
160048	5	8	0	0	5	8	5	8
16004F	4	6	0	0	4	6	5	7
160058	41	58	0	1	41	59	80	91
160064	58	55	0	0	58	55	64	59
160066	7	12	0	0	7	12	7	12
160067	47	45	0	2	47	47	50	48
160079	108	111	0	0	108	111	121	120
160080	50	62	0	0	50	62	50	62
160083	107	106	1	1	108	107	153	140
160089	48	55	0	0	48	55	49	56
160112	36	27	0	0	36	27	36	27
160113	13	15	0	0	13	15	13	15
162500	114	116	0	1	114	117	132	132
162501	112	106	2	3	114	109	157	149
162506	37	36	0	0	37	36	37	36
162507	30	34	0	0	30	34	30	34
162508	12	11	0	0	12	11	12	11
162509	23	31	0	1	23	32	26	34
162511	23	22	0	0	23	22	23	22
162512	50	47	0	0	50	47	50	47
162513	53	53	0	0	53	53	53	53
162514	19	17	0	0	19	17	19	17
162515	131	107	1	2	132	109	162	139
162516	103	107	0	0	103	107	108	113
162517	26	22	0	0	26	22	26	22
162518	37	32	0	0	37	32	40	35
162519	9	11	0	0	9	11	9	11
162520	11	14	0	0	11	14	11	14
162521	8	0	0	0	8	0	8	0
162522	22	19	0	0	22	19	22	19
162523	11	12	0	0	11	12	11	12
162524#	0	24	0	0	0	24	0	24
162525#	0	27	0	0	0	27	0	28
163500	10	9	0	0	10	9	10	9
163501	36	41	0	0	36	41	36	41
163502	17	15	0	0	17	15	17	15
163503	9	15	0	0	9	15	9	15
163504	23	23	0	0	23	23	23	23
163505	19	20	0	0	19	20	19	20
163506	17	19	0	0	17	19	17	19
163507	12	14	0	0	12	14	12	14
163508	9	12	0	0	9	12	9	12
163509	22	24	0	0	22	24	22	24
163510	11	12	0	0	11	12	11	12

ESRD Network 12

Table #4

Dialysis Modality

Number of living patients by modality by dialysis facility
In-Center

Provider	HEMO		PD		TOTAL		TOTAL OF HOME & IN-CENTER	
	2001	2002	2001	2002	2001	2002	2001	2002
163511	22	15	0	0	22	15	22	15
163512	33	43	0	0	33	43	33	43
163513#	0	15	0	0	0	15	0	15
IA Total	1830	1931	4	11	1834	1942	2049	2123

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Table #4

Dialysis Modality

Number of living patients by modality by dialysis facility
In-Center

Provider	HEMO		PD		TOTAL		TOTAL OF HOME & IN-CENTER	
	2001	2002	2001	2002	2001	2002	2001	2002
170017	20	24	0	0	20	24	20	24
170040	91	102	0	0	91	102	114	121
172501	81	74	0	0	81	74	82	79
172502	64	73	0	0	64	73	81	84
172503	98	88	0	0	98	88	162	158
172504	150	142	0	0	150	142	221	209
172505	28	28	0	0	28	28	28	28
172506	34	42	0	0	34	42	34	42
172507	32	39	0	0	32	39	32	39
172508	118	127	0	0	118	127	151	160
172509	58	57	1	0	59	57	86	94
172510	18	21	0	0	18	21	18	21
172511	32	35	0	0	32	35	32	35
172512	23	25	0	0	23	25	23	25
172514	48	40	0	0	48	40	48	40
172515	23	28	0	0	23	28	23	28
172516	22	16	0	0	22	16	22	16
172517	24	27	0	0	24	27	24	28
172518	26	31	0	0	26	31	26	31
172519	101	102	0	0	101	102	101	102
172520	75	73	0	0	75	73	75	73
172521	40	47	0	0	40	47	40	47
172522	36	34	0	0	36	34	36	34
172523	65	61	0	0	65	61	65	61
172524	49	45	0	0	49	45	49	45
172525	10	7	0	0	10	7	10	7
172526	27	22	0	0	27	22	27	22
172527	38	35	0	0	38	35	50	43
172528	23	24	0	0	23	24	23	24
172529	17	15	0	0	17	15	17	15
172530	25	25	0	0	25	25	25	25
172531	20	20	0	0	20	20	20	20
172532	26	28	0	0	26	28	26	28
172533	47	59	0	0	47	59	47	59
172534	10	12	0	0	10	12	10	12
172535	22	29	0	0	22	29	22	29
172536	54	54	0	0	54	54	54	54
172537	25	27	0	0	25	27	25	27
172538	19	17	0	0	19	17	19	17
172540#	0	19	0	0	0	19	0	19
172541#	0	22	0	0	0	22	0	22
KS Total	1719	1796	1	0	1720	1796	1968	2047
260008	51	0	0	0	51	0	56	0
260020	10	1	0	0	10	1	10	1
260021	108	0	0	0	108	0	119	0
260027	41	37	0	0	41	37	41	37

ESRD Network 12

Table #4

Dialysis Modality

Number of living patients by modality by dialysis facility
In-Center

Provider	HEMO		PD		TOTAL		TOTAL OF HOME & IN-CENTER	
	2001	2002	2001	2002	2001	2002	2001	2002
260040	30	34	0	0	30	34	30	36
26004F	24	21	0	0	24	21	35	35
26009f	30	26	0	2	30	28	33	32
260100	28	26	0	0	28	26	28	26
260113	58	55	0	0	58	55	60	56
260141	0	3	0	0	0	3	0	4
260172	12	11	0	0	12	11	12	11
260176	23	0	0	0	23	0	23	0
260179#	0	2	0	0	0	2	0	2
262501	123	107	0	2	123	109	164	161
262502	162	159	0	0	162	159	162	161
262503	97	117	0	0	97	117	99	117
262504	70	74	0	0	70	74	103	108
262505	29	26	0	0	29	26	29	26
262506	113	118	0	1	113	119	156	156
262507	51	44	0	0	51	44	61	55
262508	114	116	0	0	114	116	164	168
262509	77	64	0	0	77	64	77	64
262511	46	49	0	0	46	49	46	50
262513	35	37	0	0	35	37	35	37
262514	65	63	0	1	65	64	103	101
262515	42	43	0	0	42	43	42	43
262516	29	30	0	0	29	30	29	30
262517	91	102	0	0	91	102	123	130
262520	35	36	0	0	35	36	35	37
262521	52	54	0	0	52	54	52	54
262522	17	18	0	0	17	18	17	18
262523	10	19	0	0	10	19	10	19
262524	31	27	0	0	31	27	31	28
262526	18	17	0	0	18	17	18	17
262527	129	147	0	0	129	147	129	147
262528	52	58	0	0	52	58	69	72
262530	45	46	0	0	45	46	45	46
262531	60	68	0	0	60	68	60	69
262534	32	32	0	0	32	32	35	33
262535	86	107	0	0	86	107	86	107
262536	46	47	0	0	46	47	59	61
262537	141	140	0	0	141	140	141	140
262538	89	73	0	0	89	73	89	73
262539	91	103	0	0	91	103	91	103
262540	45	26	0	0	45	26	70	38
262541	74	70	0	0	74	70	93	95
262542	45	53	0	0	45	53	45	53
262543	74	78	0	0	74	78	91	95
262544	100	119	0	0	100	119	105	122
262547	97	90	0	2	97	92	157	150
262548	47	53	0	0	47	53	47	53
262549	140	134	0	2	140	136	160	162
262550	51	52	0	0	51	52	51	52

ESRD Network 12

Table #4

Dialysis Modality

Number of living patients by modality by dialysis facility
In-Center

Provider	HEMO		PD		TOTAL		TOTAL OF HOME & IN-CENTER	
	2001	2002	2001	2002	2001	2002	2001	2002
262551	69	65	0	0	69	65	69	65
262552	33	26	0	0	33	26	33	26
262553	68	68	0	0	68	68	68	69
262554	63	63	0	0	63	63	64	64
262555	29	32	0	0	29	32	29	32
262556	74	65	0	0	74	65	74	65
262557	33	29	0	0	33	29	34	29
262559	38	28	0	0	38	28	39	28
262560	66	58	1	0	67	58	103	62
262561	53	58	0	0	53	58	56	64
262562	45	51	0	0	45	51	55	61
262563	48	55	0	0	48	55	51	56
262564	82	94	1	0	83	94	128	130
262565	166	170	0	3	166	173	234	228
262567	15	27	0	0	15	27	18	32
262568	46	54	0	0	46	54	46	54
262569	52	59	0	0	52	59	54	63
262570	27	25	0	0	27	25	27	25
262571^	0	0	0	0	0	0	0	0
262572	44	55	0	1	44	56	53	63
262573	41	37	0	0	41	37	41	38
262574	95	92	0	0	95	92	95	93
262575	28	32	0	0	28	32	28	32
262576	107	92	0	1	107	93	120	112
262577	33	42	0	0	33	42	33	42
262578	20	25	0	0	20	25	20	25
262579	46	49	0	0	46	49	52	50
262580	18	20	0	0	18	20	18	20
262581	15	14	0	0	15	14	15	14
262582	15	14	0	0	15	14	15	14
262583	54	73	0	0	54	73	54	73
262584	23	25	0	0	23	25	23	25
262585	0	0	0	0	0	0	40	48
262586	0	0	0	0	0	0	0	7
262587	34	30	0	0	34	30	34	31
262588	15	19	0	0	15	19	15	19
262589	29	36	0	0	29	36	29	36
262590	17	16	0	0	17	16	17	16
262591#	0	13	0	0	0	13	0	22
262592	19	24	0	0	19	24	19	24
262593#	0	100	0	0	0	100	0	108
262594#	0	20	0	0	0	20	0	20
262595#	0	23	0	0	0	23	0	23
262596#	0	14	0	0	0	14	0	14
262597#	0	49	0	0	0	49	0	58
262598#	0	28	0	0	0	28	0	28
263300	3	7	0	0	3	7	6	11
263301	5	9	0	0	5	9	13	18
263302	8	17	0	1	8	18	19	27

ESRD Network 12

Table #4

Dialysis Modality

Number of living patients by modality by dialysis facility
In-Center

Provider	HEMO		PD		TOTAL		TOTAL OF HOME & IN-CENTER	
	2001	2002	2001	2002	2001	2002	2001	2002
263503	24	20	0	0	24	20	24	20
263504	27	0	0	0	27	0	27	0
263505	12	8	0	0	12	8	12	8
263506	0	3	3	3	3	6	65	64
263508	47	45	0	0	47	45	47	46
263510	28	32	0	0	28	32	28	33
MO Total	4980	5142	5	19	4985	5161	5770	5926

ESRD Network 12

Table #4

Dialysis Modality

Number of living patients by modality by dialysis facility
In-Center

Provider	HEMO		PD		TOTAL		TOTAL OF HOME & IN-CENTER	
	2001	2002	2001	2002	2001	2002	2001	2002
280065	48	37	0	0	48	37	62	42
28006F	40	34	0	0	40	34	40	34
280088	81	90	0	0	81	90	96	109
280118	9	12	0	0	9	12	9	12
280125	38	36	0	0	38	36	38	36
281329#	0	9	0	0	0	9	0	9
281341	5	7	0	0	5	7	5	7
281344#	0	3	0	0	0	3	0	3
282500	101	103	0	1	101	104	131	129
282501	33	43	1	0	34	43	92	87
282502	42	41	0	0	42	41	42	41
282503	64	67	19	0	83	67	121	101
282504	110	123	0	0	110	123	123	126
282505	19	0	0	0	19	0	19	0
282506	64	56	0	0	64	56	64	56
282507	25	41	0	0	25	41	25	41
282508	14	17	0	0	14	17	18	17
282509	29	34	0	0	29	34	29	34
282510	23	35	0	0	23	35	23	35
282511	55	53	0	0	55	53	55	53
282512	25	20	0	0	25	20	25	20
282513	44	58	0	0	44	58	44	58
282514	43	37	0	0	43	37	43	37
282515	39	42	0	0	39	42	56	59
282516	30	34	0	0	30	34	50	44
282517#	0	7	0	0	0	7	0	7
283501	44	43	0	0	44	43	44	43
283503	55	59	0	0	55	59	55	59
NE0003#	0	5	0	0	0	5	0	5
NE Total	1080	1146	20	1	1100	1147	1309	1304
Network Total	9609	10015	30	31	9639	10046	11096	11400

Source of Information: Facility Survey (CMS 2744) and Network SIMS Database

*Total from Table #3 plus total from Table #4 (for last column of report year)

Date of Preparation: June 2003

This table cannot be compared to the CMS Facility Survey because the CMS Facility Survey is limited to only Medicare approved facilities. 98 Veterans Affairs Facility patients for 2001 and 89 Veterans Affairs Facility patients for 2002.

This table includes :

Provider not operational in 2001

^ Provider not operational in 2002

ESRD Network 12

Table #5

Renal Transplant by Transplant Center

Number of transplants by transplant center calendar year 2001 and 2002

Transplant Center	Total Transplants Performed		Patients Waiting for Transplants	
	2001	2002	2001	2002
16004F	0	13	0	0
160058	95	113	189	200
160082	24	17	42	31
160083	18	17	28	0
	137	160		
IA Total				
170040	60	87	92	127
170122	40	31	40	38
	100	118		
KS Total				
260014	135	113	447	0
260020	0	0		0
260027	37	30	83	0
26004F	0	0	0	0
26009f	0	0	0	0
260104^	17	0	55	0
260105	50	45	260	278
260138	30	42	77	82
260141	23	29	59	0
263300	3	3	0	0
263301	3	4	4	0
263302	10	14	3	0
	308	280		
MO Total				
280013	98	98	195	184
280088	5	0	0	0
	103	98		
NE Total				
NETWORK TOTAL:	648	656		

Source of information: Network SIMS Database/CMS-2744

Date of Preparation: June 2003

* These numbers are not added to State or Network totals because some patients may be placed on more than one waiting list. The numbers are only accurate for each center.

Provider not operational in 2001

^ Provider not operational in 2002

ESRD Network 12

Table #6

Renal Transplant Recipients

Renal transplant recipients by transplant type, age, race, gender and primary diagnosis for calendar year 2002.

Age Group	CADAVERIC	LIVING RELATED	LIVING UNRELATED	Total
Others				
00-04	2	4	0	6
05-09	2	2	0	4
10-14	4	7	1	12
15-19	6	9	0	15
20-24	8	8	0	16
25-29	22	9	4	35
30-34	36	13	5	54
35-39	37	13	7	57
40-44	56	16	7	79
45-49	67	16	5	88
50-54	61	19	10	90
55-59	55	19	7	81
60-64	46	12	5	63
65-69	31	4	2	37
70-74	9	6	0	15
75-79	1	1	0	2
80-84	0	0	0	0
>=85	0	0	0	0
Missing	0	0	0	0
Total	443	158	53	654
Gender				
Others				
Female	179	64	20	263
Male	264	94	33	391
Missing	0	0	0	0
Total	443	158	53	654
Race				
Others				
Asian	5	3	0	8
Black	81	11	5	97
Indian subcontinent	0	0	1	1
Mid-East Arabian	0	0	0	0
Native American	6	0	0	6
Other/Multiracial	2	0	1	3
Pacific Islander	1	0	0	1
White	346	144	46	536
Missing	0	0	0	0
Unknown	2	0	0	2
Total	443	158	53	654
Primary Diagnosis				
Others				
Cystic Kidney	45	15	8	68
Diabetes	126	42	8	176
Glomerulonephritis	117	43	14	174
Hypertension	67	13	12	92
Other	63	30	8	101
Other Urologic	6	3	2	11

Missing	0	0	0	0
Unknown	19	12	1	32
Total	443	158	53	654

Source of information: Network SIMS Database

Date of Preparation: June 2003

Race: The categories are from the CMS-2728 Form.

Diagnosis: Categories are from the CMS-2728. A diagnosis of 'unknown' is ICD-9 code 7999.

This table includes 13 patients receiving treatment at VA facilities.

ESRD Network 12

Table #7

Dialysis Deaths

Deaths of dialysis patients by state of residence, age, race, gender, primary diagnosis and cause of death for calendar year 2002.

Age Group	IA	KS	MO	NE	Other	Total
Age Group						
Others						
00-04	0	0	0	0	0	0
05-09	0	0	1	0	0	1
10-14	0	0	0	0	0	0
15-19	0	1	0	0	0	1
20-24	0	0	6	0	0	6
25-29	1	0	6	0	0	7
30-34	7	6	16	4	0	33
35-39	7	7	28	2	1	45
40-44	14	11	43	8	3	79
45-49	13	24	53	14	4	108
50-54	28	30	76	16	7	157
55-59	28	29	103	26	3	189
60-64	45	41	124	33	3	246
65-69	47	60	170	52	7	336
70-74	81	70	239	45	13	448
75-79	99	86	232	63	18	498
80-84	97	70	211	55	19	452
>=85	74	57	139	41	12	323
Missing	0	0	0	0	0	0
Total	541	492	1447	359	90	2929
Gender						
Others						
Female	237	240	668	177	42	1364
Male	304	252	779	182	48	1565
Missing	0	0	0	0	0	0
Total	541	492	1447	359	90	2929
Race						
Others						
Asian	3	2	5	1	0	11
Black	21	91	404	36	17	569
Indian subcontinent	0	0	0	1	0	1
Mid-East Arabian	0	1	3	0	0	4
Native American	8	4	9	13	1	35
Other/Multiracial	2	6	5	4	2	19
Pacific Islander	0	0	3	0	0	3
White	507	386	1017	303	70	2283
Missing	0	0	0	0	0	0
Unknown	0	2	1	1	0	4
Total	541	492	1447	359	90	2929
Primary Diagnosis						
Others						
Cystic Kidney	9	10	18	8	0	45
Diabetes	244	238	650	174	26	1332
Glomerulonephritis	38	48	73	10	12	181
Hypertension	134	118	467	95	33	847
Other	83	47	167	47	11	355
Other Urologic	15	4	20	9	3	51
Missing	0	0	0	0	0	0
Unknown	18	27	52	16	5	118
Total	541	492	1447	359	90	2929
Primary Cause of Death						
Others						
Cardiac	267	197	650	204	35	1353
Gastro Intestinal	7	10	20	4	2	43
Infection	72	49	202	44	13	380
Liver Disease	6	5	7	3	0	21
Vascular	38	33	93	26	4	194
Missing	16	59	111	23	11	220
Other	81	54	202	42	10	389
Unknown	54	85	162	13	15	329

Total	541	492	1447	359	90	2929
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Source of information: Network SIMS Database

Date of Preparation: June 2003

Race: The categories are from the CMS-2728 Form.

Diagnosis: Categories are from the CMS-2728. A diagnosis of 'unknown' is ICD-9 code 7999.

This table cannot be compared to the CMS Facility Survey because the CMS Facility Survey is limited to those deaths reported by only Medicare-approved facilities. This table includes 25 patients receiving treatment at VA facilities.

ESRD Network 12
Table 8

Vocational Rehabilitation by Dialysis Facility
Patients Aged 18 through 54 as of December 31, 2002

Provider Number	Number of Dialysis Patients Aged 18-54	Number of Dialysis Patients Receiving Services from Voc Rehab related Services Providers (public or private)	Number of Dialysis Patients Employed Full-time or Part-time	Number of Dialysis Patients Attending School Full-time or Part-time	Offers Dialysis Shift Starting at 5 P.M. or Later (Yes or No)
160005	3	0	2	1	Y
160016	13	1	5	2	N
160030	8	9	17	6	N
160033	34	0	0	0	Y
160044	4	0	0	0	N
160048	1	0	0	0	N
16004F	2	0	0	0	N
160058	31	0	0	0	N
160064	10	0	12	4	N
160066	2	0	0	0	N
160067	13	0	0	0	N
160079	20	0	0	0	Y
160080	12	3	4	1	Y
160082	2	0	0	0	N
160083	37	5	14	5	Y
160089	13	0	0	0	N
160112	2	0	2	1	N
160113	5	0	1	0	N
162500	19	0	10	3	Y
162501	40	9	37	12	N
162502	2	0	0	0	N
162506	7	0	0	0	N
162507	12	0	5	2	N
162508	1	0	0	0	N
162509	9	0	1	0	N
162511	3	0	0	0	N
162512	8	0	4	1	N
162513	10	0	0	0	N
162514	3	0	0	0	N
162515	33	1	9	3	Y
162516	22	0	0	0	N
162517	7	0	2	1	N
162518	4	0	0	0	N
162519	2	0	0	0	N
162520	2	0	0	0	N
162522	3	0	0	0	N
162523	1	0	0	0	N
162524	6	3	2	1	N
162525	5	0	2	1	N
163500	1	0	0	0	N
163501	12	0	0	0	N
163502	2	0	2	1	N
163503	4	0	0	0	N
163504	5	0	0	0	N
163505	4	0	0	0	N
163506	3	0	0	0	N
163507	5	0	0	0	N
163508	3	0	0	0	N
163509	8	0	0	0	N
163510	2	0	0	0	N
163511	1	9	17	6	N
163512	7	0	0	0	N
163513	3	0	0	0	N
170017	6	0	0	0	N
170040	42	0	0	0	Y

ESRD Network 12
Table 8

Vocational Rehabilitation by Dialysis Facility
Patients Aged 18 through 54 as of December 31, 2002

Provider Number	Number of Dialysis Patients Aged 18-54	Number of Dialysis Patients Receiving Services from Voc Rehab related Services Providers (public or private)	Number of Dialysis Patients Employed Full-time or Part-time	Number of Dialysis Patients Attending School Full-time or Part-time	Offers Dialysis Shift Starting at 5 P.M. or Later (Yes or No)
172501	22	0	8	3	N
172502	19	0	0	0	N
172503	51	3	14	5	N
172504	59	0	0	0	Y
172505	5	1	5	2	N
172506	9	0	1	0	N
172507	10	0	0	0	N
172508	37	0	0	0	N
172509	22	9	14	5	N
172510	6	0	0	0	N
172511	11	0	0	0	N
172512	5	0	0	0	N
172514	12	0	8	3	N
172515	9	0	6	2	N
172516	4	1	1	0	N
172517	7	0	0	0	N
172518	5	2	2	1	N
172519	29	3	1	0	N
172520	20	2	6	2	N
172521	14	0	0	0	N
172522	7	0	0	0	N
172523	14	0	0	0	N
172524	12	2	3	1	N
172525	2	1	1	0	N
172526	6	0	0	0	N
172527	14	0	0	0	N
172528	4	0	0	0	N
172529	4	0	0	0	N
172530	8	0	3	1	N
172531	5	0	0	0	N
172532	7	2	7	2	N
172533	17	0	0	0	N
172534	2	0	0	0	N
172535	6	0	0	0	N
172536	12	0	2	1	N
172537	7	0	0	0	N
172538	3	0	0	0	N
172540	2	0	0	0	N
172541	4	0	0	0	N
260001	2	0	0	0	N
260006	1	0	0	0	N
260014	1	0	0	0	N
260020	1	0	0	0	N
260027	15	0	1	0	N
260032	1	0	0	0	N
260040	6	0	0	0	N
26004F	7	0	2	1	N
26008F	54	0	0	0	N
26009F	12	0	5	2	N
260100	6	0	3	1	N
260104	1	0	0	0	N
260113	16	0	0	0	Y
260141	2	16	34	11	N
260172	1	0	0	0	N
260179	1	0	0	0	N

Vocational Rehabilitation by Dialysis Facility
Patients Aged 18 through 54 as of December 31, 2002

Provider Number	Number of Dialysis Patients Aged 18-54	Number of Dialysis Patients Receiving Services from Voc Rehab related Services Providers (public or private)	Number of Dialysis Patients Employed Full-time or Part-time	Number of Dialysis Patients Attending School Full-time or Part-time	Offers Dialysis Shift Starting at 5 P.M. or Later (Yes or No)
262501	55	0	3	1	N
262502	41	2	12	4	N
262503	46	4	9	3	N
262504	28	8	4	1	Y
262505	8	0	7	2	N
262506	44	1	8	3	N
262507	14	0	0	0	N
262508	41	0	0	0	N
262509	20	0	2	1	N
262511	12	0	5	2	N
262513	9	0	0	0	N
262514	28	2	15	5	N
262515	12	0	10	3	N
262516	10	0	0	0	N
262517	31	0	7	2	Y
262518	3	0	0	0	N
262520	8	2	5	2	N
262521	10	0	3	1	N
262522	4	0	0	0	N
262523	3	12	22	7	N
262524	8	0	0	0	N
262526	4	0	0	0	N
262527	47	12	10	3	N
262528	26	4	10	3	N
262529	2	0	0	0	N
262530	9	0	5	2	N
262531	22	0	0	0	N
262534	11	0	0	0	N
262535	27	2	19	6	N
262536	15	1	2	1	N
262537	38	0	0	0	Y
262538	20	1	14	5	Y
262539	33	3	14	5	N
262540	11	1	5	2	N
262541	20	3	5	2	N
262542	15	0	0	0	N
262543	24	0	4	1	N
262544	20	1	11	4	N
262547	39	0	0	0	N
262548	11	0	0	0	N
262549	59	12	26	9	Y
262550	13	0	2	1	N
262551	25	0	0	0	N
262552	7	0	0	0	N
262553	12	0	5	2	N
262554	11	0	2	1	N
262555	9	0	0	0	N
262556	12	2	3	1	N
262557	8	0	0	0	N
262559	3	0	0	0	Y
262560	15	2	7	2	N
262561	19	1	5	2	N
262562	12	0	0	0	Y
262563	14	0	2	1	N
262564	47	5	9	3	N

ESRD Network 12
Table 8

Vocational Rehabilitation by Dialysis Facility
Patients Aged 18 through 54 as of December 31, 2002

Provider Number	Number of Dialysis Patients Aged 18-54	Number of Dialysis Patients Receiving Services from Voc Rehab related Services Providers (public or private)	Number of Dialysis Patients Employed Full-time or Part-time	Number of Dialysis Patients Attending School Full-time or Part-time	Offers Dialysis Shift Starting at 5 P.M. or Later (Yes or No)
262565	72	0	0	0	N
262567	13	1	5	2	N
262568	8	0	2	1	N
262569	15	0	2	1	N
262570	7	0	0	0	N
262572	14	3	6	2	N
262573	8	0	0	0	N
262574	18	6	9	3	N
262575	6	0	0	0	N
262576	24	2	9	3	Y
262577	9	0	0	0	N
262578	5	0	0	0	N
262579	17	2	8	3	N
262580	3	0	0	0	N
262581	2	0	0	0	N
262582	3	0	0	0	Y
262583	12	0	0	0	N
262584	5	0	0	0	N
262585	12	0	0	0	N
262586	2	0	0	0	N
262587	6	0	0	0	N
262588	3	0	0	0	N
262589	10	0	0	0	N
262590	5	0	0	0	N
262591	5	0	3	1	N
262592	6	0	0	0	N
262593	27	2	10	3	N
262594	5	0	0	0	N
262595	7	4	5	2	N
262596	4	0	0	0	N
262597	23	6	2	1	N
262598	11	0	0	0	N
263300	2	1	0	0	N
263301	6	0	0	0	N
263302	5	10	9	3	N
263500	1	0	0	0	N
263503	5	0	1	0	N
263505	3	0	0	0	N
263506	18	0	0	0	N
263508	11	0	0	0	N
263510	7	0	0	0	N
280013	5	0	0	0	N
280065	10	2	3	1	N
28006F	6	0	0	0	N
280088	35	0	0	0	N
280118	1	0	0	0	N
280125	8	0	0	0	N
281329	2	0	1	0	N
281341	1	0	0	0	N
282500	27	0	11	4	Y
282501	21	2	15	5	N
282502	10	0	2	1	N
282503	21	2	14	5	Y
282504	42	5	14	5	Y
282506	13	26	13	4	N

ESRD Network 12
Table 8

Vocational Rehabilitation by Dialysis Facility
Patients Aged 18 through 54 as of December 31, 2002

Provider Number	Number of Dialysis Patients Aged 18-54	Number of Dialysis Patients Receiving Services from Voc Rehab related Services Providers (public or private)	Number of Dialysis Patients Employed Full-time or Part-time	Number of Dialysis Patients Attending School Full-time or Part-time	Offers Dialysis Shift Starting at 5 P.M. or Later (Yes or No)
282507	8	0	0	0	N
282508	3	0	0	0	N
282509	5	0	2	1	Y
282510	6	0	0	0	Y
282511	16	9	9	3	N
282512	5	0	0	0	N
282513	17	0	5	2	Y
282514	10	0	0	0	N
282515	17	0	0	0	N
282516	12	0	0	0	N
282517	1	0	1	0	N
283501	7	0	0	0	N
283503	23	0	0	0	N
281344	2	0	0	0	N
282518	1	0	1	0	N
Total	2931	246	693	231	25

Source of Information: Self-reported survey from Network #!2 facilities

Date of Preparation: June 30, 2003

Number of dialysis patients aged 18 through 54 (from Network list):

From list provided by the Network of dialysis patients aged 18 through 54 receiving dialysis as of December 31 of the reporting year, as reported by each dialysis facility.

Number of dialysis patients receiving services from Vocational Rehabilitation and other Vocational Rehabilitation related Service Providers (public or private).

Includes any dialysis patient aged 18 through 54 for whom any of the following apply:

- Talked with VR personnel AND agreed to be evaluated for services by completing an application, having medical records requested, or being assigned a counselor.
- Received evaluation services by participating in testing (for example: interest inventories, skills testing, aptitude testing, work readiness inventories) or by attending an evaluation/testing center.

Received vocational counseling, training at a community facility, Ticket to Work program, private or public educational/training center or school.

Received assistance with job seeking skills, with job placement, or with retaining or modifying a job through a VR counselor, job placement specialist, Ticket to Work program, or private or public agencies.

Number of dialysis patients employed full-time or part-time.

Includes any dialysis patient aged 18 through 54 who received taxable wages from an employer or who was self-employed and paid taxes on earnings. (This count may be duplicated in #4.)

Number of dialysis patients attending school full-time or part-time.

Includes any dialysis patient aged 18 through 54 who was enrolled in any training program or formal educational (for example: college, technical school, GED program, community facility training.). (This count may be duplicated in #3.)

Offers dialysis shift starting at 5 PM or later. The Yes block is marked only if the facility offers a dialysis shift that BEGINS at 5:00 PM or later.