

# NETWORK 12

Annual Report  
2000

End-Stage Renal Disease (ESRD) 12 Network Coordinating Council, Inc.  
Kansas City, Missouri  
June 30, 2001

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**Health Care Financing Administration**  
**Baltimore, Maryland**

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## ESRD Network #12

### I. PREFACE

#### A. Introductory Statement

The year 2000 presented a number of challenges to the staff at ESRD Network #12. Despite the hectic pace, the Network continued to meet their goals. The year began with the search for a new network office location and ending with the move to our current location. The staff is to be commended for their relatively seamless move with minimal disruption occurring in the operation of their duties.

The Network's primary goals are health care quality improvement projects that assist ESRD facilities to assess and improve the care given to ESRD patients, database management, and patient advocate services. Network #12 successfully negotiated a new three-year contract with HCFA for June 2000-2003 that included positions for a data clerk and a patient services specialist. This additional staff will allow Network #12 to provide a higher quality of service to the patients and renal care providers in the four-state area.

Conversion of the Network #12 current patient history and facility databases from the old system to the new SIMS (Standard Information Management System) database was completed and fully operational by July 2000. The Network continues to work with E.S.R.D. facilities validating and submitting data as required by HCFA. "Data Stars" and "Data Champions" listed in this report submitted HCFA 2728 and 2746 forms in a timely and accurate manner and will be recognized at our annual business meeting.

In April 2000, a one-day educational workshop was presented entitled "Crisis, Chaos and Conflict Resolution in the Dialysis Center". This seminar offered renal care professionals an opportunity to identify, analyze and examine violence in the workplace, patients' rights and legal issues. Network responsibility toward CQI resulted in the completion of the Vascular Access Infection project and report data found within this report. The Medical Review Board under the leadership of Dr. Dennis Ross and his predecessor, Dr. Daniel Coyne, continued to review the data from the vascular access project. Thus, a board subcommittee has been formed spearheaded by Dr. Coyne to review the data and its implications to the network.

Finally, I would like to thank the staff of End Stage Renal Disease Network #12 and dedicate this report to Lisa Taylor, Executive Director. In the midst of all that occurred this past year, including the conversion to SIMS, moving to a new office, and hiring additional staff, Lisa was waging a personal battle with a very serious medical condition. I thank her for her diligence, but more importantly, I congratulate her on her perseverance.

Robert P. Saylor, M. D.  
Chair, Executive Committee

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## ESRD Network #12

### II. INTRODUCTION

#### A. 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 produce utility outages which can disrupt dialysis services; e.g., flooding of water treatment plants, tornadoes striking dialysis units, and power outages.

The 1990 census population of the Network area was 11.7 million which increase to 12.9 million with the 2000 census. Estimated and census population figures for the four state area are as follows:

July 1, 1998	12,593,000
July 1, 1999	12,657,000
July 1, 2000	12,920,000

According to the 2000 census data, females make up over half of the area population, 52%; with 48% being males. Racially, 88% of the four-state residents are White, 7% are Black, less than 1% are American Indian, a little over 1% are Asian or Pacific Islander, and 3% are listed as other. A little over 68% of the people live in an urban setting.

In comparing census data for 1990 with the recently completed 2000 results, total population for the four-state region increased by 9%. Some specific groups experienced relatively large increases. By race, growth was very modest for those considering themselves white (4.26%) and fairly consistent state-to-state. For African-American persons (Black), the overall increase was 14.70% which varied by state with a high of 29.175 to a low of 7.69%. The American Indian population increased by 25.42%, consistent throughout the region. Those persons classified as Asian or Pacific Islander increased dramatically by 58.72% with an 83.33% increase in Nebraska. Overall, the population of persons listed as other race—which includes Hispanics—rose by 31.13%. The percent of increase is consistently between 56 and 43% except in Kansas where it is only 4.26%.

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The following charts present the characteristics of the general population within the Network #12 region.

**Total Population by State**

	1990	1998	1999	2000
Iowa	2,708,000	2,863,000	2,869,000	2,926,000
Kansas	2,408,000	2,629,000	2,654,000	2,688,000
Missouri	5,102,000	5,439,000	5,468,000	5,595,000
Nebraska	1,578,000	1,663,000	1,666,000	1,711,000
Totals	11,797,990	12,594,000	12,657,000	12,920,000
2000 Total U.S. Population 281,422,000				

U.S. Census Bureau, Census 2000 Redistricting Data (Public Law 94-171) Summary File, Matrices PL1, PL2, PL3, PL4

**Percent Population Increase by Race 1990-2000**

	IA	KS	MO	NE
White	2.42%	3.72%	5.84%	4.26%
Black	29.17%	7.69%	14.78%	14.70%
Native American	28.57%	19.05%	31.58%	25.42%
Asian Pacific Islander	52.00%	54.84%	58.54%	58.72%
Other*	56.82%	4.26%	56.10%	31.13%

U.S. Census Bureau, Census 2000 Redistricting Data (Public Law 94-171) Summary File, Matrices PL1, PL2, PL3, PL4

**2000 Total Population Demographics by State**

	Iowa	Kansas	Missouri	Nebraska
White	2,748,000	2,314,000	4,748,000	1,533,000
Black	62,000	154,000	629,000	68,000
Native American	9,000	25,000	25,000	15,000
Asian or Pacific Islander	38,000	48,000	65,000	22,000
Other*	69,000	147,000	128,000	73,000
Male	1,396,000	1,308,000	2,696,000	837,000

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Female	1,530,000	1,380,000	2,900,000	874,000
Rural	1,170,000	806,000	1,678,000	520,000
Urban	1,756,000	1,882,000	3,917,000	1,191,000
Totals	2,926,000	2,688,000	5,595,000	1,711,000

U.S. Census Bureau, Census; 1990 *Population and Housing Unit Counts, United States* (1990 CPH-2-1)/ Census 2000 Brief Series, [www.census.gov/population/www/cen2000/briefs.html](http://www.census.gov/population/www/cen2000/briefs.html)

"Other" was included in the Census 2000 for respondents who were unable to identify with the five Office of Management and Budget race categories. Respondents who provided write-in entries such as Moroccan, South African, Belizean, or a Hispanic origin (for example, Mexican, Puerto Rico, or Cuban) are included in the other race category.

Three thousand, seven hundred, and eighty-three (3,783) persons initiated chronic renal replacement therapy including transplantation at a facility located within the Network #12 region during 2000. Please refer to Table #1 on page X for various demographics.

Adjusted incidence rates per 100,000 persons for the four-state region are as follows:

Iowa	23.48
Kansas	25.30
Missouri	32.33
Nebraska	26.72

When analyzed by race, disparities in 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 differences between tribes.

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As the end of 2000, there were 10,534 patients actively dialyzing at a facility in Network #12. Of the 10,534 persons, 1,807 live in Iowa, 1,984 live in Kansas, 5,263 live in Missouri, and 1,163 live in Nebraska with 317 patients residing outside the area. The heaviest ESRD population concentration continues to be around Missouri's major metropolitan areas, St. Louis and Kansas City.

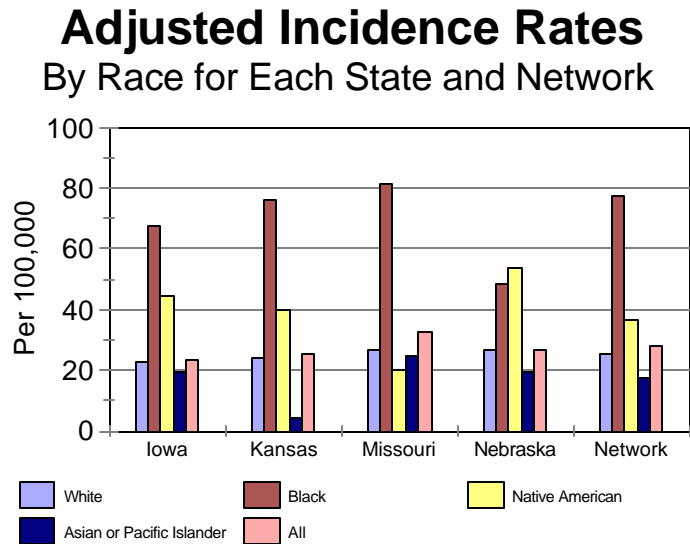
Diabetes over the last ten years has eclipsed all other diseases as the primary cause of renal failure. It was the primary diagnosis for 44% of patients starting ESRD therapy in 2000. Of the patients dialyzing at a Network #12 facility as of December 31, 2000, diabetes was the primary cause of renal failure for 40%.

As in past years, over half of the newly diagnosed ESRD patients were 65 years of age or older—54%. Of the dialysis patients prevalent as of December 31, 2000, 48% were 65 years of age or older.

In comparison with 1990, there have been major shifts in the incident population with patients being older and more likely to have concomitant medical conditions. See the Table below.

Two thousand, six hundred, and eighty-four dialysis patients died while received care at a Network #12 facility last year. The group in which the largest number of persons died was the 75-79 age range. As

**Figure 1**



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**ESRD Incidence by Age and Diagnosis  
1990 and 2000**

	1990 No. (%)	2000 No. (%)
By Age		
≤ 19	47(3)	56 (2)
20-64	939 (58)	1668 (44)
65-85+	647 (40)	2059 (54)
By Diagnosis		
Diabetes	437 (27)	1673 (44)
Hypertension	270 (16)	976 (26)
Glomerulonephritis	512 (31)	339 (9)
Cystic Kidney Disease	81 (5)	104 (3)
Other/Unknown	333 (20)	961 (25)
Total	1633	3783

in past years, the leading reported cause of death was cardiac related.

Please refer to Section IV, Data Tables for specific information on the ESRD patient population receiving treatment within Network #12.

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B. Structure

ESRD Network Staff  
with responsibilities  
As of December 31, 2000

**Lisa F. Taylor, B.S.N., R.N.**  
Executive Director

Financial Management  
HCFA Liaison  
Renal Community Liaison  
Daily Operations and Personnel  
Management  
Vocational Rehabilitation Activities

**Sarah Yelton, R.N., C.N.N.**  
Quality Improvement Coordinator  
**Cathy Long, B.A., R.H.I.T.**  
Quality Improvement Specialist

Quality Improvement Activities  
USRDS Studies Coordination  
Patient Grievances and Concerns  
Core Indicators Data Collection

**Sharon K. Holder**  
Data Coordinator

SIMS Database Manager  
Computer System Integrity Management  
HCFA Data Contact  
Data Request Processing

**Glenda Whittle, B.S., C.I.S.**  
Data Specialist

Processing of 2728 and 2746 Forms  
Data Integrity Management  
Forms Compliance Reporting  
Facility Education on Forms

**Marilyn K. Graham**  
Data Clerk

Monthly Patient Rosters  
Facility Education on Rosters

**Yolanda Y. Thomas**  
Administrative Assistant

Accounts Payable and Receivable  
Patient Manual Requests  
Board and Staff Travel Arrangements  
Office Supplies Management  
Facility Information Notebooks

**Rosalie Littlejohn**  
Receptionist and Staff Support

Office Equipment Management  
Correspondence and Communications

## ESRD Network #12

The organization currently known as End Stage Renal Disease (ESRD) Network #12 Coordinating Council, Inc., registered as a not-for-profit corporation in Missouri on 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.; Frederick 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. As a corporation

Membership in the Network #12 Council is extended to a representative of each ESRD facility located within the four-state area having a separate ESRD Medicare provider number. Delineated in the bylaws, council representatives have rights and responsibilities similar to shareholders. The Council establishes policies for the corporation. It is empowered to carry out all of the duties and responsibilities of the corporation through its delegated committees.

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 2000, 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 facility administrator; and four patient representatives. The Committee is responsible for carrying out the specific functions of reviewing the care of ESRD patients and overseeing all quality improvement activities. During 2000, these 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 infection initiative
- ~ Development of an adequacy of hemodialysis improvement project

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, compensation, fringe benefits, and oversight

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of general corporate financial affairs. During 2000, the Finance Committee was involved in the following:

- ~ Continued monthly oversight of the accounting procedures
- ~ Cash flow management review
- ~ Review and replacement of outdated office equipment
- ~ Development of fiscal policies focused on investing

The Network utilizes two ad hoc committees: the Nominating Committee appointed by the Executive Committee; and the Grievance Committee, appointed by the Medical Review Board. These committees met only on an as-needed basis during 2000.

## **ESRD Network #12**

### **ESRD NETWORK #12 EXECUTIVE COMMITTEE December 2000**

Robert Saylor, MD, Chair  
Fremont Medical Center  
Springfield, Missouri

John Whalen, MD,  
Immediate Past Chair  
Tri-State Dialysis  
Dubuque, Iowa

Arnold Chonko, MD  
University of Kansas Medical Center  
Kansas City, Kansas

Mary E. Gellens, MD  
St. Louis University Health Sciences  
St. Louis, Missouri

Michael D. Hammeke, MD  
Nebraska Health System  
Omaha, Nebraska

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

Jan Dudley, MS, RD  
Dialysis Clinic, Inc.  
Omaha, Nebraska

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

Kerry Lavery, RN, CNN  
National Kidney Foundation of Kansas &  
Western Missouri  
Westwood, Kansas

Stan Langhofer, BSN, CNN  
Kansas Dialysis Services  
Topeka, Kansas

John L. Smith, MD  
Via Christi Regional Medical Center  
Wichita, Kansas

Ann C. Stivers, RN, CEO  
Dialysis Center of Lincoln  
Lincoln, Nebraska

Lisa VanHoose, MSW  
Dialysis Clinic, Inc  
Columbia, Missouri

Mark A. Matson, MD  
Cedar Valley Dialysis  
Waterloo, Iowa

Linda Francisco, MD, FACP  
Via Christi Regional Medical Center  
Wichita, Kansas

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### ESRD NETWORK #12 MEDICAL REVIEW BOARD December 2000

Dennis Ross, MD, Chair  
Renal Care Group, Inc  
Wichita, Kansas

Daniel W. Coyne, MD  
Immediate Past Chair  
Chromalloy American Kidney Center  
St. Louis, Missouri

Douglass T. Domoto, MD, JD  
Forum Representative  
DaVita, Inc.  
St. Louis, Missouri

Ardyth Boucher, Patient Representative  
Mercy Hospital Medical Center  
Des Moines, Iowa

Sheryl Baker, RN, CEO  
Renal Care Group of the Midwest  
Wichita, Kansas

Michelle Womack, BSW, CNSW  
Renal Care Group, Inc  
Joplin, Missouri

Marie E. Williams, Patient Representative  
Bishop Clarkson Dialysis Center  
Omaha, Nebraska

Bradley Warady, MD  
Children's Mercy Hospital  
Kansas City, Missouri

Robert Dickerson, Patient Representative  
Research Medical Center  
Kansas City, Missouri

Stacy Neumayer, Patient Representative  
Milton & Ethel Warner Dialysis

Spencer, Iowa

Jerry L. Fischer, MD, PhD  
Omaha Nephrology, PC  
Omaha, Nebraska

Robert Dunley, MD  
Dialysis Clinic, Inc  
Omaha, Nebraska

Francis Ivanovich, BS, CHT  
Cape County Regional Dialysis  
Cape Girardeau, Missouri

Elaine Mitchell, RD, LD, CDE  
Tri-State Dialysis  
Dubuque, Iowa

Jason Taylor, MD  
Kansas Nephrology Physicians  
Wichita, Kansas

Traci Simpson, RN, BSN  
Renal Care Group, Inc  
Wichita, Kansas

Anne L. Voigts, MD, Vice Chair  
Internists, P.C.  
Cedar Rapids, Iowa

Martin Jendrisak, MD, FACP  
Washington University Medical  
St. Louis, Missouri

Michael Flanigan, MD  
University of Iowa Hospital & Clinics  
Iowa City, Iowa

## **ESRD Network #12**

### **Finance Subcommittee A Subcommittee of the Executive Committee**

Ann Stivers, RN, Committee Chair  
Robert Saylor, MD, Executive Committee Chair  
Stan Langhofer, BSN, RN, CNN  
Mary Gellens, MD  
Norma Knowles, Patient Representative  
Lisa Taylor, BSN, RN, Network #12 Executive Director

### **Nominating Subcommittee A Subcommittee of the Executive Committee**

Robert Saylor, MD, Executive Committee Chair  
Jan Dudley, MS, RD, LD  
Dennis Ross, MD, Medical Review Board Chair  
Kerry Lavery, RN, CNN  
Lisa VanHoose, MSW  
Mary Gellens, MD  
Lisa Taylor, BSN, RN, Network #12 Executive Director

### **Grievance Committee A Subcommittee of the Medical Review Board**

Anne L. Voigts, MD, Committee Chair  
Ardy Boucher, Patient Representative  
Robert Dickerson, Patient Representative  
Kerry Lavery, RN, CNN  
Dennis Ross, MD, Executive Committee Chair  
Lisa Taylor, BSN, RN, Network #12 Executive Director

### **Data Committee A Subcommittee of the Medical Review Board**

Andrew Hartley, Consultant  
Daniel W Coyne, MD  
Lou Polish, MD  
John L. Smith, MD  
Les Spry, MD  
Sarah Yelton, RN, CNN, Network #12 QI Coordinator  
Cathy Long, RHIT, Network #12 QI Specialist

## ESRD Network #12

### III. HCFA NATIONAL GOALS AND NETWORK ACTIVITIES

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 HCFA has accorded ESRD Networks with quasi-regulatory authority of facilities, the Network #12 Boards and staff are committed to acting in an educational role, supplying information and tools to improve data integrity and patient care.

This section will summarize Network activity toward meeting HCFA's ESRD Program goals

#### ***HCFA 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 goal can be grouped into the following four categories:

1. Quality Improvement Projects
2. Quality of Care Initiatives
3. Provider Community Education
4. Assistance to Facility and Patients Related to Care Issues

1. Quality Improvement Projects

#### **Vascular Access Infection Project**

##### Project Introduction

As of December 31, 1996, there were 294,700 ESRD patients in the United States, including transplant recipients. Of the dialysis population (215,900), 85.5% (184,600) were receiving hemodialysis. Within the Network #12 area, there were 8,825 dialysis patients with 7,128 receiving hemodialysis (80.77%) as of December 31, 1997.

Infectious complications of vascular accesses are a leading cause of morbidity and mortality in dialysis patients. An untreated access infection may lead to bacteremia, sepsis, hemorrhage, and death. Infection is also one of the leading causes of catheter removal in hemodialysis patients. Due to the importance of preventing these infections, the Dialysis Outcomes Quality Initiatives (DOQI) Guidelines discusses many aspect of access care related to infection control. Tracking occurrence of infections can help identify their sources and suggest corrective actions.

Most participating facilities had substantial room for improvement in the following process areas of providing care:

- Creation and maintenance of formal tracking mechanisms for vascular access infections

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- Adherence to DOQI guidelines for infection control practices. The Network sought to help facilities improve with respect to these areas, thereby reducing infection rates in the later months of the project.

To encourage facilities to initiate and continue the tracking of infection percentages, the Network calculated their monthly rates for one year, and later assisted them in calculating their own rates. To help facilities apply the DOQI Guidelines, the Network distributed and collected a questionnaire twice during the year. The survey tool included questions taken directly from the vascular access infection control processes prescribed in the Guidelines. Additionally, resource materials were distributed to each facility outlining the DOQI Guidelines for access infection prevention. Both directly and indirectly, the best practices for infection prevention were provided for the facilities.

### Project Methods

All outpatient hemodialysis facilities in the Network's four-state region were invited to participate in the project. Each month, facility staff provided data on the number of patients with each vascular access type. Access types were A/V graft, A/V fistula, subclavian catheter (cuffed and non-cuffed), intrajugular (cuffed and non-cuffed), and other (specify type). The Network requested facility staff to count all hemodialysis patients with more than one access during the month in all applicable categories. A vascular access infection was defined as a case in which the patient exhibited signs and symptoms of access infection combined with positive blood cultures. For any vascular access infections, the facility staff provided the access type, whether or not the patient received antibiotics, and whether or not the access was

## Facility Practices Survey Questions

- A. All accesses are washed with an antibacterial soap or scrub and water prior to cannulation.
- B. A 70% alcohol &/of 10% povidone iodine solution is applied in a circular rubbing motion prior to cannulation.
- C. If a 70% alcohol solution is used, it is applied for 1 minute immediately prior to needle insertion.
- D. If a 10% povidone solution is used, it is applied and allowed to dry prior to needle insertion.
- E. Clean gloves are worn by staff for cannulation and are changed between patients.
- F. The access is assessed for signs of infection each treatment and this information is documented in the medical record.
- G. A clean technique for needle cannulation is used for all cannulation procedures.
- H. Catheter hub caps or bloodline connectors are soaked for 3-5 minutes in povidone iodine and then allowed to dry prior to separation.
- I. Patients wear a surgical mask for all dressing changes and procedures that remove the catheter caps accessing the patient's bloodstream.
- J. Staff wear a surgical mask or face shield for all catheter dressing changes.
- K. Staff wear a surgical mask or face shield and gloves for all procedures that remove the catheter caps accessing the patient's bloodstream.
- L. Catheter lumens are kept sterile.
- M. Catheter exit sites are examined each hemodialysis treatment for signs of infection and these findings are documented in the medical record.
- N. Manipulation of a hemodialysis catheter and accessing the patient's bloodstream is performed in a manner that minimizes contamination.

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removed. The Network office received this information monthly for a twelve-month period.

Twice during the project, facility staff responded to a survey assessing infection control practices. The facility self-reported their performance in following the NKF-DOQI Clinical Practice Guidelines for Vascular Access related to preventing infection. Each practice recommendation was re-stated as a single question on the tool. Facilities were asked to rate their performance on a 1-10 scale, with 10 being always and 1 being never.

Continuous and timely feedback on infection percentages was provided the facilities.

**Table 1**  
**Results at Baseline by Access Type**  
**Infections and Treatment As Percentage of Total**

Access Type	No.	Infection No. (%)	Antibiotics No. (%)	Removed No. (%)
Graft	9111	95 (1.04)	95 (1.04)	34 (0.37)
Fistula	6217	11 (0.18)	11 (0.18)	0 (0.00)
Sbclvn C	2531	90 (3.56)	82 (3.24)	41 (1.62)
Sbclvn NC	411	22 (5.35)	22 (5.35)	10 (2.43)
Intrjglr C	3004	108 (3.60)	100 (3.33)	49 (1.63)
Intrjglr NC	274	20 (7.30)	20 (7.30)	14 (5.11)
Other	201	5 (2.49)	2 (2.49)	2 (1.00)
Totals	21749	351(1.61)	335 (1.54)	150 (0.69)

Sbclvn C = Subclavian Cuffed

Intrjglr C = Intrajugular Cuffed

Sbclvn NC = Subclavian Noncuffed

Intrjglr NC = Intrajugular Non Cuffed

Additionally, at the end of the project, the data were analyzed following a pre-post intervention experimental design, to assess project effectiveness in reducing infection rates. The combination of a rapid-cycle data feedback mechanism with an underlying analytic methodology for testing changes in facility patterns encouraged facility participation and understanding of the study. This design also provided the facilities with data to evaluate their progress and make appropriate changes or corrective action as needed.

The combination of a pre-post experimental design with rapid cycle improvement was implemented as follows. Facilities were grouped according to whether they monitored infections at baseline. Facility-specific and aggregate infection percentages were calculated at the baseline, five-month and eleven-month time periods for the groups both combined and separately. Rapid cycle data reporting was used concurrently to provide monitoring and feedback data for each facility. The average infection percentage per vascular access type was

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calculated over the first three months, to serve as a baseline measurement. Data from Months 4 and 5 were analyzed to assess whether the process of tracking infections (with monthly feedback on infection percentages) improved percentages. A survey of infection control practices during Month 5 provided a baseline for the second part of the project. Educational materials were distributed during Month 6. Data collected in response to the final survey during Month 11 was examined to ascertain whether process improvements had been implemented and whether improvements in rates had occurred. Participating facilities were provided their results along with comparative data from their state and the four-state region.

**Table 2**  
**Baseline Access Removal**  
**As Percentage of Infected Access**  
**by Type**

Access Type	Infections	Removed	Removed %
Graft	95	34	35.79
Fistula	11	0	0
Sbclvn C	90	41	45.56
Sbclvn NC	22	10	45.45
Intrjglr C	108	49	45.37
Intrjglr NC	20	14	70.00
Other	5	2	40.00
Totals	351	150	42.73

Sbclvn C = Subclavian Cuffed  
 Sbclvn NC = Subclavian Noncuffed  
 Intrjglr C = Intrajugular  
 Intrjglr NC = Intrajugular Non Cuffed

**Table 3**  
**Access Types Number and Percent**

Access Type	Baseline n (%)	Month 5 n (%)	Month 11 n (%)
Graft	9111 (42)	5592 (40)	1958 (40)
Fistula	6217 (29)	3982 (29)	1480 (30)
Sbclvn C	2531 (12)	1624 (12)	519 (11)
Sbclvn NC	411 (2)	204 (1)	83 (2)
Intrjglr C	3004 (14)	2113 (15)	769 (16)
Intrjglr NC	274 (1)	176 (1)	39 (1)
Other	201 (1)	145 (1)	64 (1)
Totals	21749	13836	4912

Sbclvn C = Subclavian Cuffed  
 Sbclvn NC = Subclavian Noncuffed  
 Intrjglr C = Intrajugular Cuffed

Results

Of the 205 outpatient hemodialysis facilities in Network #12 as of December 31, 1999, 142 (69%) elected to participate in the project: Iowa 37 (86%); Kansas 28 (72%); Missouri 62 (63%); and Nebraska 15 (62%). Of the 142 units, 78 (54.9%) indicated at Month 1 that they regularly calculated infection percentages.

For Months 1-3 (Baseline), the overall infection rate was 0.69% with the highest rate reported in non-cuffed subclavian catheters. Ninety-five percent of all access infections (335 of 351 cases) were

treated with antibiotics. Of those accesses that became infected, removal percentages varied

widely between access types; for instance, the proportion of infected grafts removed due to infection was 36% higher than the corresponding rate for fistulae. On the other hand, the corresponding rates for catheters were fairly constant, with the exception of non-cuffed intrajugular catheters. (See Table 2) These percentages were consistent throughout the project.

The percentage of patients with each type of access remained stable throughout the project. However, facility participation waned close to the end

of the project. The declining participation is evident in the decreasing numbers of accesses reported at Month 12, the final time point seen in Table 3.

Infection rates remained fairly constant throughout the project. There were no significant differences seen in the pre-post measurements by either presence or absence of an infection rate monitoring mechanism at baseline, by state, or by access type. (See Tables 3 and 4) Self-reported compliance with the DOQI guidelines related to preventing access infection remained substantially constant from the first to the final survey, conducted during Months 5 and Months 11, respectively. (See Table 5 and 6)

Discussion

Feldman et al. attributed the largest cause of morbidity in the hemodialysis population to

**Table 4**  
**Infection Rates**  
**State and Time Period**  
**By Tracking Mechanism at Baseline**

	Baseline % (No./n)	Month 5 % (No./n)	Month 11 % (No./n)
State			
IA	1.40 (69/4929)	1.69 (58/3431)	1.68 (21/1250)
KS	1.54 (56/3647)	1.93 (43/2229)	1.89 (17/900)
MO	1.73 (1821/10526)	1.97 (131/6643)	1.87 (39/2085)
NE	1.66 (44/2647)	2.41 (37/1533)	1.77 (12/677)
Tracking at Baseline?			
No	1.42 (88/6178)	1.5 (53/3535)	1.49 (21/1412)
Yes	1.48 (1941/13088)	1.98 (172/8673)	2.05 (61/2978)

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vascular access complications, accounting for 15 to 16 percent of hospitalizations.<sup>1</sup> In its 1997 Annual Report, the United States Renal Data System reported Medicare spending in 1994 for vascular access procedures was between \$743M and \$939M, representing between 8.4 and 10.6 percent of total Medicare ESRD spending in 1994 for all modalities and all patients. Spending per year was between \$6,228 and \$7,871 representing between 14 and 17 percent of total spending for hemodialysis patients per year.<sup>2</sup>

**Table 5**  
**Facility Practices Responses**  
**Survey 1**

Response No (%)											
Survey 1	10	9	8	7	6	5	4	3	2	1	N/A
Question (n)											
A (114)	42(37)	8(7)	7(6)	9(8)	9(8)	5(4)	6(5)	6(5)	9(8)	13(11)	0(0)
B (115)	77(67)	8(7)	11(10)	1(1)	0(0)	1(1)	1(1)	0(0)	1(1)	11(10)	4(3)
C (117)	43(37)	10(9)	17(15)	2(2)	0(0)	23(2)	1(1)	1(1)	1(1)	10(9)	30(26)
D (117)	39(33)	19(16)	15(13)	9(8)	4(3)	4(3)	4(3)	4(3)	0(0)	7(6)	12(10)
E (118)	115(97)	2(2)	1(1)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
F (119)	95(80)	12(10)	2(2)	3(3)	5(4)	0(0)	0(0)	1(1)	1(1)	0(0)	0(0)
G (122)	115 (94)	4(3)	3(2)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
H (116)	51 (44)	9(8)	10(9)	3(3)	5(4)	2(2)	1(1)	2(2)	0(0)	33(28)	0(0)
I (116)	67 (58)	21(18)	5(4)	1(1)	2(2)	3(3)	1(1)	1(1)	0(0)	15(13)	0(0)
J (116)	96 (83)	11(9)	3(3)	2(2)	0(0)	2(2)	0(0)	0(0)	0(0)	2(2)	0(0)
K (115)	101(87)	7(6)	4(3)	2(2)	0(0)	1(1)	0(0)	0(0)	0(0)	1(1)	0(0)
L (115)	98(85)	12(10)	3(3)	1(1)	1(1)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
M (116)	101(87)	9(8)	4(3)	0(0)	0(0)	0(0)	0(0)	1(1)	0(0)	1(1)	0(0)
N (115)	102 (89)	10(9)	3(3)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)

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<sup>1</sup>Feldman HI, Held PJ, Hutchinson JT, Stoiber E, Hartigan MF, Berlin JA. Hemodialysis vascular access morbidity in the United States. *Kidney International* 43:1091-1096.

<sup>2</sup>U.S. Renal Data System, USRDS 1997 Annual Data Report, National Institutes of Health, National Institutes of Diabetes and Digestive and Kidney Diseases, Bethesda, MD, April 1997.

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Infection is a common complication related to vascular accesses for hemodialysis. Because it is one the leading causes of catheter removal and morbidity in dialysis

**Table 8**  
**Facility Practices Responses**  
**Survey 2**

Survey 2	Response										
	10	9	8	7	6	5	4	3	2	1	N/A
Question (n)											
A (121)	45(37)	15(12)	7(6)	6(5)	11(9)	9(7)	5(4)	5(4)	6(5)	12(10)	0(0)
B (122)	89(73)	15(12)	8(7)	2(2)	2(2)	1(1)	0(0)	0(0)	0(0)	3(2)	2(2)
C (118)	54(46)	14(12)	12(10)	9(8)	3(3)	1(1)	0(0)	0(0)	1(1)	3(3)	21(18)
D (122)	43(35)	23(19)	14(11)	14(11)	2(2)	3(2)	2(2)	0(0)	2(2)	4(3)	15(12)
E (122)	114(93)	5(4)	3(2)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
F (120)	97(81)	6(5)	8(7)	3(3)	3(3)	0(0)	0(0)	2(2)	1(1)	0(0)	0(0)
G (117)	110 (94)	6(5)	1(1)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
H (125)	51 (43)	13(10)	11(9)	4(3)	6(5)	0(0)	3(2)	4(3)	2(2)	22(18)	6(5)
I (122)	77 (63)	19(16)	4(3)	0(0)	0(0)	2(2)	0(0)	1(1)	3(2)	16(13)	0(0)
J (122)	100(82)	16(13)	2(2)	0(0)	0(0)	2(2)	0(0)	0(0)	0(0)	2(2)	0(0)
K (122)	102(84)	16(13)	1(1)	0(0)	1(1)	1(1)	0(0)	0(0)	0(0)	1(1)	0(0)
L (128)	111(87)	13(10)	1(1)	2(2)	1(1)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
M (122)	105(86)	7(6)	4(3)	5(4)	1(1)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)
N (116)	97 (84)	10(9)	6(5)	2(2)	0(0)	0(0)	0(0)	0(0)	0(0)	1(1)	0(0)

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patients,<sup>3, 4, 5</sup> the NKF-DOQI Clinical Practice Guidelines for Vascular Access Care recommend tracking the occurrence of infection to help identify the source and allow corrective action be taken.<sup>6</sup>

The low percent of fistulas and higher percent of other accesses removed due to infection are consistent with other studies<sup>7,8,9</sup>. The project achieved its stated short-term goals and objectives:

- Establish facility, state, and regional vascular access infection percentages
  - Educate facilities in the process of collecting, computing, and tracking vascular access rates
  - Assess the implementation of recommended clinical practice guidelines related to access infection prevention and care
  - Develop a process for consistently collecting data needed for monitoring vascular access infection rates
  - Develop a process to produce facility, state, and regional vascular access infection rates
- However, the long-term goal of reducing vascular access infections was not met.

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<sup>3</sup>Schwab SJ, Buller GL, McCann RL, Bollinger RR, Stickel DL. Prospective evaluation of a dacron cuffed hemodialysis catheter for prolonged use. *American Journal of Kidney Disease* 11:166-169, 1988.

<sup>4</sup>Suchoki P, Conlon P, Knelson M, Harland RC, Schwab SJ. Silastic cuffed catheters for hemodialysis vascular access: thrombolytic and mechanical correction of HD catheters malfunction. *American Journal of Kidney Disease* 28:379-386, 1999.

<sup>5</sup>Marr K, Krekland K, Seefon D, Conlon P, Conly R, Schwab SJ. Catheter related bacteremia in hemodialysis patients. *Annals of Internal Medicine*, 1997.

<sup>6</sup>NKF-DOQI Clinical Practice Guidelines for Vascular Access. National Kidney Foundation, New York, 1997.

<sup>7</sup>Harland RC: Placement of permanent vascular access devices: surgical considerations. *Advances in Renal Replacement Therapy*, 1:99-106, 1994.

<sup>8</sup>Kinnaert P, et al., Nine Years' experience with internal arteriovenous fistulas for hemodialysis: study of some factors influencing results. *British Journal of Surgery*, 64:242-246, 1977.

<sup>9</sup>Kherlakain GM, et al. Comparison of autogenous fistula versus expanded polytetrafluoroethylene graft fistula for angioaccess in hemodialysis. *American Journal of Surgery*, 152:238-243, 1986.

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There is a lack of outcomes research on implementing effective systems changes in the dialysis unit setting to decrease vascular access infection rates. The lack of improvements in infection rates may indicate that vascular access care is more complex than other care processes, so that interventions other than data collection and feedback report are required to effect improvements. Specifically, it is plausible that intervention leading to increased adherence to DOQI Guidelines would result in infection rate decreases. Facilities in this project reported particularly low adherence to the following such guidelines:

- Catheter hub caps or bloodline connectors are soaked for 3-5 minutes in povidone iodine and then allowed to dry prior to separation.
- Patients wear a surgical mask for all dressing changes and procedures that remove the catheter caps accessing the patient's bloodstream.
- All accesses are washed with an antibacterial soap or scrub and water prior to cannulation.

Another way projects like this one could possibly have more impact would be to increase the intensity of the educational component. Previous studies to effect system changes in outpatient settings included the use of trained coordinators who provided personalized systems review and monitoring for each clinic<sup>10,11</sup>. Each coordinator was assigned a maximum number of clinics which they visited on a regular basis leading systems review meetings and providing educational materials.

Further study is indicated to discern more effective interventions for improving the care of hemodialysis patients, access care, and multi-center initiatives.

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<sup>10</sup>Carney P, Dietrich A, Keller A, Landgraf J, O'Connor G. Tools, Teamwork, and Tenacity: elements of a cancer control office system for primary care practice *Journal of Family Practice*, 1992 35(4):388-394.

<sup>11</sup>Dietrich A, O'Connor G, Keller A, Carney P, Levy D, Whaley F Improving cancer early detection and prevention: a community practice randomized trial. *British Medical Journal*. 1992 March 14, 304:687-691.

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### HD Adequacy Project

Proposed to HCFA September 1, the project was pending approval on December 31, 2000. This project will focus on improving the effectiveness of hemodialysis treatments received by in-center patients. The measure of interest is the Urea Reduction Ratio (URR), with a 0.65 (or 65%) value being the threshold for appropriate care. Facilities will report the number of patient < and those whose URR is  $\geq 0.65$  monthly.

Network intervention to increase the number and percent of patients whose URR is  $\geq 0.65$  include the following:

- Providing facility-specific URR run charts and aggregate comparative reports
- Assessing facility compliance in delivering the hemodialysis prescription
- Assessing implementation of applicable DOQI guidelines
- Establishing facility-specific improvement goals—an increase in the percent of patient achieving a URR  $\geq 0.65$  of 10%
- Providing education on improving hemodialysis adequacy

The facility data collection burden will be moderate, consisting of monthly reporting of the number of patients in each of the following categories: (1) number having URR values; (2) number for whom URR testing was not performed; (3) number whose URR values were < 0.65; (4) the number whose values were  $\geq 0.65$ .

The project uses a hybrid A-B-A methodology to help assess effectiveness of the project and its intervention. Month 1 data will serve as the baseline measurement. Facilities will be assigned randomly into 2 groups. Intervention will begin immediately for Group 1 (one-third of the facilities) with a flow sheet audit comparing the delivered hemodialysis treatment against the prescription. When available, the audit results will be provided to the facility. Also, the unit's improvement goals will be communicated on the monthly URR run chart. Facilities experiencing difficulty achieving either the 80% threshold or the 10% improvement goal will receive educational materials on improving hemodialysis adequacy.

Group 2 will serve as a comparison group to Group 1. Intervention with Group 2 units will begin upon completion of the first intervention. Intra-group differences will be compared to assess project effectiveness.

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### 2. Quality of Care Initiatives

#### Hepatitis B Vaccination Initiative

This initiative is the outgrowth of a Quality Improvement Project conducted during 1998-1999. Upon project completion, 30 facilities had vaccination percentages < 60%. These facilities were notified of their continued need for improvement with the project's final feedback report. These units were re-surveyed during 2000 for increased vaccination percentages in . Of the 30 units, all but four had improved beyond the 60% threshold. The Medical Review Board will continue to work with the remaining four facilities on this important preventive health care issue.

#### Conflict Resolution Initiative

This initiative was developed as a joint project between the Medical Review Board and Executive Committee in 1999. As developed, the initiative has the following four components:

- A day-long seminar demonstrating non-violent conflict resolution techniques, the need for policies to support a non-violent environment in the dialysis unit, and the steps necessary before patient dismissal.
- Distribution of a guideline endorsed by the Network Executive Committee on preventing violence and harassment in the dialysis unit.
- A discount offer for the book "Dealing with Challenging Dialysis Patient Situations" by Mary Rau Foster, R.N., B.S., J.D., A.R.M.
- Assembling and training a cadre of non-violent conflict resolution instructors who will provide instruction at the facility level.

Phase I of the of the initiative was completed on April 6, 2000, when the educational meeting "Crisis, Conflict, and Chaos in the Dialysis Unit" was held. The day-long seminar gave the over 350 participants an overview of incorporating violence and harassment policies into facility health and safety plans. Participants also received demonstrations on identifying violence potential and non-violent interventions. The afternoon focused on the steps facilities must have demonstrated prior to the dismissal of a patient.

The Network #12 guideline on preventing violence and harassment in dialysis units was distributed to all facilities in May 2000. Fifty-two facilities ordered a copy of the book on challenging patient situations during the year.

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### 3. Provider Community Education

#### Annual Meeting

The 12<sup>th</sup> Annual Network Coordinating Council Business and Educational Meeting was held September 14-15, 2000, with attendance of more than 300 renal professionals and Board members. A reception and poster session was held following Board meetings on Thursday evening. The evening was highlighted by a presentation on renal osteodystrophy. The day-long educational sessions on Friday focused on home therapies including presentations on trends in home therapies, the continuum of care throughout modalities, adequacy in peritoneal dialysis, prevention of peritonitis, peritoneal catheter care, preventing abdominal catastrophes in peritoneal dialysis patients, nocturnal home hemodialysis, and preventing care giver burn-out. The Council Business Meeting was held during lunch and included an address by the Executive Director on Network activities.

### 4. Assistance to Facilities and Patients Related to Care Issues

All calls related to patient care are directed to either Sarah Yelton, R.N., C.N.N., QI Coordinator, Cathy Long, B.A., R.H.I.T., QI Specialist, or Lisa Taylor, Executive Director.

Network #12 maintains a toll-free telephone line for patient use—800-444-9965. As part of their new patient orientation, ESRD facilities acquaint the patient with Network #12 and how to reach us. Previously distributed to existing units, we provide new facilities with a poster listing the phone number and ask that it be displayed in the patient waiting room or other appropriate area.

**Table 7**

**Number of Calls by Originator, 2000**

Caller

Patient or Family Member	59
Facility Staff	219
Challenging Patient Behavior	111
All Others	108
State Surveyor	3

During 2000, the office received 191 calls from patients, family members, facility staff, and others on a variety of issues. As displayed in Table 7, 106 of the calls were from facility personnel, of which 62 were requests for information on addressing challenging patient behaviors. Additionally, there were six calls from State Survey Agencies

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requesting information related to grievances filed against facilities. Table 8 lists the types of questions and concerns relating to patient care received during 2000.

In response to calls involving challenging patient behaviors, the Network QI staff reviews the ESRD Conditions for 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 discharge 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 inquire about the process that the facility has undergone to identify the problem with the patient. The following questions are raised:

- Have there been any care planning meetings?

**Table 8: Types of Complaints and Questions Related to Patient Care, 2000**

Care Practices	Other Concerns
<ul style="list-style-type: none"><li>• Hepatitis B questions</li><li>• Vascular Access QIP</li><li>• Unit cleanliness</li></ul>	<ul style="list-style-type: none"><li>• Inappropriate patient behavior</li><li>• Transfer policies</li><li>• Patient rights</li><li>• Undocumented residents</li><li>• Transportation</li><li>• Patient Education</li><li>• Location of other facilities</li></ul>
Insurance and Billing Problems	
<ul style="list-style-type: none"><li>• Costs not covered by Medicare</li><li>• Billing questions</li><li>• Transplant medication coverage</li></ul>	

- If there have been meetings, 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 their rights; e.g., a behavior contract?
- What support system does the patient have that might effect the situation?
- Importantly, does the facility have a policy regarding transfer or termination of patients and is that process being followed?

If a dismissal is imminent, the Network QI 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 a number of facilities and

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are relying on hospital emergency rooms to receive care.

### ***HCFA Goal #2 Improving Data Reporting, Reliability, and Validity between ESRD Facility, Network, and HCFA***

As directed by our contract with HCFA, Network #12 provides facilities with routine reports on accuracy and timeliness of submitted HCFA forms. Compliance reports, generated quarterly and annually, are distributed providing each facility with feedback on their data reporting performance. The calculation is a simple percentage of forms received divided by the number of forms completed and accurately and the number submitted on time.

Beginning in 1999, we have been distributing certificates of merit for quarterly forms compliance with the color of the certificate signifying the level of achievement. Additionally, we honor our "Data Champions"—facilities who exceeded the HCFA compliance goals—and "Data Stars"—facilities who met the HCFA compliance guidelines—during the Network Annual Business Meeting.

**HCFA Goal #3 Establishing and Improving Partnerships and Cooperative Activities Among and Between the ESRD Network, Peer Review Organizations (PROs), State Survey Agencies (SSAs), and ESRD Facilities.**

HCFA top officials are located in Baltimore, Maryland. To assure effective local implementation of the Medicare program, there are ten regional offices located in major

#### **2000 Data Champions**

These facilities achieved 100% timeliness and accuracy in data forms submission

Advanced Renal Services-Fremont	North Iowa Mercy Dialysis-Charles City
Bluff City Dialysis	Renal Care Group-Arkansas City
DePaul Health Center	Renal Care Group-Dodge City
Dialysis Center of Beatrice	Renal Care Group-Emporia
Dialysis Center of Lincoln Northwest	Renal Care Group-Great Bend
Dialysis Clinics, Inc.-Macy, NE	Renal Treatment Centers-Parsons
Dialysis Clinics, Inc.-Mexico, MO	Renal Treatment Centers-Winfield
Dialysis Clinics, Inc.-West Plains	RMI Dialysis Center of Maryville
Dialysis Clinics, Inc.-West Omaha, NE	Salem Memorial Hospital
Lutheran Community Hospital	Saline County Dialysis-Concordia
Mary Greeley Medical Cntr- Marshalltown	Saline County Dialysis-Junction City
Nebaska Health System-Baker Place	Saline County Dialysis-Salina
North Iowa Mercy Dialysis-Algona	Samaritan Memorial Hospital-Macon, MO
	St. Louis ConnectCare-Prince Hall

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cities throughout the U. S. Each regional office controls survey, peer review organization, and ESRD Network activities within a particular region. Regional Administrators report directly to the HCFA Administrator who reports to the Secretary of Health and Human Services. Region VII office is located in Kansas City and is

### **2000 Data Stars**

These facilities achieved 80% timeliness and accuracy in data forms submission

Advanced Renal Services –Hastings, NE	Jefferson County Dialysis Center
Cedar Valley Dialysis Center	Kidney Dis. Cntr. of the Ozarks-Branson
Dialysis Center of Council Bluffs	Mercy Hospital Medical Center-Des Moines
Dialysis Center of Fremont	Metro Dialysis Center-Normandy
Dialysis Center of Lincoln	Nebraska Health Systems-Clarkson ESRD
Dialysis Center of South Omaha	Pella Regional Health Center
Dialysis Center of West Omaha	Penn Valley Dialysis Center, Kansas City
Dialysis Clinics, Inc.-Baptist, Kansas City	Renal Treatment Centers–Kennett, MO
Dialysis Clinics, Inc.-Omaha	Renal Treatment Centers–Wichita, KS
Dialysis Clinics, Inc.-Osage Beach	Renex Dialysis Clinic-Maplewood
Dialysis Specialists of Topeka, Inc.	St. John’s Mercy Medical Center, St. Louis
Farmington Dialysis Center	University Hospital Transplant-Omaha
Gambro Healthcare–Washington, MO	University of Iowa - Iowa City
Gambro Healthcare-St. Louis, MO	Wyandotte County Dialysis, LLC
Genesis Medical Center	

responsible for state survey activity in Iowa, Kansas, Missouri, and Nebraska; and overseeing Peer Review Organization (PRO) and ESRD Network activities in thirteen states.

ESRD Network #12 continued to enjoy good relationships with the state survey agencies and peer review organizations in the four-state region during 2000.

### ***HCFA Goal #4 Evaluating and Resolving Patient Grievances***

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

- Receipt of a written grievance form at the Network office.
- Ascertain what steps the patient has taken previously to resolve the problem and the patient’s goal.
- Notify 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. ***Please note***, the patient may remain anonymous throughout the process.
- Removal of all identifiers from the information provided by all parties.

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- Review of the case by the Grievance Committee.
- Rendering of a decision by the Grievance Committee or referral to the Medical Review Board.
- Drafting of a response to the grievant which is sent to the facility or physician for review and comment.
- Notify the grievant of the Grievance Committee's decision that includes the facility's comments.

At any time during this process, a facility visit may be necessary due to the serious nature of the complaint. Matters which are of a serious and immediate threat to the patient's or other patients' health are referred immediately to HCFA Region VII office for investigation.

If, in the course of the review, the Grievance Committee refers the case to the Medical Review Board (MRB) for determination, the MRB may request an improvement plan from the facility. If the facility is not successful in correcting the identified care problem within the time frame of the improvement plan, the MRB, with support of the Executive Committee, may recommend that HCFA sanction the facility.

A grievant who is not satisfied with the Network's findings may appeal the decision with HCFA Region VII office and is notified of this right in the final determination letter.

Network #12 had 8 formal grievances during 2000 which are summarized below.

<b>Count</b>	<b>Nature of Grievance</b>
1	Professional Conduct of Facility Staff
2	Complaints regarding Behavioral Contracts
2	Complaints regarding Facility Policies
1	Complaints regarding Denial of Service
1	Complaints regarding Patient Care
1	Disputes of previous Grievance Committee Findings

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IV. SANCTION RECOMMENDATIONS

No sanctions were recommended or imposed by Network #12 during 2000.

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V. RECOMMENDATIONS FOR ADDITIONAL FACILITIES

There was much activity in opening and closing dialysis units during 2000. As of December 31, 2000, Network #12 consisted of the following types of facilities:

4 Organ Procurement Agencies

18 Medicare-certified Transplant Centers

210 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 1999, net growth for dialysis units, including veterans and federal prison providers, consisted of ten facilities. However, this represents the closing of 8 and opening of 18 new units. The table 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. This year and last year's relative slowing may reflect market saturation.

**ESRD NETWORK #12  
Total Facility Count by Calendar Year**

<b>Year</b>	<b>Facility Count</b>	<b>Average Percent of Growth</b>
1990	100	Baseline
1991	106	6.00%
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	0.49%
2000	215	4.88%

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<b>Average Annual Growth Rate for Last 5 Years</b>	<b>8.05%</b>
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VI. DATA TABLES

2000 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 2000. 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.

2000 Network #12 Prevalence Data

Prevalence reflects the number of people on chronic maintenance dialysis in the Network on December 31, 2000. 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 (HCFA 2728 forms) or ESRD Death Notifications (HCFA 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.

**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 2000*

Age Group	IA	KS	MO	NE	Other	Total
00-04	3	1	6	0	2	12
05-09	1	1	1	1	2	6
10-14	0	1	6	1	0	8
15-19	3	7	12	4	4	30
20-24	6	7	21	3	2	39
25-29	13	16	26	13	3	71
30-34	16	14	47	16	4	97
35-39	20	24	63	11	4	122
40-44	20	37	86	12	8	163
45-49	36	34	101	16	8	195
50-54	49	44	150	31	11	285
55-59	38	65	154	44	10	311
60-64	70	83	174	43	15	385
65-69	73	68	245	53	18	457
70-74	109	91	255	62	20	537
75-79	115	96	242	75	26	554
80-84	87	58	147	41	8	341
>=85	28	33	72	31	6	170
Missing	0	0	0	0	0	0
<b>Total</b>	<b>687</b>	<b>680</b>	<b>1808</b>	<b>457</b>	<b>151</b>	<b>3783</b>
<b>Gender</b>						
Female	331	318	882	189	55	1775
Male	356	362	926	268	96	2008
Missing	0	0	0	0	0	0
<b>Total</b>	<b>687</b>	<b>680</b>	<b>1808</b>	<b>457</b>	<b>151</b>	<b>3783</b>
<b>Race</b>						
Asian	7	1	9	3	0	20
Black	42	117	512	33	16	720
Indian subcontinent	0	0	3	0	0	3
Mid-East Arabian	1	0	2	1	0	4
Native American	4	10	5	8	1	28
Other/Multiracial	1	1	0	0	0	2
Pacific Islander	0	1	6	1	0	8
White	632	550	1271	411	134	2998
Missing	0	0	0	0	0	0
Unknown	0	0	0	0	0	0
<b>Total</b>	<b>687</b>	<b>680</b>	<b>1808</b>	<b>457</b>	<b>151</b>	<b>3783</b>
<b>Primary Diagnosis</b>						
Cystic Kidney	18	26	41	13	6	104
Diabetes	293	328	812	197	43	1673
Glomerulonephritis	66	65	143	45	20	339
Hypertension	172	140	520	106	38	976
Other	89	80	174	51	26	420
Other Urologic	26	10	51	15	10	112
Missing	0	0	0	0	0	0
Unknown	23	31	67	30	8	159
<b>Total</b>	<b>687</b>	<b>680</b>	<b>1808</b>	<b>457</b>	<b>151</b>	<b>3783</b>

Source of information: Network SIMS Database

Date of Preparation: May 2001

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

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

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

This table includes 62 patients with transplant therapy as an initial treatment.

This table includes 33 patients receiving treatment at non-Medicare VA facilities

Living ESRD Dialysis Patients  
(ESRD Dialysis Prevalence)

All Active Dialysis Patients by state of residence, age, race, gender and primary diagnosis as of  
12/31/2000

Age Group	IA	KS	MO	NE	Other	Total
00-04	4	4	7	1	3	19
05-09	5	0	3	1	1	10
10-14	2	2	10	2	0	16
15-19	4	9	23	6	7	49
20-24	16	20	59	13	8	116
25-29	29	46	98	33	9	215
30-34	34	45	187	36	6	308
35-39	73	90	194	54	7	418
40-44	99	120	338	72	25	654
45-49	91	139	393	87	27	737
50-54	138	189	510	87	26	950
55-59	133	168	456	119	32	908
60-64	190	235	530	117	26	1098
65-69	210	210	642	124	30	1216
70-74	259	246	659	125	48	1337
75-79	268	240	611	142	34	1295
80-84	176	145	376	91	16	804
>=85	76	76	167	53	12	384
Missing	0	0	0	0	0	0
<b>Total</b>	<b>1807</b>	<b>1984</b>	<b>5263</b>	<b>1163</b>	<b>317</b>	<b>10534</b>
<b>Gender</b>						
Female	810	954	2570	560	142	5036
Male	997	1030	2693	603	175	5498
Missing	0	0	0	0	0	0
<b>Total</b>	<b>1807</b>	<b>1984</b>	<b>5263</b>	<b>1163</b>	<b>317</b>	<b>10534</b>
<b>Race</b>						
Asian	26	21	35	12	1	95
Black	169	475	2132	187	77	3040
Indian subcontinent	0	0	4	1	0	5
Mid-East Arabian	2	0	4	3	0	9
Native American	10	30	19	43	3	105
Other/Multiracial	11	45	15	12	0	83
Pacific Islander	0	8	10	1	0	19
White	1589	1405	3044	904	236	7178
Missing	0	0	0	0	0	0
Unknown	0	0	0	0	0	0
<b>Total</b>	<b>1807</b>	<b>1984</b>	<b>5263</b>	<b>1163</b>	<b>317</b>	<b>10534</b>
<b>Primary Diagnosis</b>						
Cystic Kidney	54	79	161	43	10	347
Diabetes	700	848	2123	481	97	4249
Glomerulonephritis	260	310	597	160	53	1380
Hypertension	418	425	1625	258	81	2807
Other	226	205	454	116	49	1050
Other Urologic	74	46	123	37	11	291
Missing	0	0	0	0	0	0
Unknown	75	71	180	68	16	410
<b>Total</b>	<b>1807</b>	<b>1984</b>	<b>5263</b>	<b>1163</b>	<b>317</b>	<b>10534</b>

Source of information: Network SIMS Database

Date of Preparation: May 2001

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

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

This table cannot be compared to the HCFA facility survey because the HCFA 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 patients receiving treatment at non-Medicare VA facilities.







262585#	0	0	0	7	0	17	0	0	0	24
262586#	0	0	0	3	0	0	0	0	0	3
262587#	0	0	0	0	0	0	0	0	0	0
262588#	0	0	0	0	0	0	0	0	0	0
263300	0	0	0	0	1	2	0	0	1	2
263301	0	0	0	0	5	5	0	0	5	5
263302	1	1	1	0	28	19	0	0	30	20
263500^	0	0	0	0	0	0	0	0	0	0
263502^	0	0	0	0	0	0	0	0	0	0
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	33	34	13	16	0	0	46	50
263507	0	0	0	0	0	0	0	0	0	0
263508	0	0	0	0	0	0	0	0	0	0
263510	0	0	0	0	0	0	0	0	0	0
452603^	0	0	0	0	0	0	0	0	0	0
MOBERL^	0	0	0	0	0	0	0	0	0	0
<b>MO Total</b>	<b>74</b>	<b>83</b>	<b>364</b>	<b>299</b>	<b>326</b>	<b>370</b>	<b>0</b>	<b>0</b>	<b>764</b>	<b>752</b>
280020^	0	0	0	0	0	0	0	0	0	0
280030	0	0	0	0	0	0	0	0	0	0
280034	0	0	0	0	0	0	0	0	0	0
280065	0	0	0	2	3	3	0	0	3	5
28006F	0	0	0	0	0	0	0	0	0	0
280088	0	1	26	22	5	6	0	0	31	29
282500	0	1	18	19	17	18	0	0	35	38
282501	0	0	26	30	32	42	0	0	58	72
282502	0	0	0	0	0	0	0	0	0	0
282503	0	0	34	36	28	29	0	0	62	65
282504	0	0	18	15	5	2	0	0	23	17
282505	0	0	0	0	0	0	0	0	0	0
282506	0	0	6	9	2	2	0	0	8	11
282507	0	0	0	0	0	0	0	0	0	0
282508	0	0	7	4	1	1	0	0	8	5
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#	0	0	0	7	0	9	0	0	0	16
283501	0	0	0	0	0	0	0	0	0	0
283502	0	0	9	0	10	0	0	0	19	0
283503	0	0	0	0	0	0	0	0	0	0
<b>NE Total</b>	<b>0</b>	<b>2</b>	<b>144</b>	<b>144</b>	<b>103</b>	<b>112</b>	<b>0</b>	<b>0</b>	<b>247</b>	<b>258</b>
<b>Network#12 Tot:</b>	<b>124</b>	<b>125</b>	<b>763</b>	<b>705</b>	<b>611</b>	<b>692</b>	<b>0</b>	<b>0</b>	<b>1498</b>	<b>1522</b>

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

Date of Preparation: May 2001

This table cannot be compared to the HCFA Facility Survey because the HCFA Facility Survey is limited to dialysis patients receiving outpatient services from Medicare approved dialysis facilities. This table includes 13 VA Patients Veterans Affairs Facility patients for 1999 and 4 VA Patients Veterans Affairs Facility patients for 2000.

# Provider not operational in 1999

^ Provider not operational in 2000

### Dialysis Modality

Number of living patients by modality by dialysis facility self-care settings  
as of December 31, 1999 and December 31, 2000

InCenter

Provider	HEMO		PD		TOTAL		TOTAL OF HOME & IN-CENTER*	
	1999	2000	1999	2000	1999	2000	1999	2000
160005	15	16	0	0	15	16	16	17
160016	35	38	0	0	35	38	37	38
160030	28	35	0	0	28	35	33	39
160033	97	118	0	0	97	118	99	119
160044	12	24	0	0	12	24	12	24
16004F	7	4	0	0	7	4	8	5
160058	97	37	0	0	97	37	202	80
160064	24	45	0	6	24	51	34	51
160066	4	6	0	0	4	6	4	6
160067	34	42	0	0	34	42	40	46
160079	87	105	0	0	87	105	98	121
160080	44	45	0	0	44	45	44	45
160083	90	95	0	0	90	95	122	129
160089	39	54	0	0	39	54	39	54
160112	28	34	0	0	28	34	29	34
160113#	0	8	0	0	0	8	0	8
162500	105	99	0	0	105	99	119	114
162501	98	99	1	1	99	100	130	148
162505^	6	0	0	0	6	0	6	0
162506	54	61	0	0	54	61	55	61
162507	25	26	0	0	25	26	25	26
162508	9	11	0	0	9	11	9	11
162509	21	27	0	0	21	27	29	31
162511	25	21	0	0	25	21	25	21
162512	27	40	0	0	27	40	27	40
162513	39	46	0	0	39	46	43	52
162514	16	24	0	0	16	24	17	24
162515	90	109	0	0	90	109	120	154
162516	90	95	0	1	90	96	94	102
162517	13	23	0	0	13	23	13	23
162518	21	33	0	0	21	33	21	35
162519#	0	7	0	0	0	7	0	7
162520#	0	10	0	0	0	10	0	10
162521#	0	5	0	0	0	5	0	5
162522#	0	17	0	0	0	17	0	17
163500	6	10	0	0	6	10	6	10
163501	37	37	0	0	37	37	37	37
163502	12	16	0	0	12	16	12	16
163503	8	11	0	0	8	11	8	11
163504	17	17	0	0	17	17	17	17
163505	15	16	0	0	15	16	15	16
163506	12	17	0	0	12	17	12	17
163507	11	15	0	0	11	15	11	15
163508	8	11	0	0	8	11	8	11
163509	17	19	0	0	17	19	17	19
163510	11	12	0	0	11	12	11	12
163511	18	17	0	0	18	17	18	17
163512	24	26	0	0	24	26	24	26
<b>IA Total</b>	<b>1476</b>	<b>1683</b>	<b>1</b>	<b>8</b>	<b>1477</b>	<b>1691</b>	<b>1746</b>	<b>1921</b>
170017	10	18	0	0	10	18	10	18
170040	77	80	0	0	77	80	99	108
172501	71	70	1	0	72	70	84	81
172502	60	57	0	0	60	57	70	71
172503	109	100	2	0	111	100	161	173
172504	133	151	0	0	133	151	194	221
172505	22	27	0	0	22	27	22	27

172506	38	31	0	0	38	31	38	31
172507	27	36	0	0	27	36	27	36
172508	81	104	0	0	81	104	104	139
172509	55	60	0	0	55	60	81	94
172510	14	18	0	0	14	18	14	18
172511	31	34	0	0	31	34	31	34
172512	24	19	0	0	24	19	24	19
172513	3	0	0	0	3	0	3	0
172514	27	43	0	0	27	43	27	43
172515	14	22	0	0	14	22	14	22
172516	19	21	0	0	19	21	20	21
172517	19	29	0	0	19	29	19	29
172518	23	22	0	0	23	22	23	22
172519	82	99	0	0	82	99	82	99
172520	55	67	0	0	55	67	55	67
172521	2	34	0	0	2	34	2	34
172522	23	29	0	0	23	29	23	29
172523	50	59	0	0	50	59	50	59
172524	41	41	0	0	41	41	41	41
172525	9	15	0	0	9	15	9	15
172526	25	25	0	0	25	25	25	25
172527	39	40	0	0	39	40	52	57
172528	25	23	0	0	25	23	25	23
172529	21	20	0	0	21	20	21	20
172530	21	21	0	0	21	21	21	21
172531	18	23	0	0	18	23	18	23
172532	28	30	0	0	28	30	28	30
172533	37	54	0	0	37	54	37	54
172534	6	10	0	0	6	10	6	10
172535	16	20	0	0	16	20	16	20
172536	44	52	0	0	44	52	44	52
172537	16	19	0	0	16	19	16	19
172538	15	17	0	0	15	17	15	17
172539#	0	0	0	0	0	0	0	0
173502^	0	0	0	0	0	0	0	0
<b>KS Total</b>	<b>1430</b>	<b>1640</b>	<b>3</b>	<b>0</b>	<b>1433</b>	<b>1640</b>	<b>1651</b>	<b>1922</b>
260006^	84	0	0	0	84	0	115	0
260008	58	56	0	0	58	56	63	60
260020	3	0	0	0	3	0	3	0
260021	110	108	1	0	111	108	131	123
260027	46	47	0	0	46	47	46	47
260031^	0	0	0	0	0	0	0	0
260040	28	25	0	0	28	25	28	25
26004F	18	27	0	0	18	27	21	27
26008F^	151	0	0	0	151	0	153	0
26009F	68	32	0	0	68	32	77	35
260100	26	28	0	0	26	28	26	28
260104	0	0	0	0	0	0	0	0
260105	11	0	0	0	11	0	29	0
260113	33	45	0	0	33	45	35	47
260141	2	0	0	0	2	0	3	2
260172	13	19	0	0	13	19	13	19
260176	16	19	0	0	16	19	16	19
260179	2	1	0	0	2	1	2	1
260180^	5	0	0	0	5	0	5	0
262501	104	120	0	0	104	120	153	180
262502	163	154	0	0	163	154	164	154
262503	76	109	1	0	77	109	81	111
262504	72	82	0	0	72	82	109	123
262505	24	29	0	0	24	29	24	29
262506	105	96	0	0	105	96	154	139
262507	39	52	0	1	39	53	52	69
262508	97	114	0	0	97	114	139	158

262509	52	71	2	0	54	71	66	71
262511	37	43	0	0	37	43	37	43
262513	44	36	0	0	44	36	44	36
262514	53	59	0	0	53	59	81	93
262515	34	52	0	0	34	52	34	52
262516	29	27	0	0	29	27	30	27
262517	82	89	0	0	82	89	82	89
262518	49	0	0	0	49	0	50	0
262520	39	42	0	0	39	42	39	42
262521	32	46	0	0	32	46	32	46
262522	16	18	0	0	16	18	16	18
262523	17	18	0	0	17	18	17	18
262524	24	26	0	0	24	26	25	28
262526	16	24	0	0	16	24	18	25
262527	108	127	1	0	109	127	128	127
262528	43	57	0	0	43	57	61	72
262530	30	46	0	0	30	46	30	46
262531	51	44	0	0	51	44	51	44
262534	32	37	0	0	32	37	32	37
262535	69	86	1	0	70	86	70	86
262536	50	49	0	0	50	49	57	59
262537	125	128	0	0	125	128	150	160
262538	89	94	0	0	89	94	89	94
262539	86	88	0	0	86	88	87	88
262540	26	35	0	0	26	35	33	42
262541	38	56	0	0	38	56	49	71
262542	33	39	0	0	33	39	33	39
262543	51	67	0	0	51	67	62	77
262544	70	98	1	0	71	98	74	101
262547	69	89	1	0	70	89	119	136
262548	35	40	0	0	35	40	35	40
262549	124	140	0	0	124	140	141	157
262550	31	43	0	0	31	43	31	43
262551	53	68	0	0	53	68	53	68
262552	30	30	0	0	30	30	31	30
262553	60	70	0	0	60	70	60	70
262554	35	52	0	0	35	52	41	57
262555	26	31	0	0	26	31	26	31
262556	65	85	0	0	65	85	65	85
262557	23	31	0	0	23	31	23	31
262559	21	26	0	0	21	26	21	26
262560	53	60	0	0	53	60	86	115
262561	43	54	1	0	44	54	60	63
262562	27	40	0	0	27	40	33	47
262563	39	46	0	0	39	46	45	49
262564	59	65	1	0	60	65	95	111
262565	137	157	0	0	137	157	189	214
262566	22	0	0	0	22	0	23	0
262567	24	16	0	0	24	16	26	17
262568	22	37	0	0	22	37	22	37
262569	29	37	0	0	29	37	29	41
262570	29	29	0	0	29	29	29	29
262571	17	28	0	0	17	28	30	43
262572	19	31	0	0	19	31	23	38
262573	24	30	1	0	25	30	25	30
262574	82	91	0	0	82	91	82	91
262575	26	29	0	0	26	29	26	29
262576	79	93	0	1	79	94	87	106
262577	29	40	0	0	29	40	29	40
262578	25	20	0	0	25	20	25	20
262579	0	36	0	0	0	36	0	38
262580#	0	18	0	0	0	18	0	18
262581#	0	12	0	0	0	12	0	12

262582#	0	12	0	0	0	12	0	12
262583#	0	47	0	0	0	47	0	47
262584#	0	15	0	0	0	15	0	15
262585#	0	1	0	1	0	2	0	26
262586#	0	0	0	0	0	0	0	3
262587#	0	28	0	0	0	28	0	28
262588#	0	7	0	0	0	7	0	7
263300	3	5	0	0	3	5	4	7
263301	8	4	0	0	8	4	13	9
263302	9	9	0	1	9	10	39	30
263500^	62	0	0	0	62	0	62	0
263502^	9	0	0	0	9	0	9	0
263503	26	28	0	0	26	28	26	28
263504	28	26	0	0	28	26	28	26
263505	11	15	0	0	11	15	11	15
263506	3	0	0	0	3	0	49	50
263507	25	0	0	0	25	0	25	0
263508	41	58	1	0	42	58	42	58
263510	19	24	0	0	19	24	19	24
452603^	0	0	0	0	0	0	0	0
MOBERL^	5	0	0	0	5	0	5	0
<b>MO Total</b>	<b>4385</b>	<b>4718</b>	<b>12</b>	<b>4</b>	<b>4397</b>	<b>4722</b>	<b>5161</b>	<b>5474</b>
280020^	0	0	0	0	0	0	0	0
280030	0	0	0	0	0	0	0	0
280034	22	39	0	0	22	39	22	39
280065	31	42	0	0	31	42	34	47
28006F	28	41	0	0	28	41	28	41
280088	98	83	0	1	98	84	129	113
282500	113	99	2	0	115	99	150	137
282501	4	0	1	0	5	0	63	72
282502	36	41	0	0	36	41	36	41
282503	7	42	0	5	7	47	69	112
282504	108	116	0	0	108	116	131	133
282505	17	19	0	0	17	19	17	19
282506	48	68	0	0	48	68	56	79
282507	27	31	0	0	27	31	27	31
282508	4	9	0	0	4	9	12	14
282509	22	25	0	0	22	25	22	25
282510	17	18	0	0	17	18	17	18
282511	39	41	0	0	39	41	39	41
282512	17	24	0	0	17	24	17	24
282513#	0	29	0	0	0	29	0	29
282514#	0	43	0	0	0	43	0	43
282515#	0	36	0	0	0	36	0	52
283501	30	40	0	0	30	40	30	40
283502	25	0	0	0	25	0	44	0
283503	69	50	0	0	69	50	69	50
<b>NE Total</b>	<b>762</b>	<b>936</b>	<b>3</b>	<b>6</b>	<b>765</b>	<b>942</b>	<b>1012</b>	<b>1200</b>
<b>Network #12 Total</b>	<b>8053</b>	<b>8977</b>	<b>19</b>	<b>18</b>	<b>8072</b>	<b>8995</b>	<b>9570</b>	<b>10517</b>

Source of information: Network SIMS Database

Date of Preparation: May 2001

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

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

This table cannot be compared to the HCFA Facility Survey because the HCFA Facility Survey is limited to dialysis patients receiving outpatient services from Medicare approved dialysis facilities. This table includes 121 VA Patients Veterans Affairs Facility patients for 1999 and 104 VA Patients Veterans Affairs Facility patients for 2000.

# Provider not operational in 1999

^ Provider not operational in 2000

## Renal Transplant by Transplant Center

Number of transplants performed by transplant center calendar year 1999 and  
calendar year 2000

Transplant Center	TOTAL TRANSPLANTS PERFORMED		PATIENTS WAITING FOR TRANSPLANT *	
	1999	2000	1999	2000
160058	90	113	150	152
160082	28	19	39	57
160083	17	16	16	14
<b>IA Total</b>	<b>135</b>	<b>148</b>		
170040	61	64	61	80
170122	39	30	31	41
<b>KS Total</b>	<b>100</b>	<b>94</b>		
260014	121	108	348	438
260020	17	18	71	0
260027	50	45	63	71
260104	15	13	48	64
260105	47	52	181	212
260138	45	45	75	74
260141	44	44	44	50
263300	6	4	4	2
263301	3	7	7	3
263302	6	10	11	7
<b>MO Total</b>	<b>354</b>	<b>346</b>		
280013	41	100	196	203
280030^	0	0	0	0
280088^	49	0	0	0
<b>NE Total</b>	<b>90</b>	<b>100</b>		
<b>NETWORK TOTAL:</b>	<b>679</b>	<b>688</b>		

Source of information: Network SIMS Database/HCF A-2744

Date of Preparation: May 2001

\* 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 2000 for kidney transplants.

### Renal Transplant Recipients

Renal transplant recipients by transplant type, age, race, gender and primary diagnosis for  
calendar year 2000

Age Group	CADAVERIC	LIVING RELATED	LIVING UNRELATED	Total
00-04	2	3	3	8
05-09	1	2	3	6
10-14	2	2	1	5
15-19	11	7	2	20
20-24	11	10	8	29
25-29	16	14	5	35
30-34	36	10	15	61
35-39	47	17	10	74
40-44	44	11	16	71
45-49	67	17	16	100
50-54	65	9	7	81
55-59	52	12	13	77
60-64	43	7	6	56
65-69	34	6	6	46
70-74	15	1	2	18
75-79	0	0	1	1
80-84	0	0	0	0
>=85	0	0	0	0
Missing	0	0	0	0
<b>Total</b>	<b>446</b>	<b>128</b>	<b>114</b>	<b>688</b>
<b>Gender</b>				
Female	173	58	55	286
Male	273	70	59	402
Missing	0	0	0	0
<b>Total</b>	<b>446</b>	<b>128</b>	<b>114</b>	<b>688</b>
<b>Race</b>				
Asian	4	0	1	5
Black	83	12	14	109
Indian subcontinent	1	0	0	1
Mid-East Arabian	0	0	0	0
Native American	1	2	0	3
Other/Multiracial	3	0	1	4
Pacific Islander	1	0	0	1
White	353	114	98	565
Missing	0	0	0	0
Unknown	0	0	0	0
<b>Total</b>	<b>446</b>	<b>128</b>	<b>114</b>	<b>688</b>
<b>Primary Diagnosis</b>				
Cystic Kidney	43	11	12	66
Diabetes	137	18	23	178
Glomerulonephritis	108	43	30	181
Hypertension	59	7	19	85
Other	85	40	27	152
Other Urologic	14	9	3	26
Missing	0	0	0	0
Unknown	0	0	0	0
<b>Total</b>	<b>446</b>	<b>128</b>	<b>114</b>	<b>688</b>

Source of information: Network SIMS Database

Date of Preparation: May 2001

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

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

This table includes 0 patients receiving treatment at non-Medicare VA facilities.

### Dialysis Deaths

Deaths of dialysis patients by state of residence, age, race, gender, primary diagnosis and cause of death for calendar year 2000

Age Group	IA	KS	MO	NE	Other	Total
00-04	0	0	0	0	0	0
05-09	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	0	1	1	0	0	2
20-24	2	1	3	0	0	6
25-29	1	3	5	1	1	11
30-34	6	4	8	6	0	24
35-39	4	14	25	5	2	50
40-44	14	10	35	13	3	75
45-49	15	22	65	12	2	116
50-54	23	20	68	15	6	132
55-59	42	34	108	24	4	212
60-64	50	51	139	27	10	277
65-69	53	56	197	45	10	361
70-74	67	76	190	65	11	409
75-79	81	76	214	63	11	445
80-84	56	60	167	45	5	333
>85	45	47	102	29	8	231
Missing	0	0	0	0	0	0
<b>Total</b>	<b>459</b>	<b>475</b>	<b>1327</b>	<b>350</b>	<b>73</b>	<b>2684</b>
<b>Gender</b>						
Female	225	256	671	157	41	1350
Male	234	219	656	193	32	1334
Missing	0	0	0	0	0	0
<b>Total</b>	<b>459</b>	<b>475</b>	<b>1327</b>	<b>350</b>	<b>73</b>	<b>2684</b>
<b>Race</b>						
Asian	3	2	6	1	0	12
Black	18	83	357	34	9	501
Indian subcontinent	0	1	1	0	0	2
Mid-East Arabian	0	0	1	0	0	1
Native American	6	3	2	10	0	21
Other/Multiracial	0	5	2	5	0	12
Pacific Islander	1	1	1	0	0	3
White	431	380	957	300	64	2132
Missing	0	0	0	0	0	0
Unknown	0	0	0	0	0	0
<b>Total</b>	<b>459</b>	<b>475</b>	<b>1327</b>	<b>350</b>	<b>73</b>	<b>2684</b>
<b>Primary Diagnosis</b>						
Cystic Kidney	8	7	16	9	1	41
Diabetes	203	223	601	163	26	1216
Glomerulonephritis	39	46	98	31	6	220
Hypertension	121	128	423	86	22	780
Other Cause	63	44	129	33	11	280
Other Urologic	9	7	14	7	2	39
Missing	0	0	0	0	0	0
Unknown Cause	16	20	46	21	5	108
<b>Total</b>	<b>459</b>	<b>475</b>	<b>1327</b>	<b>350</b>	<b>73</b>	<b>2684</b>
<b>Primary Cause of Death</b>						
Cardiac	241	260	672	216	32	1421
Gastro Intestinal	9	3	17	4	1	34
Infection	72	61	197	49	9	388
Liver Disease	3	4	10	3		20
Vascular	36	34	97	32	7	206
Missing	0	0	0	0	0	0
Other	98	113	334	46	24	615
Unknown	0	0	0	0	0	0
<b>Total</b>	<b>459</b>	<b>475</b>	<b>1327</b>	<b>350</b>	<b>73</b>	<b>2684</b>

Source of information: Network SIMS Database

Date of Preparation: May 2001

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

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

This table cannot be compared to the HCFA facility Survey because the HCFA Facility Survey is limited to those deaths reported by only Medicare-approved facilities.

This table includes 15 patients who received care at non-Medicare VA facilities.

TABLE #8

VOCATIONAL REHABILITATION BY DIALYSIS FACILITY  
 PATIENTS AGED 18 - 55 AS OF DECEMBER 31, 2000

PROVIDER	NUMBER OF PATIENTS AGED 18 - 55	REFERRALS TO VOC. REHABILITATION <sup>1</sup>	PATIENTS EMPLOYED OR ATTENDING SCHOOL FULL OR PART-TIME	OFFERED DIALYSIS SHIFT AFTER 5 P.M.
160005	3	0	4	Y
160016	12	1	9	N
160030	12	2	5	N
160033	40	0	10	Y
160044	6	5	0	N
16004F	2	1	2	N
160058	74	10	56	Y
160064	17	0	15	N
160066	2	1	3	N
160067	10	0	25	N
160079	25	2	19	Y
160080	13	0	5	Y
160083	44	0	12	Y
166089	15	1	6	Y
160112	9	2	2	Y
160113	3	0	0	N
162500	17	0	10	Y
162501	52	1	34	N
162506	11	0	9	N
162507	12	0	7	N
162508	2	0	4	N
162509	8	0	6	N
162511	4	0	1	N
162512	10	0	5	N
162513	16	0	10	N
162514	3	0	2	N
162515	47	10	14	N
162516	31	8	11	N

Source of Information: Self-reported survey data from Network #12 ESRD Facilities

Date of Preparation: June 30, 2001

<sup>1</sup> Number of patients (aged 18 - 55) who were referred to VR programs sponsored by the state or private agencies (or other programs if applicable)

<sup>2</sup> Number of patients, aged 18 - 55, who were employed or attending school full-time or part-time during the reporting year regardless of the patient's state of residence.

The patient selection for this table is all dialysis patients between ages 18 - 55 receiving dialysis as of December 31 of the reporting year, as reported by each dialysis facility.

TABLE #8

VOCATIONAL REHABILITATION BY DIALYSIS FACILITY  
 PATIENTS AGED 18 - 55 AS OF DECEMBER 31, 2000

PROVIDER	NUMBER OF PATIENTS AGED 18 - 55	REFERRALS TO VOC. REHABIL.	PATIENTS EMPLOYED OR ATTENDING SCHOOL FULL OR PART-	OFFERED DIALYSIS SHIFT AFTER 5 P.M.
162517	5	0	5	N
162518	4	0	2	N
162519	2	0	0	N
162520	1	0	0	N
162521	3	0	2	N
162522	1	0	1	N
163500	1	0	0	N
163501	14	2	6	N
163502	4	0	0	N
163503	4	0	2	N
163504	5	0	2	N
163505	3	1	0	N
163506	4	0	4	N
163507	4	0	3	N
163508	2	0	3	N
163509	10	2	0	N
163510	4	0	0	N
163511	3	0	3	N
163512	6	0	5	N
170017	2	0	0	N
170040	63	33	30	Y
172501	23	0	18	N
172502	19	2	14	N
172503	73	23	42	N
172504	82	16	48	Y
172505	11	0	8	N
172506	11	1	2	N
172507	12	2	9	N

Source of Information: Self-reported survey data from Network #12 ESRD Facilities

Date of Preparation: June 30, 2001

<sup>1</sup> Number of patients (aged 18 - 55) who were referred to VR programs sponsored by the state or private agencies (or other programs if applicable)

<sup>2</sup> Number of patients, aged 18 - 55, who were employed or attending school full-time or part-time during the reporting year regardless of the patient's state of residence.

The patient selection for this table is all dialysis patients between ages 18 - 55 receiving dialysis as of December 31 of the reporting year, as reported by each dialysis facility.

TABLE #8

VOCATIONAL REHABILITATION BY DIALYSIS FACILITY  
 PATIENTS AGED 18 - 55 AS OF DECEMBER 31, 2000

PROVIDER	NUMBER OF PATIENTS AGED 18 - 55	REFERRALS TO VOC. REHABIL.	PATIENTS EMPLOYED OR ATTENDING SCHOOL FULL OR PART-	OFFERED DIALYSIS SHIFT AFTER 5 P.M.
172508	41	5	35	N
172509	23	13	19	N
172510	7	0	6	N
172511	16	0	3	N
172512	6	2	4	N
112514	17	0	4	N
172515	6	0	4	N
172516	4	0	4	N
172517	11	0	7	Y
172518	4	0	0	N
172519	43	18	10	N
172520	27	10	8	N
172522	10	0	6	N
172523	13	0	2	N
172524	13	1	9	N
172525	3	0	4	N
172526	6	2	3	N
172527	22	5	3	N
172528	4	0	14	N
172529	5	0	4	N
172530	8	0	5	N
172531	7	0	2	N
132532	10	1	2	N
175533	18	0	13	N
172134	2	0	5	N
172535	5	1	1	N
172516	12	9	1	N
172537	8	0	6	N

Source of Information: Self-reported survey data from Network #12 ESRD Facilities

Date of Preparation: June 30, 2001

<sup>1</sup> Number of patients (aged 18 - 55) who were referred to VR programs sponsored by the state or private agencies (or other programs if applicable)

<sup>2</sup> Number of patients, aged 18 - 55, who were employed or attending school full-time or part-time during the reporting year regardless of the patient's state of residence.

The patient selection for this table is all dialysis patients between ages 18 - 55 receiving dialysis as of December 31 of the reporting year, as reported by each dialysis facility.

TABLE #8

VOCATIONAL REHABILITATION BY DIALYSIS FACILITY  
 PATIENTS AGED 18 - 55 AS OF DECEMBER 31, 2000

PROVIDER	NUMBER OF PATIENTS AGED 18 - 55	REFERRALS TO VOC. REHABILITATION <sup>1</sup>	PATIENTS EMPLOYED OR ATTENDING SCHOOL FULL OR PART-TIME	OFFERED DIALYSIS SHIFT AFTER 5 P.M.
172538	4	0	3	N
172539	0	0	0	N
260008	46	22	0	N
260020	0	0	7	N
260021	43	10	23	N
260027	19	5	30	N
260031	0	0	0	N
260040	5	0	8	N
26004F	4	0	8	N
26008F	94	Not eligible	0	N
26009F	28	4	6	N
260100	6	3	1	N
260104	0	0	0	N
260105	16	0	14	N
260113	25	15	4	Y
260141	6	0	15	N
260172	3	0	4	N
260176	4	0	2	N
260179	0	0	6	N
260180	1	0	0	N
262501	85	5	69	N
262502	110	2	59	N
262503	59	1	22	N
262504	32	10	15	Y
262505	11	4	5	N
262506	55	0	38	N
262507	32	1	15	N
262508	59	2	27	N
262509	26	1	9	N

Source of Information: Self-reported survey data from Network #12 ESRD Facilities

Date of Preparation: June 30, 2001

<sup>1</sup> Number of patients (aged 18 - 55) who were referred to VR programs sponsored by the state or private agencies (or other programs if applicable)

<sup>2</sup> Number of patients, aged 18 - 55, who were employed or attending school full-time or part-time during the reporting year regardless of the patient's state of residence.

The patient selection for this table is all dialysis patients between ages 18 - 55 receiving dialysis as of December 31 of the reporting year, as reported by each dialysis facility.

TABLE #8

VOCATIONAL REHABILITATION BY DIALYSIS FACILITY  
 PATIENTS AGED 18 - 55 AS OF DECEMBER 31, 2000

PROVIDER	NUMBER OF PATIENTS AGED 18 - 55	REFERRALS TO VOC. REHABILITATION <sup>1</sup>	PATIENTS EMPLOYED OR ATTENDING SCHOOL FULL OR PART-TIME	OFFERED DIALYSIS SHIFT AFTER 5 P.M.
262511	19	0	10	N
262513	17	0	9	N
262514	47	0	13	N
262515	21	1	5	N
262516	6	0	5	N
262517	23	1	30	Y
262520	11	2	5	N
262521	14	2	6	N
262522	1	0	0	N
262523	0	0	2	N
262526	13	0	1	N
262526	10	0	2	N
262527	55	7	21	N
262528	22	11	15	N
262530	10	0	7	N
262531	17	2	6	N
262534	15	0	2	N
262535	21	0	9	N
262536	9	1	6	N
262537	71	0	45	N
262538	41	14	22	Y
262539	32	2	11	N
262540	11	0	9	N
262541	16	1	5	N
262542	10	0	3	N
262543	26	1	0	N
262544	22	0	7	N
262547	36	2	17	N
262548	12	1	3	N

Source of Information: Self-reported survey data from Network #12 ESRD Facilities

Date of Preparation: June 30, 2001

<sup>1</sup> Number of patients (aged 18 - 55) who were referred to VR programs sponsored by the state or private agencies (or other programs if applicable)

<sup>2</sup> Number of patients, aged 18 - 55, who were employed or attending school full-time or part-time during the reporting year regardless of the patient's state of residence.

The patient selection for this table is all dialysis patients between ages 18 - 55 receiving dialysis as of December 31 of the reporting year, as reported by each dialysis facility.

TABLE #8

VOCATIONAL REHABILITATION BY DIALYSIS FACILITY  
 PATIENTS AGED 18 - 55 AS OF DECEMBER 31, 2000

PROVIDER	NUMBER OF PATIENTS AGED 18 - 55	REFERRALS TO VOC. REHABIL.	PATIENTS EMPLOYED OR ATTENDING SCHOOL FULL OR PART-	OFFERED DIALYSIS SHIFT AFTER 5 P.M.
262549	80	5	18	Y
262550	10	0	2	N
262551	36	4	4	N
262552	11	1	6	N
262553	17	1	10	N
262554	5	0	2	N
262555	8	1	0	N
262556	25	0	14	Y
262557	9	0	2	N
262559	5	0	2	Y
262560	32	0	8	N
262561	22	4	9	N
262562	16	6	5	Y
262563	16	4	9	N
262564	57	1	32	N
262565	101	6	41	N
262567	4	2	2	N
262568	13	0	6	N
262569	11	0	6	N
262570	9	2	7	N
262571	12	0	5	N
262572	12	1	4	N
262573	8	3	1	N
262574	16	2	3	N
262575	7	0	3	N
262576	26	5	3	Y
262577	12	0	4	N
262578	4	1	6	N
262579	18	0	4	N

Source of Information: Self-reported survey data from Network #12 ESRD Facilities

Date of Preparation: June 30, 2001

<sup>1</sup> Number of patients (aged 18 - 55) who were referred to VR programs sponsored by the state or private agencies (or other programs if applicable)

<sup>2</sup> Number of patients, aged 18 - 55, who were employed or attending school full-time or part-time during the reporting year regardless of the patient's state of residence.

The patient selection for this table is all dialysis patients between ages 18 - 55 receiving dialysis as of December 31 of the reporting year, as reported by each dialysis facility.

TABLE #8

VOCATIONAL REHABILITATION BY DIALYSIS FACILITY  
 PATIENTS AGED 18 - 55 AS OF DECEMBER 31, 2000

PROVIDER	NUMBER OF PATIENTS AGED 18 - 55	REFERRALS TO VOC. REHABIL.	PATIENTS EMPLOYED OR ATTENDING SCHOOL FULL OR PART-	OFFERED DIALYSIS SHIFT AFTER 5 P.M.
262580	4	0	2	N
262581	1	0	0	N
262582	4	0	0	Y
262583	15	3	11	N
262584	5	1	0	N
262585	11	3	8	N
262586	0	0	0	N
262587	5	0	0	N
263300	2	0	10	N
263301	7	0	27	N
263302	12	2	20	N
263503	7	0	1	N
263504	15	1	0	N
263505	5	0	0	N
263506	17	7	11	N
263508	22	1	14	N
263510	5	4	4	N
280034	13	0	14	N
280065	14	0	6	N
28006F	7	1	0	N
280088	52	12	105	N
282500	36	0	58	Y
282501	15	0	12	N
262502	14	0	6	N
282503	34	0	29	Y
282504	61	1	36	Y
282505	3	0	0	N
282506	26	1	32	N

Source of Information: Self-reported survey data from Network #12 ESRD Facilities

Date of Preparation: June 30, 2001

<sup>1</sup> Number of patients (aged 18 - 55) who were referred to VR programs sponsored by the state or private agencies (or other programs if applicable)

<sup>2</sup> Number of patients, aged 18 - 55, who were employed or attending school full-time or part-time during the reporting year regardless of the patient's state of residence.

The patient selection for this table is all dialysis patients between ages 18 - 55 receiving dialysis as of December 31 of the reporting year, as reported by each dialysis facility.

TABLE #8

VOCATIONAL REHABILITATION BY DIALYSIS FACILITY  
 PATIENTS AGED 18 - 55 AS OF DECEMBER 31, 2000

PROVIDER	NUMBER OF PATIENTS AGED 18 - 55	REFERRALS TO VOC. REHABIL.	PATIENTS EMPLOYED OR ATTENDING SCHOOL FULL OR PART-	OFFERED DIALYSIS SHIFT AFTER 5 P.M.
282507	3	0	2	N
282508	2	1	0	N
282509	6	0	4	Y
282510	8	0	13	Y
282511	12	0	3	N
282512	5	0	6	N
282513	18	0	10	Y
282514	17	0	8	N
282515	24	0	12	N
282516	0	0	0	N
283501	12	4	8	N
283503	25	5	23	N
<b>TOTALS</b>				
IOWA	580	49	324	9
KANSAS	651	144	358	2
MISSOURI	2,116	204	989	10
NEBRASKA	407	25	387	6
<b>NETWORK #12</b>	<b>3,754</b>	<b>422</b>	<b>2,058</b>	<b>27</b>

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