

**2000 ANNUAL STATISTICAL REPORT**  
**FOR**  
**END-STAGE RENAL DISEASE**  
**NETWORK 9/10**  
**THE RENAL NETWORK, INC.**

**Submitted By: Sponsored By:**

**The Renal Network, Inc. Health Care Financing Administration**

**911 East 86th Street, Suite 202 Contract Numbers: 500-00-NW09 &**

**Indianapolis, IN 46240 500-00-NW10**

**317-257-8265**

**Date: May 10, 2001**

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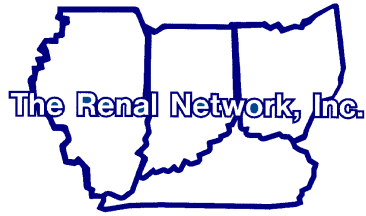


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May 10, 2001

The *2000 Annual Statistical Report for End-Stage Renal Disease (ESRD) Networks 9/10*, which outlines the year's activities, represents a successful coordinated effort among health care providers, patients, and Network staff.

The Renal Network, Inc. (ESRD Networks 9/10) is an independent agency that monitors the treatment of patients with ESRD in Illinois, Indiana, Kentucky, and Ohio. There are a total of 18 ESRD Networks throughout the country that provide oversight of dialysis and transplant centers. The goal of the ESRD Networks is to assure appropriateness of dialytic care while fostering patient independence and well-being. ESRD Networks are funded through the Health Care Financing Administration (HCFA).

The Renal Network is particularly proud of patient participation at all levels of its operation from the Board of Trustees through the Medical Review Board and Network Coordinating Council to each individual dialysis unit.

Network Coordinating Council and committee members are volunteers who have given of their time to assure the quality of care provided to patients receiving treatment for ESRD. These same individuals have participated in the development of various goals and outcome surveys for the Network. The Network appreciates the contributions of facility staff, members of the Medical Review Board, Board of Trustees, the Network Coordinating Council, and the Patient Leadership Committee. These committees have gone well beyond the requirements of our HCFA contract to drive a progressive pro-active Network that has been recognized by the U.S. Office of the Inspector General as demonstrating a "promising approach" to the oversight of ESRD patient care.

I am grateful to all the dedicated professionals, including those in each of our dialysis and transplant facilities and the Network administrative office, without whose dedication and perseverance the Network accomplishments would not have been possible. I am proud of my association with The Renal Network, Inc., and I expect that the contributions of our stakeholders will continue to make our Network a model for others to emulate.

Sincerely,

Jay B. Wish, M.D.  
President

**THE RENAL NETWORK, INC.**  
**2000 ANNUAL REPORT**

**I. INTRODUCTION**

**A. Network Description**

The Renal Network encompasses the states of Illinois, Indiana, Kentucky, and Ohio. The total population in the four-state area is 33,894,687 ("Population by Race and Hispanic or Latino Origin, for the United States, Regions, Division, and States, and for Puerto Rico: 2000", U.S. Department of Commerce, Bureau of the Census). ESRD incidence and prevalence rates continued to increase during 2000 as shown in the following tables.

[Incidence Rates- 1990 - 2000](#)

[Prevalence Rates - 1990 – 2000](#)

The following data for race and ethnicity data are taken from "Percent of Population by Race and Hispanic or Latino Origin, for the United States, Regions, Division, and States, and for Puerto Rico: 2000," U.S. Department of Commerce, Bureau of the Census. Data for age and sex demographics reflect 1999 census update information; 2000 demographic tables in this area had not been released at press time.

Illinois, "The Prairie State," ranks 5<sup>th</sup> among all states in population. Figures from the U.S. Department of Commerce, Bureau of the Census Update 1999, show the population divided by race as:

White	73.5%	Black	15.1%
Other	11.4%		

About 12.3% of the population is defined as Hispanic in ethnicity. Divided by age groups, approximately 25.8% of the population was under the age of 18; 61.7% were between the ages of 18 and 64; and 12.6% were aged 65 or greater. Currently, the female population is approximately 51.5% and the male population is 48.5%.

One-half of the population of the state live in the metropolitan Chicago area. In total, 83 percent of the population live in urban areas and 17 percent of the population live in rural areas. Other urban areas in Illinois (with a population of greater than 100,000) are Springfield (the state capital), Rockford, and Peoria.

Indiana, "The Hoosier State," ranks 14<sup>th</sup> among all states in population. Figures from the U.S. Department of Commerce, Bureau of the Census Update 1999 show the population divided by race as:

White	87.5%	Black	8.4%
Other	4.1%		

About 3.5% of the population is defined as Hispanic in ethnicity. Divided by age groups, approximately 26.3% of the population was at age 18 or under; 61.3% were between the ages of 18 and 65; and 12.1% were over the age of 65. Currently, the female population is approximately 51.5% and the male population is 48.5%.

About two-thirds of Indiana's population live in urban areas. Indianapolis, the state capital, is the largest city in the Network area, as well as Indiana, with a population of over 1,000,000. Other urban areas in Indiana (with population greater than 100,000) are Fort Wayne, Gary, Evansville and South Bend.

Kentucky, "The Bluegrass State," ranks 25<sup>th</sup> among all states in population. Figures from the U.S. Department of Commerce, Bureau of the Census Update 1999 show the population divided by race as:

White	90.1%	Black	7.3%
Other	2.6%		

About 1.5% of the population is defined as Hispanic in ethnicity. Divided by age groups, approximately 26.7% of the population was at age 18 or under; 61% were between the ages of 18 and 65; and 12.3% were over the age of 65. The female population is approximately 52% and the male population is 48%.

The Kentucky population is about evenly divided between rural and urban dwellers. Urban centers (with population greater than 100,000) are Louisville, Lexington, Owensboro, Covington, Bowling Green, Paducah, Hopkinsville, and Ashland. Kentucky's state capital is Frankfort.

Ohio, "The Buckeye State," ranks 7<sup>th</sup> among all states in population. Figures from the U.S. Department of Commerce, Bureau of the Census Update 1999 show the population divided by race as:

White	85%	Black	11.5%
Other	3.5%		

About 1.9% of the population is defined as Hispanic in ethnicity. Divided by age groups, approximately 26.3% of the population was at age 18 or under; 61.2% were between the ages of 18 and 65; and 12.5% were over the age of 65. Currently, the female population is approximately 52.1% of total population and the male population is 47.9%.

About three-quarters of the population of Ohio live in urban areas. Urban centers (with population greater than 100,000) include Cleveland, Columbus (the state capital), Cincinnati, Toledo, Akron, Dayton, and Youngstown.

## **B. Network Structure**

### **1. Staffing**

The Renal Network employs 16 full and part-time employees. Those employees include:

Susan A. Stark	Executive Director
Bridget M. Carson	Assistant Director
Jeannette A. Cain, B.S.R.N., M.S.M., C.P.H.Q.	Quality Improvement Director
Raynel Kinney, R.N., C.N.N.	Quality Improvement Coordinator
Mary Ann Webb, M.S., R.N.	Quality Improvement Coordinator
Rosa Rivera-Mizzoni, M.S.W.	Special Projects Coordinator
Janet Nagle	Office Manager
Richard Coffin	Program Analyst
Helen McFarland	Data Services Manager

Kathi Niccum, Ed.D.	Patient Services Director
Dolores Perez, M.S.	Patient Services Associate
Kathy Gumerson	Data Specialist
Christine Harper	Data Specialist
LaToya Scott	Data Specialist
Marietta Gurnell	Data Specialist
Laura Hileman	Administrative Assistant
Janie Hamner	Secretary

Susan A. Stark , Executive Director: Project Director, responsible for the overall operation of all functions of The Renal Network, Inc.

Bridget M. Carson, Assistant Director: provides back-up in administrative responsibilities. This position is also responsible for overseeing all communications for The Renal Network, and staff responsibilities to the Medical Review Board, the Pediatric Renal Group, the Publications Committee and the Nominating Committee.

Jeannette A. Cain, B.S.R.N., M.S.M., C.P.H.Q., Quality Improvement Director: Oversees all quality improvement projects and intervention activities.

Raynel Kinney, R.N., C.N.N., Quality Improvement Coordinator: assists with quality improvement and intervention activities and also coordinates the clinical performance measures project.

Mary Ann Webb, M.S., R.N., Quality Improvement Coordinator: assists with quality improvement and intervention activities.

Rosa Rivera-Mizzoni, M.S.W., Special Projects Coordinator: responsible for grievance resolution and assists in preparation of patient-oriented materials.

Janet Nagle, Office Manager: responsible for operation of the Network office, including bookkeeping and personnel.

Richard Coffin , Program Analyst: responsible for all programming needs and also directs the staff of the Data Department.

Helen McFarland, Data Services Manager: Responsible for tracking patients for Network 10 facilities.

Kathi Niccum, Ed.D., Patient Services Director: responsible for direction of all patient activities.

Dolores Perez, M.S., Patient Services Associate: assists with implementation of all patient activities.

Kathy Gumerson, Data Specialist: responsible for tracking patients for Network 9 facilities.

Christine Harper, Data Specialist: responsible for providing support to the Networks 9/10 tracking program for facilities in both Network areas.

LaToya Scott, Data Specialist: Responsible for tracking patients for Network 10 facilities.

Marietta Gurnell, C.H.T., Data Specialist: Responsible for tracing patients in Network 9 facilities.

Laura Hileman, Administrative Assistant: responsible for secretarial support.

Janie Hamner, Secretary: responsible for secretarial support.

## 1. Committees

Network Coordinating Council: The Network Coordinating Council (NCC) is composed of representatives of dialysis providers from hospitals and other facilities located in the states of Illinois, Indiana, Kentucky, and Ohio which are certified by the Secretary of Health and Human Services to furnish at least one specific end-stage renal disease service. The NCC includes a representative of each of the current Medicare approved end-stage renal disease facilities. Each facility has a single representative, designated by its chief executive officer or medical director, who is approved by the governing board of the facility. The NCC is responsible for the election of members to the Board of Trustees and the Medical Review Board. Elections are held by mail-in ballot. The Council meets once annually. During 2000, the Council met on May 25.

During 2000, the following occurred:

- ◆ Financial statements for year-end 1999 and year-to-date were disclosed.
- ◆ The 2000 slates for membership on the Board of Trustees and Medical Review Board were presented and approved. Nominations were accepted from January through May 25 (at 5 p.m. EST) for open positions. Members were elected to both committees by mail-in ballot in the fall. Terms of office were to begin on January 1, 2001 and end on December 31, 2003.
- ◆ 1999 data were presented and the 1999 Annual Report was approved.
- ◆ The Network Coordinating Council was updated on activities with HCFA and the Forum of Renal Networks, and contract issues.
- ◆ Bylaws changes were approved to add a Strategic Planning Committee and a Finance Committee, to make the Patient Leadership Committee a standing Network committee, and to have four patient representatives on the MRB and the BOT.
- ◆ A bylaws change was approved to expand the categorical positions on the Board of Trustees and to increase term limits to three consecutive terms for both the Board of Trustees and Medical Review Board members.
- ◆ The 2000 Nephrology Conference was held at the Chicago Marriott Downtown, in Chicago, Illinois on May 24, 25, and 26. The Conference offered educational programs for administrators, physicians, nurses, social workers, dietitians, and technicians.
- ◆ Dialysis facilities within Networks 9/10 were informed of and participated in the HCFA Clinical Performance Measures Project and the Adequacy of Dialysis Quality Improvement Project.

Board of Trustees: The Board of Trustees is the chief governing body of ESRD Network 9/10. The Board of Trustees holds the Network contracts for ESRD Network 9/10 with the Health Care Financing Administration, and is responsible for meeting contract deliverables and oversight of the administration of the Network budget.

In 2000, the Board of Trustees was composed of 20 members, elected for three year terms of office including:

Eight Renal Physicians  
Four ESRD Patients  
Chairperson of the Medical Review Board/ Network 9 area  
Chairperson of the Medical Review Board/Network 10 area  
One Nurse  
One Social Worker  
One Administrator  
One Dietitian  
One Technician  
One Public Member  
One Non-Categorical Position  
The Past President

The Board of Trustees met in person on February 9, June 21, and October 25, 2000.

Members of the Board of Trustees for 2000 were:

Emil P. Paganini, M.D., President	Patricia Hormann, Vice President
Chester Amedia, Jr., M.D., Treasurer	Craig Stafford, M.D., Secretary
Jay B. Wish, Network 9 MRB Chair	Robert Mutterperl, D.O., Ntrk 10 MRB Chair
Samuel L. Milligan, M.D., Past President	Kent Bryan, M.D.
Evernard Davis	Sam Eby, M.D.
Robert Felter	Billie Goble, M.S.W.
Thomas Golubski, M.D.	Patricia Gunnerson
Jesse Hano, M.D.	JoAnn Johnson, R.N.
Janeen Beck Leon, R.D.	Jane Robinson, R.N.
C. Frederic Strife, M.D.	Myra Schwartz
Cheryl Sweeney, R.N., C.N.N.	

During 2000, the Board of Trustees accomplished the following:

- ◆ Network financial records were reviewed and expenditure reports approved.
- ◆ The Board of Trustees heard updates from the Medical Review Board, the Patient Advisory Councils, the Nominating Committee, and the Program Committee. These updates included committee activities and action items.
- ◆ The Board of Trustees was updated on activities with HCFA and the Forum of ESRD Networks, and contract issues.
- ◆ The Board of Trustees participated in a strategic planning session. Members discussed how to incorporate the core purpose, the core values, and the goals of the Network into current and future projects of The Renal Network, Inc.

Medical Review Board: The Medical Review Board (MRB) is composed of 35 members, elected for three year terms of office including:

16 Physicians	3 ESRD Nurses
3 ESRD Social Workers	3 ESRD Dietitians
3 ESRD Facility Administrators	4 ESRD Patients
3 ESRD Technicians	

The Medical Review Board functions with the concurrence and subject to the review and control of the Board of Trustees. It performs functions prescribed by the regulations issued by the Secretary of Health and Human Services, as well as other duties related to quality improvement, vocational rehabilitation, and patient concerns as requested by the Network Coordinating Council. The MRB met on January 14, 15 and 16, March 7 and 8, May 23 and 24, September 12 and 13, and November 14 and 15, 2000.

Members of the Medical Review Board for 2000 were:

Jay B. Wish, M.D., Chairperson	Robert Mutterperl, D.O., Chairperson
George Aronoff, M.D., Vice Chairperson	Homer Byrd
Claire Callahan, R.D.	Diane Cook, R.N.
David Charney, M.D.	Peter DeOreo, M.D.
John Dillon, M.D.	Robert Felter
Andrew Finnegan, C.H.T.	Sandra Fritzsich, R.N., J.D.
Elisabeth Fry, R.D., L.D.	Clifford Glynn, C.H.T.
Karen Griffin, M.D.	Janet Hanson
James Hasbargen, M.D.	Brenda Heath, R.N.
Carol Jackson, M.S.W.	Meghan Hiland, M.S.S.A.
Maria Karalis, R.D.	Stephen McMurray, M.D.
Romeo Micat, M.D.	Kathy Olson, R.N.
Emil P. Paganini, M.D.	Sally Rice, M.S.S.W.
Mark Parks, C.H.T.	Ashwini Sehgal, M.D.
Marcia Silver, M.D.	Martinlow Spaulding
Charles Sweeney, M.D.	Linda Ulerich, R.D.
Beth Vogt, M.D.	Thomas H. Waid, M.D.
Margaret Westbrook, M.S.W.	Steven Zelman, M.D.

During 2000, the Medical Review Board:

- ◆ Continued the refinement of the tables and the distribution of The Physician Activity Report. This report, shows Network nephrologists their patient data from the Clinical Performance Measures, as reported via the unique physician identification number (UPIN). These reports were mailed to more than 600 nephrologists at three times during 2000: March, July, and October.
- ◆ Completed a Quality Improvement Project (QIP) of the new HCFA-Network contract. The QIP looked at physician practices in prescription and adequacy measurements in the area of peritoneal dialysis. Key findings were that improved adequacy correlated with increased measurements. Cycles for the collection and reporting of data changed to match DOQI™. Improvements in the percentage of patients measured and meeting DOQI™ were documented.
- ◆ Completed a QIP in the area of vascular access. The central venous catheter rate in Network 9/10 has been one of the highest in the nation according to the Centers for Disease Control & Prevention data,



1995-97. The MRB identified this process of care as an opportunity for improvement. The goal of the QIP was to lower the Network 9/10 catheter rate. The catheter rates increased from 20% to 26% of patients >90 days ESRD. The MRB then decided to further study this area to determine the cause of the increase, and to continue its efforts to lower the overall rate of catheter use. The methodology to standardize vascular access rates for patient characteristics was accomplished. This will be used in the investigation of the catheter rates by facility.

- ◆ Developed and began implementation of the HCFA required Adequacy of Hemodialysis QIP. Based on national data from the fourth quarter 1998, the percentage of patients with a mean URR  $\geq$  65% in Network 9/10 were below 80%. Hemodialysis programs were selected to participate in this project if their facility's fourth quarter 1999 Clinical Performance Measure URR rate was in the lowest 25<sup>th</sup> percentile. Interventions were developed and included: feedback reports, education materials in a Quality Improvement Kit (Q.I.K. box), workshops, and facility developed improvement projects addressing hemodialysis adequacy.
- ◆ Worked to refine the repository of Network aggregate data, called The Renal Network Data System (TRNDS). The repository was developed to encourage members of the Network, as well as the renal community at large, to use the data for research purposes. Data from TRNDS was used to present four abstracts at the 2000 meeting of the American Society of Nephrology, as well as an invited presentation on barriers to transplantation presented by Ash Sehgal, M.D., a member of the MRB.
- ◆ Oversaw the implementation and completion of the URR Validation Project, for HCFA. The final report was submitted in November 2000.
- ◆ Oversaw the dissemination of a Facility Profile, which displays descriptive data from each facility, with comparisons of regional, state, Network and national statistics for those same areas, include demographic and diagnosis data. Included also are SMR and gross mortality. These profiles are distributed annually to each facility to help them in their continuous quality improvement efforts.
- ◆ Oversaw the implementation of the Facility Intervention Profile. The profile is achieved by combining data from various areas of Network participation to provide a comprehensive view of facility performance. Facilities which proved to be outliers were targeted for specialized intervention and overview by the Medical Review Board.
- ◆ Oversaw the activities of the Pediatric Renal Group, a subcommittee of the Medical Review Board. The goal of the group is to act as a resource to the Network on the care and treatment of pediatric dialysis and transplant patients. The Pediatric Renal Group met on February 24, May 25, and October 5, 2000.
- ◆ Oversaw the activities of the newly formed Transplant Task Force, a specialty group organized to advise on matters regarding renal transplantation. The purpose is two-fold: to educate the transplant community on The Renal Network and to offer assistance to the transplant community. The Task Force met on August 22 and December 5 in 2000. It focused on redefining transplant status codes to provide better data on patients awaiting transplant, and in developing educational materials for patients and staff.
- ◆ Received continuous updates on the activities of the Health Care Financing Administration and the new Scope of Work, the United States Renal Data System (USRDS), The Forum of ESRD Networks, and the Quality Assurance Committee of The Forum.

- ◆ Reviewed data profiles, including rates for mortality, home therapy, and transplantation.
- ◆ Reviewed grievances filed with the Network.
- ◆ Oversaw the implementation of the HCFA clinical performance measures project.
- ◆ Oversaw and participated in the development and implementation of the Adequacy QIP.

Patient Leadership Committee: The Patient Leadership Committee's (PLC) purpose is to identify and address ESRD patient needs and concerns through the development of educational projects and activities. The PLC met on March 31, May 25, September 22, and November 9, 2000.

Members of the Patient Leadership Committee during 2000:

Homer Byrd	Celia Chretien
Bill Davis	Lorraine Edmond
Robert Felter	Craig Fisher
Mary Fistic	Barbara Hasbargen R.N.
Pearl Hirsh	Diane Hohwald
David Jones	Kathy Kirk
Ellen Newman	Bob Nordsiek
Jan Nordsiek	Janet Welch
Martinlow Spaulding	Rose Stoia
Charlotte Szromba	Eddie Taylor
Nancy Ware, L.I.S.W.	Max Warnock
Janet Welch	Wendy Yumans
Richard Zseberan	

During 2000:

The **Pediatric Subcommittee** focused on the educational needs of pediatric renal patients and their families. The committee developed the situational game cards for a game to be produced by Chronic Care Challenges. Work continued with Indiana University/Purdue University Media Department to develop a CD-ROM educational game.

The **Family Subcommittee** focused on identifying the needs of family members and started to develop components for a video on how family members are affected by the chronic illness.

The **Special Projects Subcommittee** addressed the issue of compliancy and wrote articles for the patient newsletter, *Renal Outreach*, to be published next year.

The **Patient Education Subcommittee** focused on Early Renal Insufficiency and identified resources on the topic and developed the first draft of a brochure on the topic.

Patient Advisory Council: The Patient Advisory Council (PAC) membership includes over 210 patients who have been appointed by their facilities to act as liaisons to the Network. During 2000:

- ◆ PAC Handbook was developed and includes information about the levels of PAC activities and gives suggested activities.

- ◆ PAC Activity Report form was sent to social workers to complete with their PAC Representatives. The results from the 32% who returned the form indicated that the top three PAC activities are peer support, meeting new patients, and posting Network resources on the bulletin board.
- ◆ The PAC newsletter, *PAC ActionGram*, highlighted access care and included a poster, suggested activities, a booklet on access care, and a pocket guide on access care. It was sent to all PAC Reps in August and to head nurses at facilities which had no PAC Reps.

## **II. NETWORK ACTIVITIES**

### **A. Network Goals and Objectives**

The Network organizations are responsible for:

1. Encouraging, consistent with sound medical practice, the use of those treatment settings most compatible with the successful rehabilitation of the patient and the participation of patients, providers of services, and renal disease facilities in vocational rehabilitation programs.
2. Developing criteria and standards relating to the quality and appropriateness of patient care by working with patients, facilities, and providers; encouraging participation in vocational rehabilitation programs; and by establishing Network goals with respect to the placement of patients in self-care settings and undergoing or preparing for transplantation.
3. Evaluating the procedure by which facilities and providers in the Network assess the appropriateness of patients for proposed treatment modalities.
4. Implementing a procedure for evaluating and resolving patient grievances.
5. Conducting on-site reviews of facilities and providers as necessary, utilizing standards of care established by the Network organization to assure proper medical care.
6. Collecting, validating, and analyzing data necessary to prepare reports and to assure the maintenance of the ESRD patient registry.
7. Collecting, validating, and submitting to the Secretary data for inclusion in the national ESRD medical information system.
8. Identifying facilities and providers that are not cooperating toward meeting Network goals and assisting such facilities and providers in developing appropriate plans for correction. Reporting to the Secretary facilities and providers that are not providing appropriate medical care.
9. Submitting an annual report to the Secretary that includes a full statement of Network goals, data on the Network's performance in meeting its goals and encouraging participation in vocational rehabilitation programs.
10. Identifying those facilities that have consistently failed to cooperate with Network goals and recommendations with respect to the need for additional or alternative services or facilities in

the Network in order to meet the Network goals, including self-dialysis training, transplantation, and organ procurement facilities.

The following is a listing of goals for The Renal Network, Inc.:

- ◆ ***To assist each ESRD patient to reach maximum capacity in achieving independence in employment through increased use of vocational rehabilitation services.***

The Renal Network believes this goal area is best met through development and dissemination of education and information to patients and to renal providers, to encourage them to use the vocational rehabilitation services available through established agencies. Rehabilitation activities included the distribution of a finance resources brochure and also the inclusion of vocational rehabilitation topics in newsletters, web linkages and resources and patient workshops. This goal area is detailed in section H. Vocational Rehabilitation.

- ◆ ***To increase patient involvement in his/her medical care program and in the decision making operations of the Network.***

This goal is continuously maintained through the governing structure of the Network, as defined in the bylaws. Eight patient members serve on the governing and policy-making bodies: four on the Board of Trustees and four on the Medical Review Board. The Patient Advisory Committee (PAC) and the Patient Leadership Committee (PLC) assess the needs of patients, and develop projects based on these needs. Their activities are detailed under Committees in Part I. The Network philosophy is to increase each patient's awareness of his or her renal disease and treatment, so he or she will be an informed patient, and able to make the most appropriate treatment choices.

- ◆ ***To assure patient access to a high quality care including appropriate treatment settings.***

Historically, all Network activities have shared the common goal of promoting high quality care within the member dialysis facilities. At the beginning of 1998, the Board of Trustees officially adopted the following as the core purpose of The Renal Network: ***The Renal Network facilitates the achievement of optimal wellness for renal disease patients.*** All activities are evaluated to ensure they are in accordance with the core purpose. Implementation of special studies to make practice recommendations and implementation of HCFA initiatives such as core indicators support the goal of assuring access to high quality care. Specific quality improvement activities are outlined in Section D, 1999 Quality Assurance/Improvement Activities.

- ◆ ***To maintain a patient specific medical information system, based upon the 1983 HCFA-adopted minimal common data set that permits continual and consistent assessment of the ESRD population and provides data to support quality improvement activities and the Medical Review Board.***

The existence of a patient-specific data system has created baseline data which support quality improvement. Through the system, the statistics contained in this report are made possible. The data are used as support in forming benchmarks and identifying facilities whose outcomes show special cause variation. Data collection has enabled Network 9/10 to monitor facilities and identify trends which may necessitate intervention. The data system is also instrumental in implementing special studies.

- ◆ *To stress the importance of appropriate referral, the The Renal Network has established the annual goals to monitor the rates of home dialysis and transplantation, to ensure these rates meet or surpass national trends.*

The Network annually examines the areas of home therapy and transplantation by reviewing facility specific rates. Facilities within Network 9/10 are maintaining rates in these areas which currently meet or exceed the national norm. Additionally, the Network examines the availability of home therapy services, and the transplant waiting list statistics to ensure appropriate referrals are possible in these areas.

#### 1. Self Care.

Network 9 developed and adopted a document entitled "Criteria and Standards to Evaluate the Appropriateness of ESRD Care" during 1989. This document contains goals for Network facilities in various aspects of dialysis treatment. (This document was adopted by ESRD Network 10 when it joined Network 9 on August 1, 1996.)

The introductory philosophy statement of the "Criteria and Standards" establishes Network goals for the treatment modalities of self-care and transplantation (listed above in "Network Goals and Objectives"). The Patient Relations Subcommittee of the MRB monitors the rate of home therapy within the Network using the most current data available. In 1999 the subcommittee examined data from 1998. The 1998 data showed the Network rate of home therapy to be 12%; the subcommittee agreed that this was satisfactory. Overall, the percentage of home therapy achieved the Network goal of ensuring that rates of home dialysis and transplantation meet or surpass national trends.

#### 2. Transplantation.

The Network maintained a transplantation rate of approximately 3% in 1999, compared to the national average of 3%. The Board reviewed this data and concluded that in light of the current shortage of available donor kidneys, 3% is an acceptable rate. The Board monitors transplantation data on an ongoing basis and will continue to oversee developments in this area. Overall, the percentage of transplantation achieved the Network goal of ensuring that rates of home dialysis and transplantation meet or surpass national trends.

To further enhance its focus on transplantation, the MRB established, with the approval of the Board of Trustees, a Transplant Task Force. This group is charged to advise on the status of renal transplantation within Network 9/10; all members come from within the transplant community. During 2000, the task force decided that its focus will be on refining transplant status codes to develop a facility-specific report which will show dialysis facilities how their units perform in the area of placing patients on the waiting list, in comparison with regional and state achievements. A second area of focus will be to develop and disseminate educational materials. The task force is chaired by Thomas Waid, M.D., a transplant nephrologist from the University of Kentucky. Dr. Waid is a past member of the Medical Review Board.

Other members include:

Jim Callahan, Transplant Patient Representative  
Orland Park, Illinois  
Nancy Durance, R.N.,  
University Hospitals of Cleveland- Transplant

Brian Haag, M.D.

Methodist Hospital/Clarian Health, Indianapolis

Bruce Lucas, M.D.

University of Kentucky Medical Center, Lexington

Akinlolu Ojo, M.D., Ph.D., Consultant

University of Michigan Health System, Ann Arbor

Rosemary Ouseph, M.D.

University of Louisville, Kidney Disease Program

Ash Sehgal, M.D.

MetroHealth Medical Center, Cleveland, OH

Roseann Sweda, R.N.

Department of Transplant Surgery, University of Chicago

Linda Ulerich, R.D.

Methodist Hospital/Clarian Health, Indianapolis, IN

Steve Woodle, M.D.

University of Cincinnati, Department of Surgery

Jay B. Wish, M.D. (*ex officio*)

University Hospitals of Cleveland

George Aronoff, M.D. (*ex officio*)

University of Louisville, Kidney Disease Program

Caleb Alexander, M.D., Research Fellow

## **B. Patient Interaction in Network Activities.**

The Renal Network maintains an active relationship with the renal community. Through regular communications with the Health Care Financing Administration and the Forum of ESRD Networks, and other professional organizations, the Network provides information of national interest to the local ESRD community, through various and continuous means of communication. To promote patient input and participation in the Network, the following activities were conducted during 2000.

- ◆ New patients were informed about the Network, its grievance procedure, patient rights and responsibilities, and its resources by a New Patient Newsletter. This was discontinued near the end of the year when the Forum started sending out a New Patient Packet
- ◆ Patients participated on Network Committees
- ◆ New social worker folders were updated to provide a listing of resources and information to share with patients as well as material to encourage patients to become active on the Patient Leadership Committee or the Patient Advisory Committee.
- ◆ Throughout the year, information about the PAC, PLC, and Patient-to-Patient Program and patient resources were sent to patients and staff who expressed an interest in becoming involved with any of the programs.
- ◆ The board game, *Adventure Park, ESRD Special Edition*, was distributed per request and information about the game was sent to kidney camps, ikidney.com, and the American Association for Kidney Patients' annual conference.

- ◆ The Patient Services Staff participated in patient conferences held by the National Kidney Foundation of Illinois and the Polycystic Kidney Research Foundation.

### **C. Cooperative Network and ESRD Medicare Survey and Certification Activities.**

During 2000, the Network maintained ongoing cooperative relationships with a wide variety of organizations within the renal and Medicare communities.

The Network maintains an ongoing relationship with Health Care Excel, the organization which administers the peer review organizations (PRO) for both Kentucky and Ohio. The Network is represented on cooperative committees organized by Health Care Excel. The Network worked with KePRO, the contractor for the peer review organization for the State of Ohio, on a study of cardiac risk factors in dialysis units in Northeast Ohio.

The Network acts as a resource to the departments of health in the Illinois, Indiana, Kentucky, and Ohio. Interactions between the Network and the state health agencies are ongoing. The Network continuously acts as an expert adviser for the technical aspects of dialysis, and provides Network developed resources when requested.

The Network also provides resources and contacts with other dialysis agencies, such as the American Association for Medical Instrumentation, the National Kidney Foundation and its affiliates, The University of Michigan Kidney Epidemiology and Cost Center, the United States Renal Data Service, and the United Network for Organ Sharing. The relationship between state health agencies and Network 9/10 continues to develop in a collaborative manner.

The Network participated in the HCFA/Medicare Flu campaign for 2000, distributing information on flu shots to dialysis patients and dialysis facilities and printing information in the patient newsletter, *Renal Outreach*. Postings were also added to the Network web site.

### **D. 2000 Quality Improvement Activities**

#### **1. The Clinical Performance Measures Project**

The Clinical Performance Measures (CPM) Project (formerly known as the Core Indicators Project) has a consistent clinical database to assess patient outcomes and support improvement activities at Network 9/10 and facilities. The elements of the database represent clinical measures indicating key components of ESRD patient care. In 2000, all dialysis facilities participated in the Network-wide improvement project. The goals of the project are to:

- (1) increase the knowledge and awareness of the CPM Project to Network 9/10 ESRD providers,
- (2) analyze the applicability of the CPMs on facility and network levels,
- (3) implement improvement intervention programs on a Network-wide level, and,
- (4) improve patient outcomes.

The Renal Network established a process to collect, analyze, and provide data feedback reports to facilities. In the Network-wide CPM project, facilities collected data on 100% of prevalent patients and electronically submitted this to the Network for analysis. There were three hemodialysis (HD) collections: April, July and fourth quarter 2000. Peritoneal dialysis (PD) data was collected in three four-month cycles, January-April 2000 (J-A00), May-August 2000 (M-A00), and September-December 2000 (S-D00). The data were

analyzed and feedback reports were distributed after each collection. The patient demographics and facility participation rates by state and Network 9/10 are described in Tables D.1 and D.2.

#### Comparison of HD Outcomes from 4<sup>th</sup> Quarter 1999 to 4<sup>th</sup> Quarter 2000

- % patients with average URR  $\geq$  65% increased from 79% to 81%
- Average URR increased from 69.8% to 70.3%
- % patients with average Kt/V Daugirdis II  $\geq$  1.2 increased from 84% to 86%
- Average Kt/V Daugirdis II increased from 1.49 to 1.50
- Average hemoglobin increased from 11.4 to 11.6 gm/dL
- % patients with average hemoglobin  $\geq$  11 gm/dL increased from 68% to 72%
- % patients with average hemoglobin between 11-12 gm/dL decreased from 36% to 35%
- % patients with average hemoglobin greater than 12 gm/dL increased from 32% to 38%
- % of patients with average albumin  $\geq$  3.5 gm/dL decreased from 80% to 79%
- Average albumin decreased from 3.75 to 3.73 gm/dL

#### Comparison of PD Outcomes from September – December Cycle 1999 – 2000

- % patients with measurement of weekly Creatinine Clearance(CrCl) or weekly Kt/V increased from 65% to 76%
- % patients meeting weekly CrCl or Kt/V target increased from 54% to 65%
- Average hemoglobin remained at 11.77 gm/dL
- % patients with average hemoglobin  $\geq$  11 gm/dL increased from 68% to 71%
- % patients with average hemoglobin between 11-12 gm/dL decreased from 48% to 29%
- % patients with albumin  $\geq$  3.5 gm/dL remained at 60%
- Average albumin decreased from 3.55 to 3.53 gm/dL

## 2. CPM Results.

Three clinical areas are addressed in the CPM project. The treatment of anemia includes the first monthly pre-dialysis hemoglobin (HGB), transferrin saturation (TSAT), serum ferritin concentration and weekly Epogen (Epo) dosage. HD adequacy contains the first monthly-paired pre/post serum urea nitrogen for a urea reduction ratio (URR) and a calculation of Kt/V using the Daugirdas II methodology. PD adequacy uses the reported weekly creatinine clearance and Kt/V. The nutritional status is measured by the serum albumin; bromocresol purple (BCP) assay measurements are adjusted by +0.3 for comparison with the bromocresol green (BCG) measurements.



**Table D.1. 2000 April, July & 4<sup>th</sup> Quarter Hemodialysis (HD) Patient Demographics & Facility Participation**

Patient Demographics	Illinois			Indiana			Kentucky			Ohio			Network 9/10		
	Apr	July	4Q	Apr	July	4Q	Apr	July	4Q	Apr	July	4Q	Apr	July	4Q
Total Number	9924	10298	<b>11794</b>	4503	4340	<b>5115</b>	2553	2589	<b>3069</b>	8864	9091	<b>10574</b>	25844	26318	<b>30552</b>
Sex															
Men	53%	53%	<b>53%</b>	53%	53%	<b>52%</b>	54%	54%	<b>54%</b>	52%	53%	<b>53%</b>	53%	53%	<b>53%</b>
Women	47	47	<b>47</b>	47	47	<b>48</b>	46	46	<b>46</b>	48	47	<b>47</b>	47	47	<b>47%</b>
Race															
Black	45%	45%	<b>44%</b>	32%	32%	<b>31%</b>	30%	30%	<b>29%</b>	40%	39%	<b>39%</b>	40%	39%	<b>38%</b>
White	48	49	<b>50</b>	65	66	<b>66</b>	69	69	<b>70</b>	58	59	<b>59</b>	56	57	<b>58</b>
Other	5	5	<b>5</b>	2	2	<b>2</b>	1	1	<b>1</b>	2	1	<b>2</b>	3	3	<b>3</b>
Age in years															
<18	*/%	*/%	<b>*/%</b>	*/%	1%	<b>*/%</b>	*/%	1%	<b>*/%</b>	*/%	*/%	<b>*/%</b>	*/%	*/%	<b>*/%</b>
18-44	17	17	<b>16</b>	16	16	<b>15</b>	17	17	<b>16</b>	16	15	<b>15</b>	16	16	<b>16</b>
45-64	37	37	<b>36</b>	34	34	<b>35</b>	37	37	<b>37</b>	35	35	<b>35</b>	36	36	<b>36</b>
65-74	25	24	<b>24</b>	26	26	<b>25</b>	26	27	<b>26</b>	27	27	<b>27</b>	26	26	<b>25</b>
75+	21	22	<b>23</b>	22	24	<b>24</b>	18	18	<b>20</b>	22	22	<b>23</b>	21	22	<b>23</b>
Primary Dx															
DM	36%	36%	<b>37%</b>	39%	39%	<b>39%</b>	41%	40%	<b>41%</b>	43%	43%	<b>43%</b>	39%	39%	<b>40%</b>
HTN	35	35	<b>34</b>	29	30	<b>29</b>	25	25	<b>24</b>	23	24	<b>24</b>	29	29	<b>29</b>
GN	11	11	<b>11</b>	12	12	<b>12</b>	13	13	<b>13</b>	15	14	<b>14</b>	13	12	<b>12</b>
Other	18	18	<b>18</b>	19	19	<b>19</b>	21	21	<b>21</b>	20	19	<b>19</b>	19	19	<b>19</b>
Unknown	*	*	<b>*</b>	*	*	<b>1</b>	*	*	<b>*</b>	*	*	<b>1</b>	*	*	<b>1</b>
% Facility Participation	96	100	<b>100</b>	100	96	<b>99</b>	98	100	<b>98</b>	98	100	<b>100</b>	98	99	<b>99</b>

\*% represents less than one percent. Subgroup total may not add to 100% due to rounding or missing data elements.

**Table D.2. Nov98 -April99 & Sept99 -Dec99 Peritoneal Dialysis (PD) Patient Demographics & Facility Participation**

Patient Demographics	Illinois			Indiana			Kentucky			Ohio			Network 9/10		
	J-A	M-A	S-D	J-A	M-A	S-D	J-A	M-A	S-D	J-A	M-A	S-D	J-A	M-A	S-D
Total Number	1087	987	<b>907</b>	772	773	<b>766</b>	267	279	<b>254</b>	1359	1375	<b>1298</b>	3485	3414	<b>3225</b>
Sex															
Men	48%	48%	<b>49%</b>	52%	53%	<b>52%</b>	58%	53%	<b>54%</b>	50%	51%	<b>50%</b>	51%	51%	<b>51%</b>
Women	52	52	<b>51</b>	48	47	<b>48</b>	42	47	<b>46</b>	50	49	<b>50</b>	49	49	<b>49%</b>
Race															
Black	24%	24%	<b>23%</b>	21%	20%	<b>21%</b>	14%	13%	<b>11%</b>	24%	24%	<b>25%</b>	22%	22%	<b>22%</b>
White	64	65	<b>66</b>	76	77	<b>76</b>	85	86	<b>88</b>	74	73	<b>72</b>	72	73	<b>73</b>
Other	11	11	<b>10</b>	3	3	<b>4</b>	1	1	<b>1</b>	4	3	<b>3</b>	6	4	<b>5</b>
Age in years															
<18	2%	3%	<b>3%</b>	3%	3%	<b>3%</b>	0%	0%	<b>0%</b>	3%	3%	<b>2%</b>	3%	3%	<b>2%</b>
18-44	24	23	<b>24</b>	25	24	<b>23</b>	27	26	<b>24</b>	24	24	<b>24</b>	25	24	<b>24</b>
45-64	42	43	<b>42</b>	42	40	<b>42</b>	46	49	<b>50</b>	42	42	<b>43</b>	42	43	<b>43</b>
65-74	20	20	<b>20</b>	20	22	<b>20</b>	16	16	<b>15</b>	19	19	<b>20</b>	19	20	<b>20</b>
75+	11	11	<b>12</b>	9	11	<b>11</b>	9	9	<b>10</b>	10	11	<b>10</b>	10	11	<b>11</b>
Primary Dx															
DM	32%	34%	<b>35%</b>	35%	35%	<b>35%</b>	39%	43%	<b>41%</b>	41%	42%	<b>42%</b>	37%	38%	<b>38%</b>
HTN	23	23	<b>21</b>	23	21	<b>21</b>	16	14	<b>14</b>	14	15	<b>15</b>	19	19	<b>18</b>
GN	20	21	<b>23</b>	19	19	<b>19</b>	19	19	<b>17</b>	20	19	<b>20</b>	20	20	<b>20</b>
Other	23	22	<b>21</b>	23	24	<b>25</b>	26	24	<b>27</b>	25	24	<b>24</b>	24	23	<b>24</b>
Unknown	2	0	<b>0</b>	-	0	<b>0</b>	0	0	<b>0</b>	*	0	<b>0</b>	1	0	<b>0</b>
% Facility Participation	94	94	<b>95</b>	97	93	<b>93</b>	100	95	<b>90</b>	100	97	<b>95</b>	98	95	<b>93</b>

\*% represents less than one percent. ^ U.S. data from HCFA National Core Indicator Project.

Subgroup total may not add to 100% due to rounding or missing data elements.

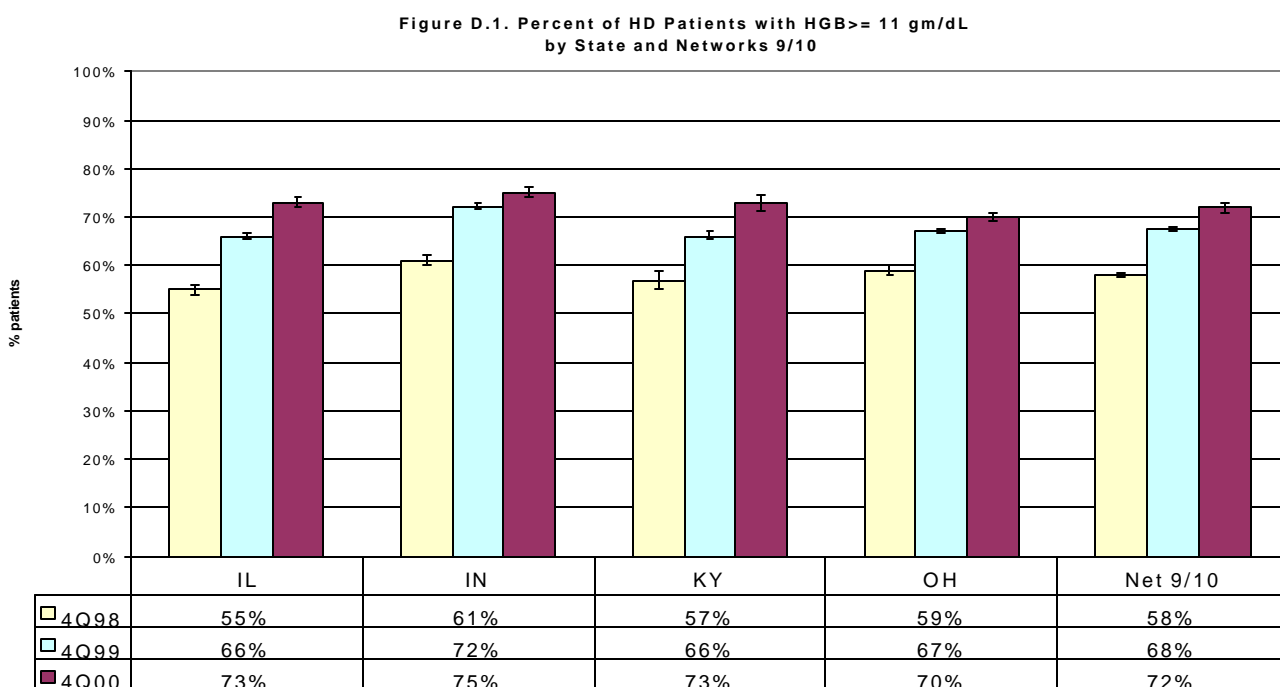
2.a.Treatment of Anemia - Hemodialysis. Figure D.1. shows the percent of patients with average pre-dialysis HGB  $\geq 11$  gm/dL. Network 9/10 rates had a statistical increase of 4% between the 4<sup>th</sup> quarter 1999 and 4<sup>th</sup> quarter 2000 with state rates ranging from 3%-7%.

Figure D.2. and Table D.3 show the distribution of HGB values for the states, Network 9/10 and the United States. The average HGB increased from 11.4 in the 4<sup>th</sup> quarter 1999 to 11.6 in the 4<sup>th</sup> quarter 2000. In all states, the percentage of patients with average HGB  $> 12$  gm/dL increased.

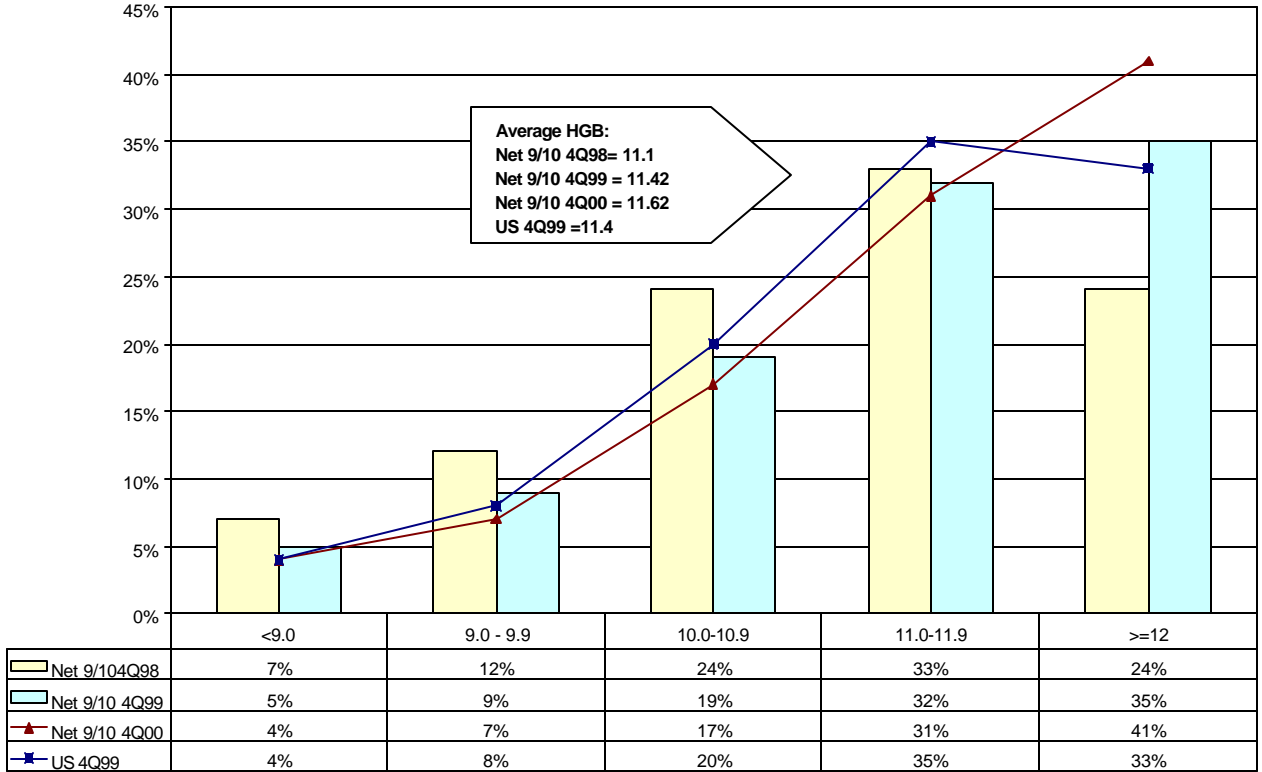
Table D.4. compares average and standard deviation values by state for HGB, TSAT, Ferritin and Epo dose. The more frequent route of Epogen<sup>TM</sup> administration was reported as intravenous at 80%. This was an increase of 5% from 4<sup>th</sup> quarter 1999. The average Epogen<sup>TM</sup> dose remained at 240 units/kilogram/week in the fourth quarter 2000. Of the patients who were prescribed iron, 88% were prescribed intravenous iron in the 4<sup>th</sup> quarter of 2000, 13% increase from the fourth quarter 1999. Between the 4<sup>th</sup> quarters of 1997 and 2000, the average TSAT ranged between 28% to 29.0%. The average ferritin increased from 514 ng/mL to 561 ng/mL. Iron prescriptions were reported for 19,078 patients in the fourth quarter 2000, 85% of these patients were reported having an IV iron prescription.

Figures D.3. & D.4.compare TSAT and ferritin between states and Network 9/10 for the 4<sup>th</sup> quarters of 1998 and 2000.

Table D.5. shows the percent of patients with paired TSAT  $<20\%$  and Ferritin  $<100$  ng/mL from 4th quarter 1997-2000.



**Figure D.2. Distribution of HD Hemoglobin Values (gm/dL)  
in Networks 9/10 & U.S.**



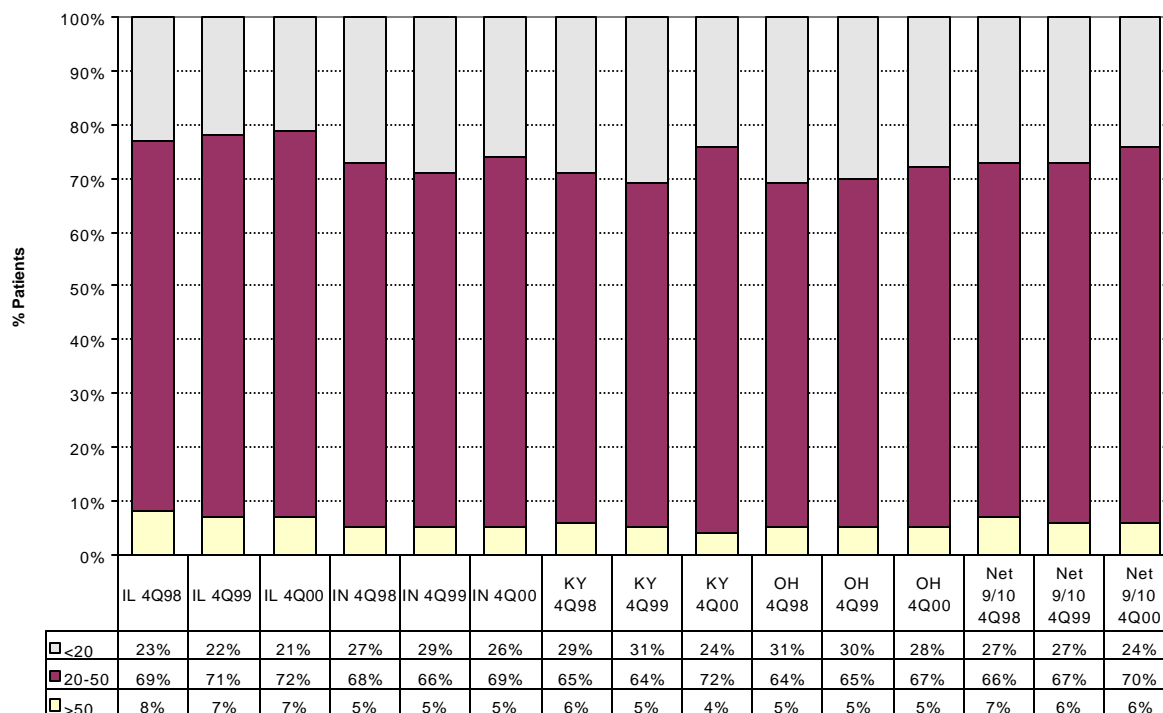
**Table D.3. Distribution of HD HGB values (gm/dL) by State.**

	< 9	9 - 10	11 - 12	>12
IL 4Q98	8%	37%	48%	7%
IL 4Q99	6%	28%	36%	31%
<b>IL 4Q00</b>	<b>4%</b>	<b>23%</b>	<b>33%</b>	<b>40%</b>
IN 4Q98	5%	33%	54%	8%
IN 4Q99	4%	25%	35%	37%
<b>IN 4Q00</b>	<b>3%</b>	<b>22%</b>	<b>35%</b>	<b>40%</b>
KY 4Q98	8%	35%	52%	5%
KY 4Q99	5%	28%	36%	32%
<b>KY 4Q00</b>	<b>3%</b>	<b>24%</b>	<b>35%</b>	<b>38%</b>
OH 4Q98	7%	35%	52%	6%
OH 4Q99	4%	29%	35%	32%
<b>OH 4Q00</b>	<b>3%</b>	<b>26%</b>	<b>37%</b>	<b>34%</b>

**Table D.4. HD Anemia Management Measures by State and Networks 9/10.**

	Illinois		Indiana		Kentucky		Ohio		Net 9/10	
	avg	sd	avg	sd	avg	sd	avg	sd	avg	sd
HGB 4Q98	11.0	1.6	11.2	1.3	11.0	1.3	11.1	1.3	11.1	1.4
HGB 4Q99	11.4	1.4	11.6	1.4	11.4	1.4	11.4	1.4	11.4	1.4
<b>HGB 4Q00</b>	<b>11.7</b>	<b>1.4</b>	<b>11.7</b>	<b>1.3</b>	<b>11.7</b>	<b>1.4</b>	<b>11.5</b>	<b>1.3</b>	<b>11.6</b>	<b>1.4</b>
TSAT 4Q97	29.0	13.9	29.5	13.3	28.5	13.7	26.7	13.0	29.0	13.9
TSAT 4Q98	30.2	14.3	27.6	13.0	27.5	13.4	26.9	13.2	28.4	13.7
TSAT 4Q99	29.7	13.4	27.2	12.9	26.4	12.3	26.9	12.6	28.0	13.0
<b>TSAT 4Q00</b>	<b>29.7</b>	<b>13.2</b>	<b>27.7</b>	<b>12.4</b>	<b>27.8</b>	<b>11.9</b>	<b>27.1</b>	<b>12.7</b>	<b>28.3</b>	<b>12.8</b>
Ferritin 4Q97	431	425	523	429	409	391	508	437	469	429
Ferritin 4Q98	459	430	534	462	436	400	516	421	489	431
Ferritin 4Q99	465	461	545	469	507	424	558	446	514	456
<b>Ferritin 4Q00</b>	<b>556</b>	<b>437</b>	<b>565</b>	<b>426</b>	<b>547</b>	<b>425</b>	<b>568</b>	<b>442</b>	<b>561</b>	<b>436</b>
Epo dose										
u/kg/wk 4Q97	227	880	205	158	229	223	228	205	223	570
u/kg/wk 4Q98	250	200	220	180	241	191	243	193	241	194
u/kg/wk 4Q99	257	194	239	197	223	183	228	200	240	196
<b>u/kg/wk 4Q00</b>	<b>247</b>	<b>199</b>	<b>240</b>	<b>210</b>	<b>232</b>	<b>188</b>	<b>235</b>	<b>208</b>	<b>240</b>	<b>203</b>

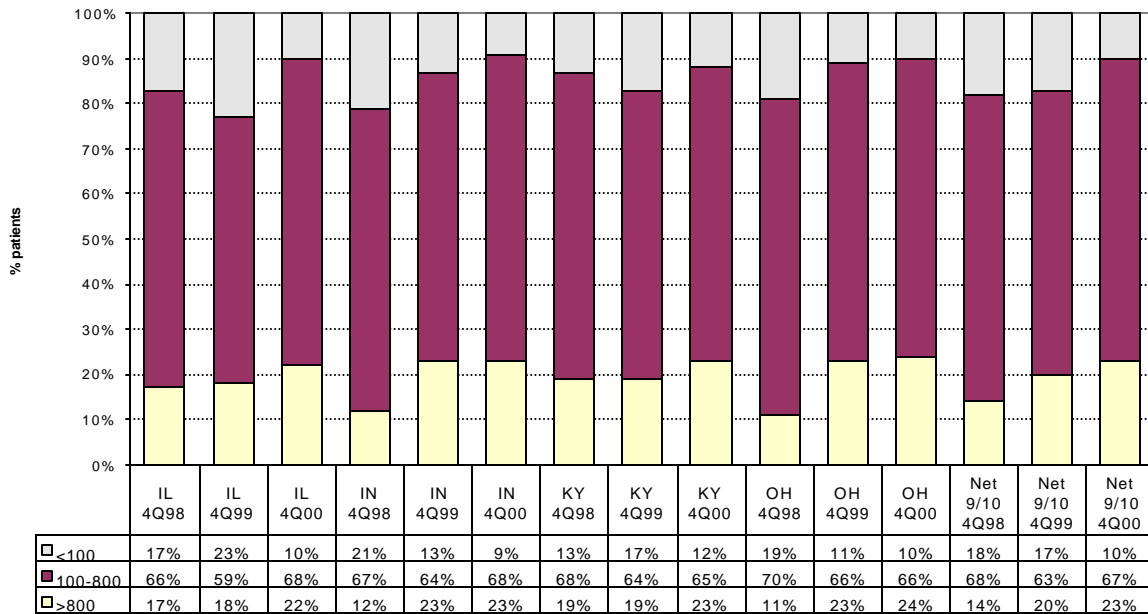
**Figure D.3. Percent HD Patients with TSAT 4Q98 - 4Q00 by State & Networks 9/10**



**Table D.5. Anemia Management Measures for Percent of HD Patients in 4th Quarter 1997-2000 with Paired TSAT <20% & Ferritin <100 ng/mL by State and Networks 9/10**

	Illinois 4 <sup>th</sup> Qtr				Indiana 4 <sup>th</sup> Qtr				Kentucky 4 <sup>th</sup> Qtr				Ohio 4 <sup>th</sup> Qtr				Net 9/10 4 <sup>th</sup> Qtr			
	97	98	99	00	97	98	99	00	97	98	99	00	97	98	99	00	97	98	99	00
TSAT < 20% and Ferritin <100 ng/ml	10	8	7	4	6	7	6	5	12	12	9	6	6	6	6	5	8	8	7	5

**Figure D.4. Percent HD Patients with Ferritin (ng/mL) 4Q98 - 4Q00 by State & Networks 9/10**



**2.b.Treatment of Anemia – Peritoneal Dialysis.** Anemia management measures show improvement in each of the reporting cycles.

Figure D.5. shows the percentage of patients with average HGB  $\geq 11$  gm/dL for the states and Network 9/10. Network 9/10 rates improved from 68% to 71% between September –December 1999-2000 (U.S. rate 69%).

Table D.6. shows the distribution of HGB values for the states. The distribution is shifting to the right, indicating improvements.

Table D.7. reports averages and standard deviations of the HGB, TSAT, Ferritin and EPO dose measurements. In the September-December 2000 cycle, the more frequent route of Epogen™ administration was reported as subcutaneous at 97%. The average Epogen™ dose increased from 147 to 155 units/kilogram/week between September-December 1999-2000.

Figures D.6. and D.7. compare the TSAT and Ferritin values by state and Network 9/10 for the periods J-A00 through S-D00.

Table D.8. shows state comparisons for paired TSAT <20 % and Ferritin <100 ng/mL measures, the Networks 9/10 rate is 10% (U.S.rate 7%). Iron prescriptions were reported for 1959 patients in September – December 2000, 10% of these patients were reported having an IV iron prescription.

Figure D.5. Percent of PD Patients with HGB >= 11 gm/dL  
by State and Networks 9/10

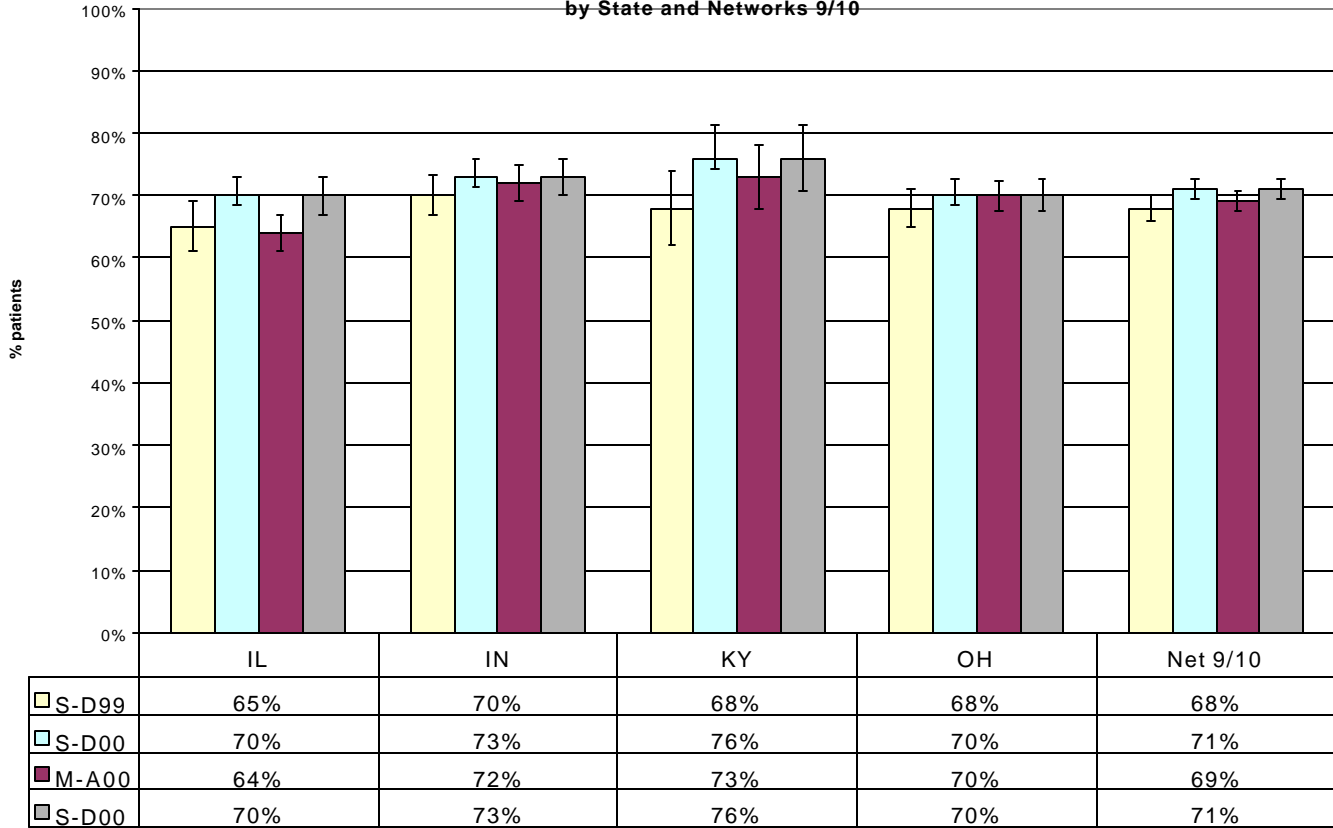


Table D.6. Distribution of PD HGB values (gm/dL) by State.

	< 9	9-10	11-12	12+
IL S-D99	5%	30%	47%	17%
IL J-A00	5%	28%	31%	37%
IL M-A00	5%	32%	26%	38%
<b>IL S-D00</b>	<b>4%</b>	<b>26%</b>	<b>30%</b>	<b>40%</b>
IN S-D99	4%	27%	50%	20%
IN J-A00	6%	23%	31%	39%
IN M-A00	4%	24%	31%	41%
<b>IN S-D00</b>	<b>3%</b>	<b>24%</b>	<b>31%</b>	<b>42%</b>
KY S-D99	6%	21%	51%	22%
KY J-A00	6%	27%	28%	38%
KY M-A00	7%	21%	30%	42%
<b>KY S-D00</b>	<b>5%</b>	<b>18%</b>	<b>30%</b>	<b>47%</b>
OH S-D99	4%	27%	48%	20%
OH J-A00	5%	25%	32%	38%
OH M-A00	5%	25%	32%	38%
<b>OH S-D00</b>	<b>4%</b>	<b>26%</b>	<b>28%</b>	<b>42%</b>

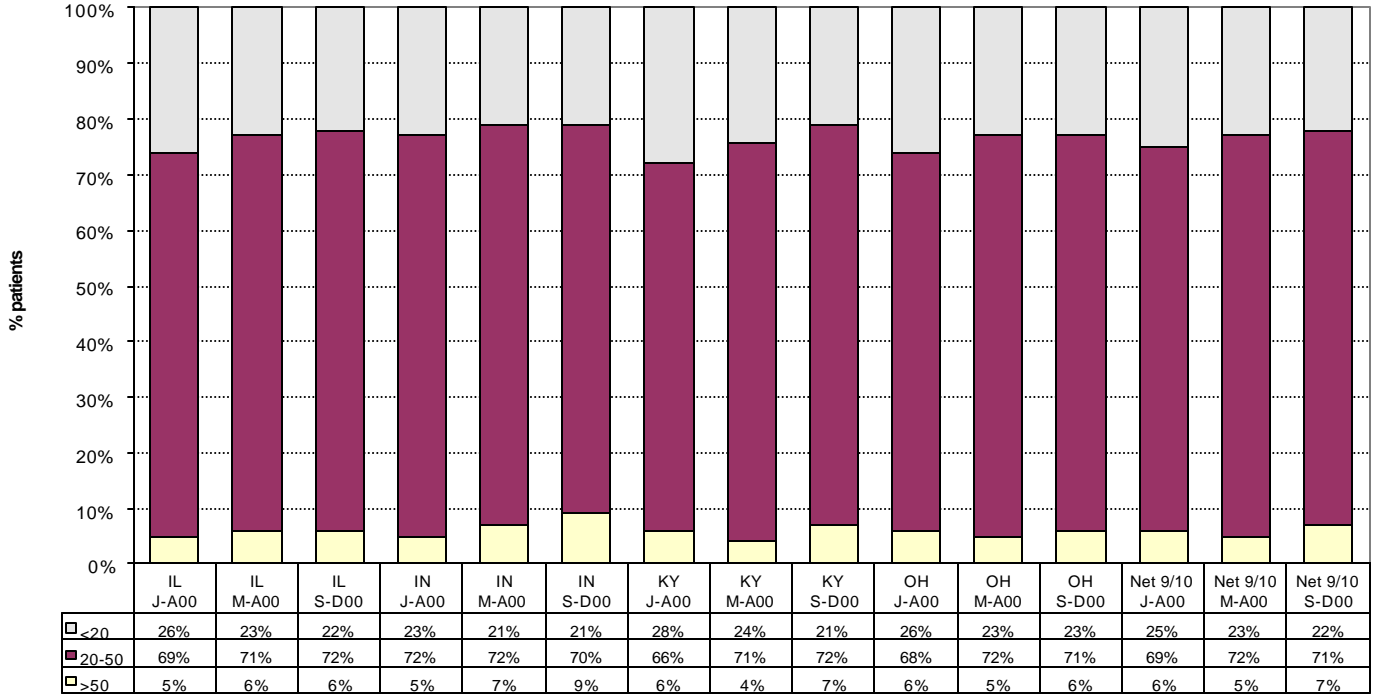
**Table D.7. PD Anemia Management Measures by State & Networks 9/10.**

	Illinois		Indiana		Kentucky		Ohio		Net 9/10	
	avg	sd	avg	sd	avg	sd	avg	sd	avg	sd
HGB S-D99	11.6	1.7	11.7	1.6	11.8	1.7	11.7	1.7	11.7	1.7
HGB J-A00	11.6	1.6	11.7	1.7	11.6	1.7	11.7	1.6	11.6	1.7
HGB M-A00	11.6	1.7	11.8	1.6	11.7	1.7	11.7	1.6	11.6	1.6
<b>HGB S-D00</b>	<b>11.7</b>	<b>1.6</b>	<b>11.8</b>	<b>1.6</b>	<b>12.0</b>	<b>1.7</b>	<b>11.7</b>	<b>1.6</b>	<b>11.7</b>	<b>1.6</b>
TSAT S-D99	29.8	13.9	29.1	14.5	28.9	13.6	27.3	12.4	28.6	13.6
TSAT J-A00	27.4	12.4	28.7	13.0	27.6	12.9	28.2	13.4	28.1	13.0
TSAT M-A00	28.8	13.1	29.4	13.1	28.3	12.7	28.3	12.5	28.7	12.8
<b>TSAT S-D00</b>	<b>28.7</b>	<b>13.2</b>	<b>30.2</b>	<b>14.3</b>	<b>29.4</b>	<b>12.9</b>	<b>28.7</b>	<b>13.2</b>	<b>29.1</b>	<b>13.5</b>
Ferritin S-D99	346	418	465	505	294	282	359	394	378	429
Ferritin J-A00	366	428	495	516	391	357	402	470	411	463
Ferritin M-A00	368	430	498	517	362	373	373	400	395	436
<b>Ferritin S-D00</b>	<b>385</b>	<b>396</b>	<b>510</b>	<b>520</b>	<b>389</b>	<b>435</b>	<b>394</b>	<b>438</b>	<b>418</b>	<b>450</b>
Epo Dose										
u/kg/wk S-D99	147	127	147	127	147	114	140	135	147	127
u/kg/wk J-A00	150	139	157	128	190	119	151	150	155	141
u/kg/wk M-A00	150	133	143	121	175	144	149	138	151	134
<b>u/kg/wk S-D00</b>	<b>155</b>	<b>136</b>	<b>154</b>	<b>142</b>	<b>164</b>	<b>138</b>	<b>153</b>	<b>143</b>	<b>155</b>	<b>141</b>

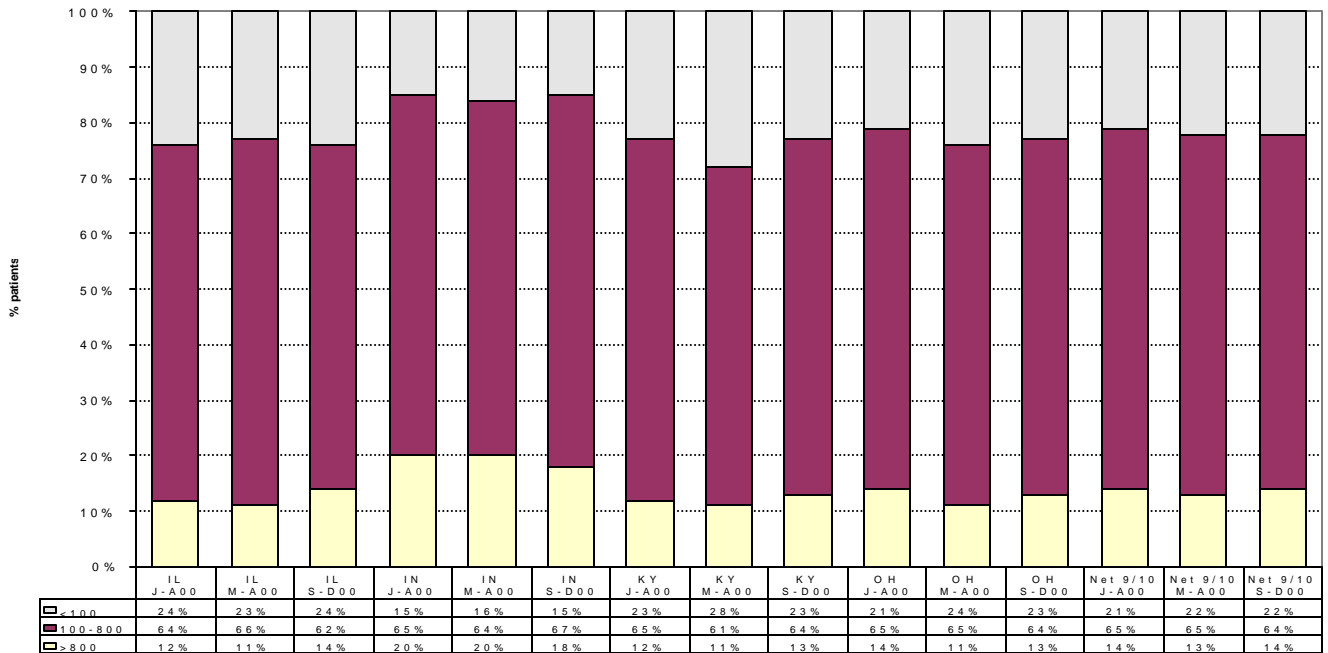
**Table D.8. Percent of Patient Measurements from September-December 1999 to 2000 with Paired TSAT <20% & Ferritin < 100 ng/mL by State & Networks 9/10.**

	Illinois				Indiana				Kentucky				Ohio				Network 9/10			
	S-D	J-A	M-A	S-D	S-D	J-A	M-A	S-D	S-D	J-A	M-A	S-D	S-D	J-A	M-A	S-D	S-D	J-A	M-A	S-D
	99	00	00	00	99	00	00	00	99	00	00	00	99	00	00	00	99	00	00	00
TSAT < 20% & Ferritin < 100 ng/mL	10	10	9	<b>8</b>	9	7	8	<b>6</b>	8	10	11	<b>9</b>	11	9	10	<b>9</b>	10	9	9	<b>8</b>

**Figure D.6. Percent PD Patients with TSAT J-A00 - S-D00 by State & Networks 9/10**



**Figure D.9. Percent PD Patients with Ferritin (ng/mL) J-A00 - S-D00 by State & Networks 9/10**





2.c. Adequacy of Hemodialysis. Figure D.8. shows the percent of patients with an average URR of 65% or greater by state, Network 9/10, and by year. There was a 2% increase from 4Q99 to 4Q00.

Figure D.9. shows the percent of patients with an average Kt/V<sub>Daugirdis II</sub> of 1.2 or greater. There was a 2% increase from one year ago in the Network 9/10 rate. The 4<sup>th</sup> quarter 2000 average URR was 70.3% with a standard deviation of 7.6 and the average Kt/V<sub>Daugirdis II</sub> was 1.52 with a standard deviation of 0.37. The average HD treatment time increased three minutes, from 218 to 221.

Table D.9. shows URR, Kt/V<sub>Daugirdis II</sub> and treatment time averages and standard deviations by state and Networks 9/10.

Figures D.10. and D.11. show the distribution of URR and Kt/V<sub>DaugirdisII</sub> values for 4<sup>th</sup> quarter 1996- 2000. The curves shift to the right, which indicates adequacy outcome improvements over time.

**Figure D.8. Percent of HD Patients with URR >= 65%  
by State & Networks 9/10**

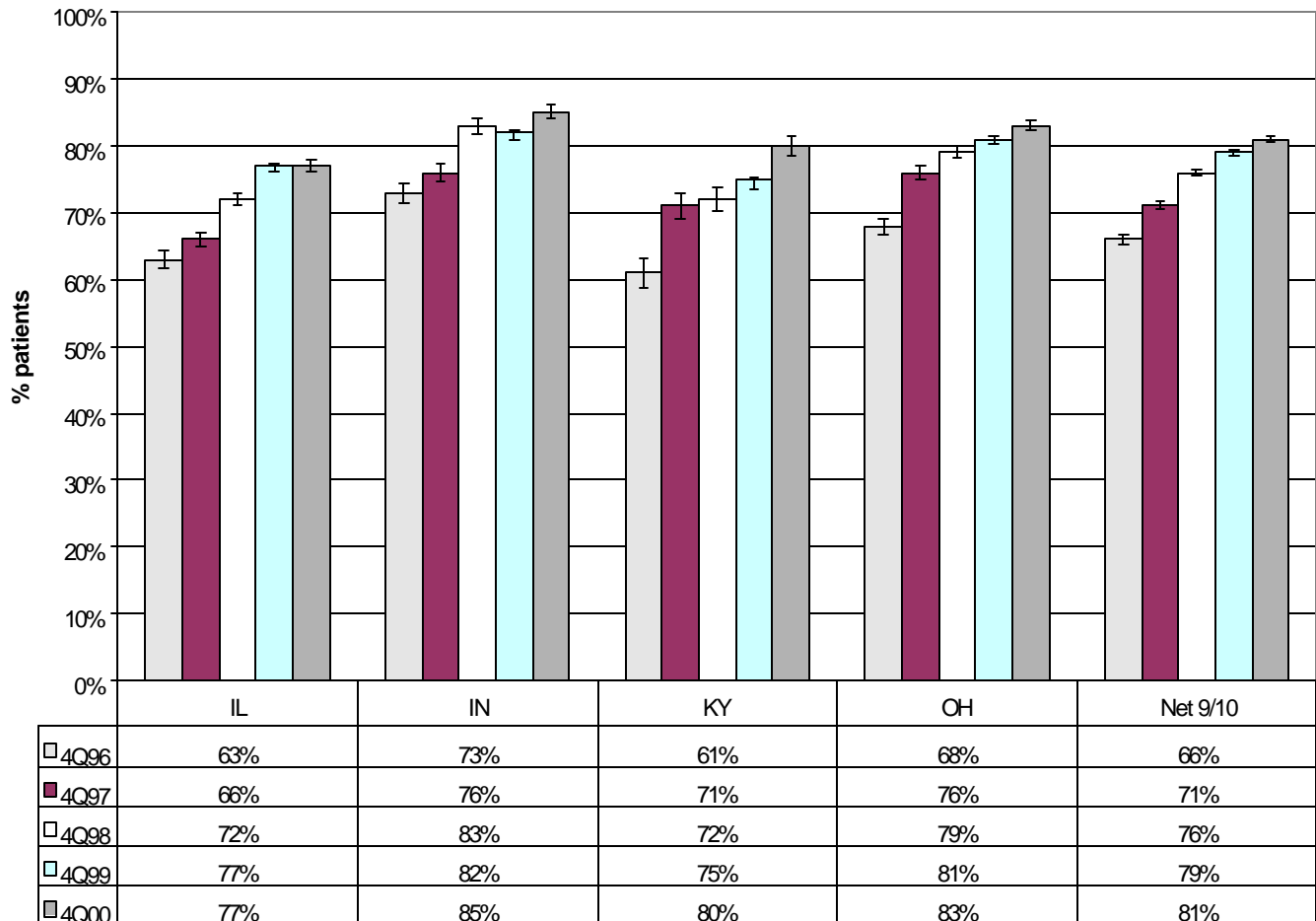


Figure D.9. Percent of HD Patients with Kt/V Daugirdas II  $\geq 1.2$  by State & Networks 9/10

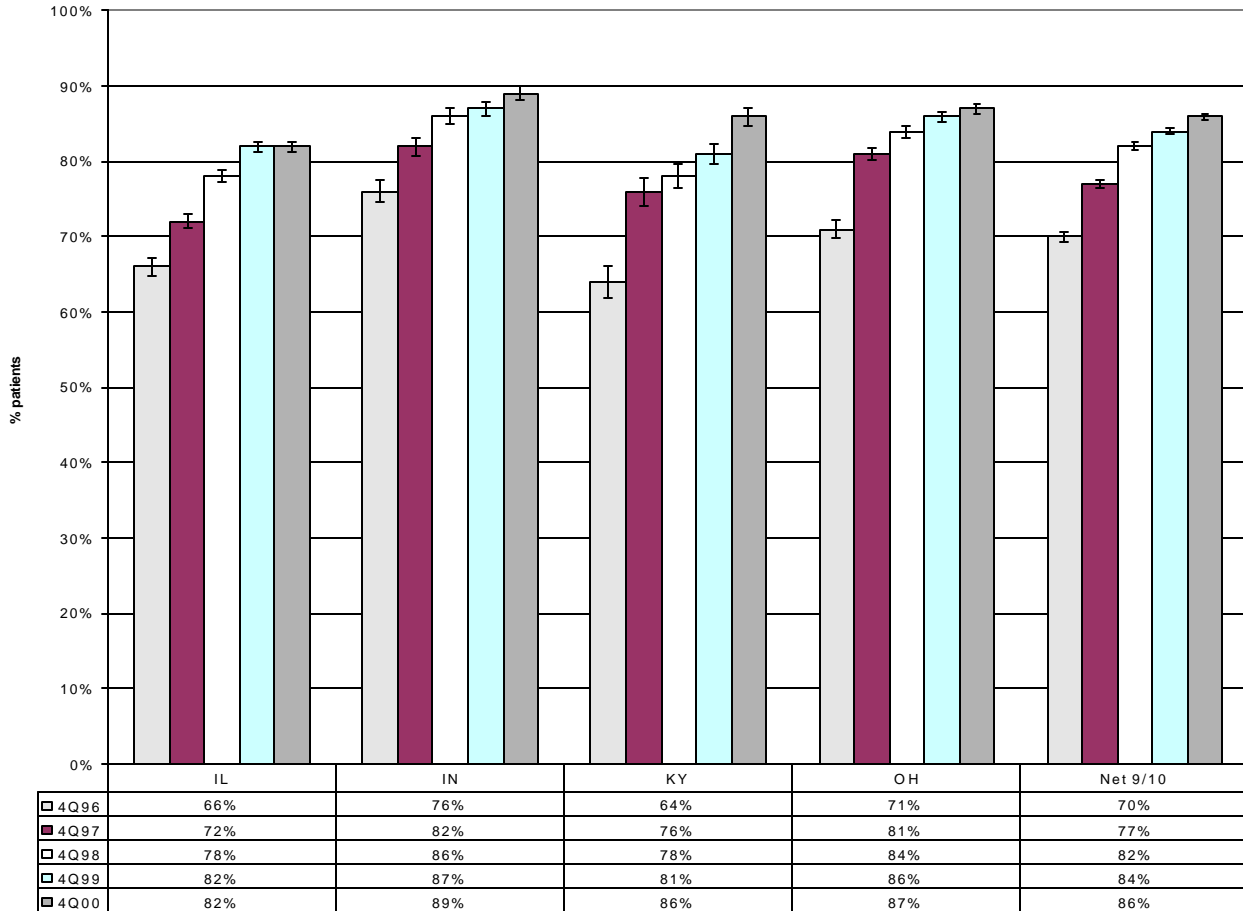
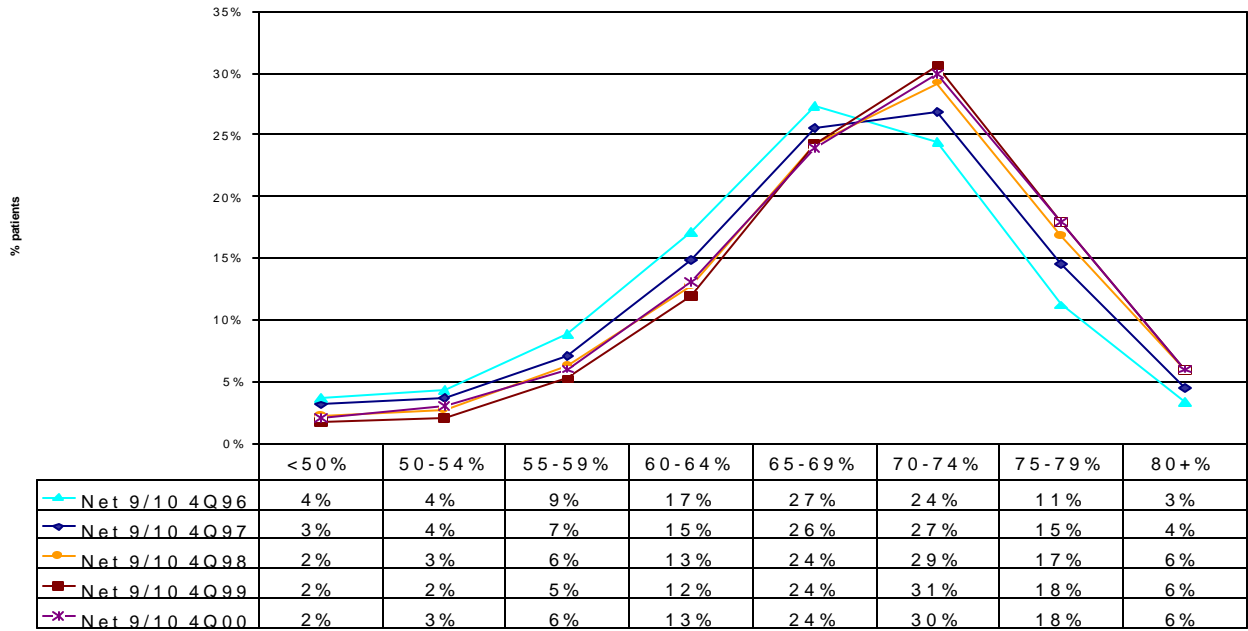


Table D.9. HD Adequacy Performance Measures by State & Networks 9/10.

	Illinois		Indiana		Kentucky		Ohio		Net 9/10	
	avg	sd	avg	sd	avg	sd	avg	sd	avg	sd
URR 4Q96	66.3	9.2	68.6	7.9	65.9	9.0	67.3	7.8	67.1	8.5
URR 4Q97	67.1	8.9	69.4	7.9	68.2	9.4	69.0	7.7	68.2	8.5
URR 4Q98	68.5	8.5	70.7	7.3	68.4	8.1	69.8	7.4	69.3	7.9
URR 4Q99	69.4	7.8	70.7	7.6	70.0	7.8	70.1	7.2	69.8	7.6
<b>URR 4Q00</b>	<b>69.6</b>	<b>7.8</b>	<b>71.5</b>	<b>7.2</b>	<b>70.1</b>	<b>7.1</b>	<b>70.6</b>	<b>6.9</b>	<b>70.3</b>	<b>7.4</b>
Kt/V 4Q96	1.32	.35	1.39	.32	1.30	.32	1.34	.28	1.34	.32
Kt/V 4Q97	1.38	.37	1.47	.36	1.41	.35	1.44	.34	1.42	.36
Kt/V 4Q98	1.43	.36	1.52	.35	1.43	.35	1.48	.36	1.47	.36
Kt/V 4Q99	1.48	.38	1.54	.40	1.45	.35	1.50	.37	1.49	.38
<b>Kt/V 4Q00</b>	<b>1.47</b>	<b>.36</b>	<b>1.56</b>	<b>.35</b>	<b>1.49</b>	<b>.32</b>	<b>1.52</b>	<b>.37</b>	<b>1.52</b>	<b>.37</b>
Min 4Q96	209	31	209	36	209	32	209	29	209	32
Min 4Q97	213	28	215	31	212	30	213	29	214	29
Min 4Q98	217	28	222	30	214	29	216	28	217	29
Min 4Q99	218	27	221	35	216	30	216	28	218	30
<b>Min 4Q00</b>	<b>221</b>	<b>27</b>	<b>227</b>	<b>30</b>	<b>218</b>	<b>30</b>	<b>218</b>	<b>29</b>	<b>221</b>	<b>29</b>

**Figure D.10. Distribution of URR Values from 4th Quarter 1996 - 2000 for HD Patients in Networks 9/10**

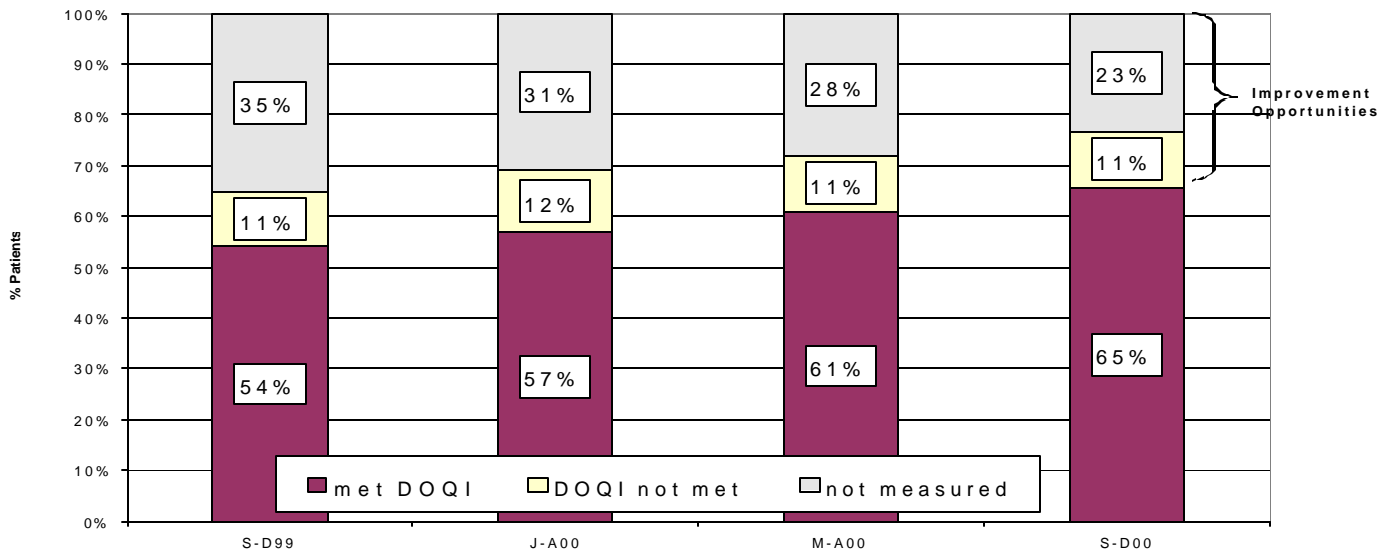


**Figure D.11. Distribution of Kt/V Daugirdis II Values from 4th Quarter 1996-2000 for HD Patients in Networks 9/10**

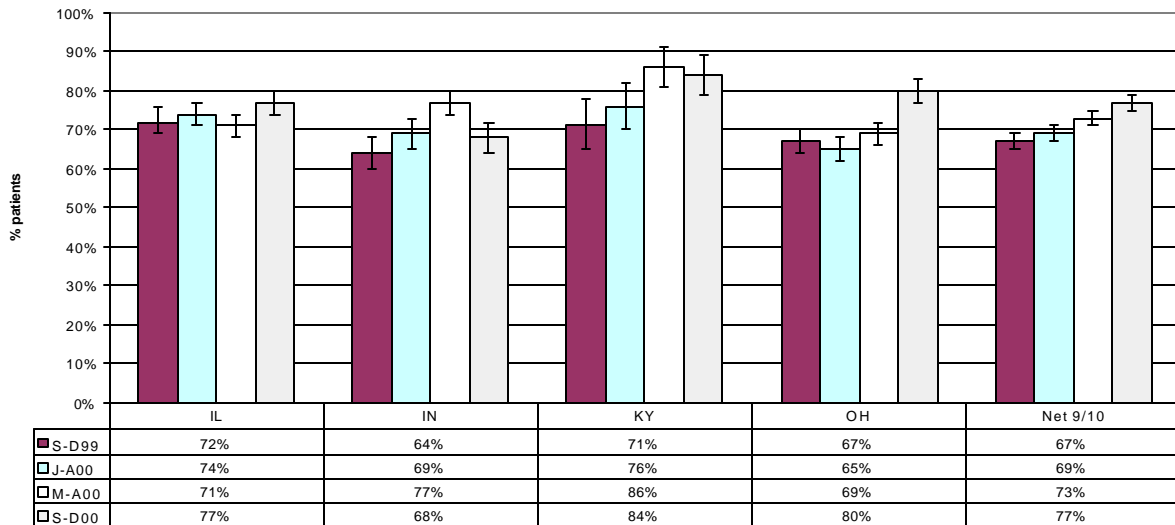


2.d. Adequacy of Peritoneal Dialysis. Three cycles of PD Clinical Performance Measures were collected in 2000, January – April 2000 (J-A00), May-August 2000 (M-A00), and September – December 2000 (S-D00). PD adequacy measures included the weekly creatinine clearance (CrCl) and weekly Kt/V. Facilities reported patient measurements in the collection time frames. The percentage of patients measured for adequacy improved from 65% to 76%. Figure D.12. shows the percentage of PD patients in Network 9/10 measured and meeting weekly CrCl or Kt/V DOQI™ guidelines from September – December 1999-2000. Approximately 33% of the PD population were either not measured or did not meet DOQI™ guidelines.

**Figure D.12. Percent of Patients in Network 9/10 with Reported Weekly CrCl or Kt/V Measured & Meeting DOQI**



**Figure D.13. Percent of PD Patients with Reported Weekly CrCl or Kt/V meeting DOQI by State and Networks 9/10**



**2.e. Nutritional Status.** The serum albumin was measured as a nutritional outcome. 83% of the HD patients had an albumin measured with a bromocresol green (BCG) assay, 12% bromocresol purple (BCP) and 5% were reported with no designated assay. 83% of the PD patients had an albumin measured with a BCG assay, 16% with a BCP assay and 1% were reported with no designated assay. An adjustment of +0.3 was made to serum albumin measured using the BCP assay for comparisons.

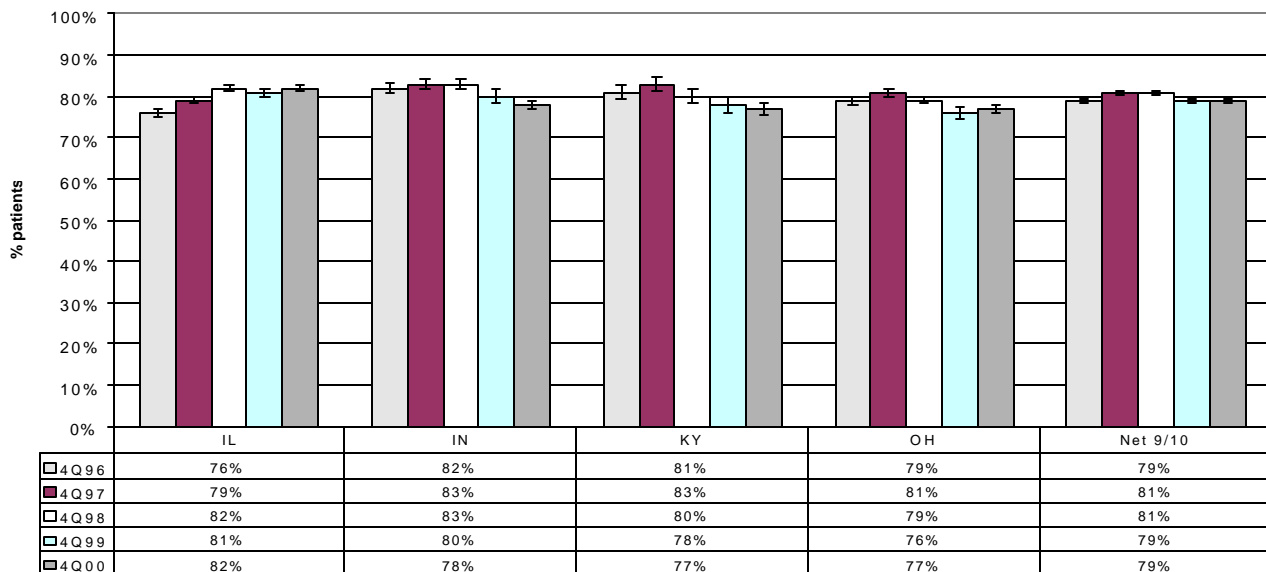
Hemodialysis - Albumin. Table D.10. outlines the average and standard deviation values by state, Network 9/10. The average albumin in the 4<sup>th</sup> quarter 2000 was 3.73 gm/dL, a slight decrease from 3.75 gm/dL in the 4<sup>th</sup> quarter 1999. The percent of patients with an average albumin  $\geq$  3.5 gm/dL remained at 79% between the two time periods. 30% of the patients had an average albumin  $\geq$  4.0 gm/dL, a 3% decrease from last year.

Figure D.14. compares the percent patients with average albumin  $\geq$ 3.5 gm/dL by state, Network 9/10 from 4<sup>th</sup> quarter 1996-2000. Table D.11. shows the distribution of average albumin by state and Network 9/10 from 4<sup>th</sup> quarter 1996-2000.

Table D.10. HD Average (avg) and Standard Deviation (sd) Values for Albumin by State & Networks 9&10.

	Illinois		Indiana		Kentucky		Ohio		Network 9/10	
	avg	sd	avg	sd	avg	sd	avg	sd	avg	sd
Albumin 4Q96	3.67	.49	3.74	.40	3.71	.42	3.67	.44	3.69	.45
Albumin 4Q97	3.76	.46	3.82	.45	3.79	.50	3.78	.44	3.78	.46
Albumin 4Q98	3.78	.43	3.81	.42	3.78	.45	3.75	.44	3.77	.44
Albumin 4Q99	3.78	.43	3.79	.51	3.72	.44	3.70	.45	3.75	.46
<b>Albumin 4Q00</b>	<b>3.78</b>	<b>.42</b>	<b>3.71</b>	<b>.50</b>	<b>3.69</b>	<b>.42</b>	<b>3.69</b>	<b>.43</b>	<b>3.73</b>	<b>.44</b>

Figure D.14. Percent of HD Patients with Average Albumin  $\geq$  3.5 gm/dl by State & Networks 9/10



**Table D.11. Distribution of HD Average Albumin Values (gm/dl) by State & Networks 9/10.**

	< 2.0	2.0-2.4	2.5-2.9	3.0-3.4	3.5+
IL 4Q96	0.3%	1.0%	4.2%	18.6%	76.0%
IL 4Q97	0.2%	0.8%	3.6%	16.9%	78.7%
IL 4Q98	0.1%	0.6%	3.3%	14.0%	82.0%
IL 4Q99	0.1%	0.6%	3.3%	15.0%	80.7% (35.7)*
<b>IL 4Q00</b>	<b>0.2%</b>	<b>0.8%</b>	<b>3.3%</b>	<b>13.7%</b>	<b>82.1% (36.1)*</b>
IN 4Q96	0.1%	0.6%	2.4%	15.3%	81.7%
IN 4Q97	0.3%	0.5%	2.5%	13.7%	83.1%
IN 4Q98	0.1%	0.6%	2.6%	13.9%	82.8%
IN 4Q99	0.1%	0.9%	3.3%	15.7%	79.7% (35.2)*
<b>IN 4Q00</b>	<b>0.1%</b>	<b>0.6%</b>	<b>3.9%</b>	<b>17.5%</b>	<b>77.9% (24.9)*</b>
KY 4Q96	0.2%	0.3%	3.7%	14.9%	80.8%
KY 4Q97	0.1%	0.7%	2.9%	13.6%	82.6%
KY 4Q98	0.2%	0.8%	3.5%	15.9%	79.5%
KY 4Q99	0.2%	0.8%	4.0%	16.2%	78.2% (30.4)*
<b>KY 4Q00</b>	<b>0.2%</b>	<b>0.8%</b>	<b>4.6%</b>	<b>17.3%</b>	<b>77.1% (26.0)*</b>
OH 4Q96	0.2%	0.7%	3.5%	16.7%	78.8%
OH 4Q97	0.1%	0.8%	3.1%	14.8%	81.0%
OH 4Q98	0.2%	0.8%	4.0%	16.2%	78.8%
OH 4Q99	0.2%	1.0%	4.9%	17.8%	75.8% (30.0)*
<b>OH 4Q00</b>	<b>0.4%</b>	<b>1.1%</b>	<b>4.3%</b>	<b>17.6%</b>	<b>76.7% (27.3)*</b>
Net 9/10 4Q96	0.2%	0.7%	3.6%	16.9%	78.7%
Net 9/10 4Q97	0.2%	0.7%	3.2%	15.3%	80.6%
Net 9/10 4Q98	0.1%	0.7%	3.4%	14.9%	80.8%
Net 9/10 4Q99	0.2%	0.8%	4.0%	16.2%	78.6% (33.1)*
<b>Net 9/10 4Q00</b>	<b>0.2%</b>	<b>0.9%</b>	<b>3.9%</b>	<b>16.0%</b>	<b>79.0% (30.2)*</b>

\*The percent of patients with average albumins <sup>≥</sup> 4.0 gm/dL are noted in parentheses for 4Q99 & 4Q00 only.

Peritoneal Dialysis - Albumin. The Network 9/10 average albumin for the September –December 2000 reporting cycles was 3.3 gm/dL. Table D.12. shows the percentage of patients in Networks 9/10 with an average albumin ≥ 3.5 gm/dl was 60%.

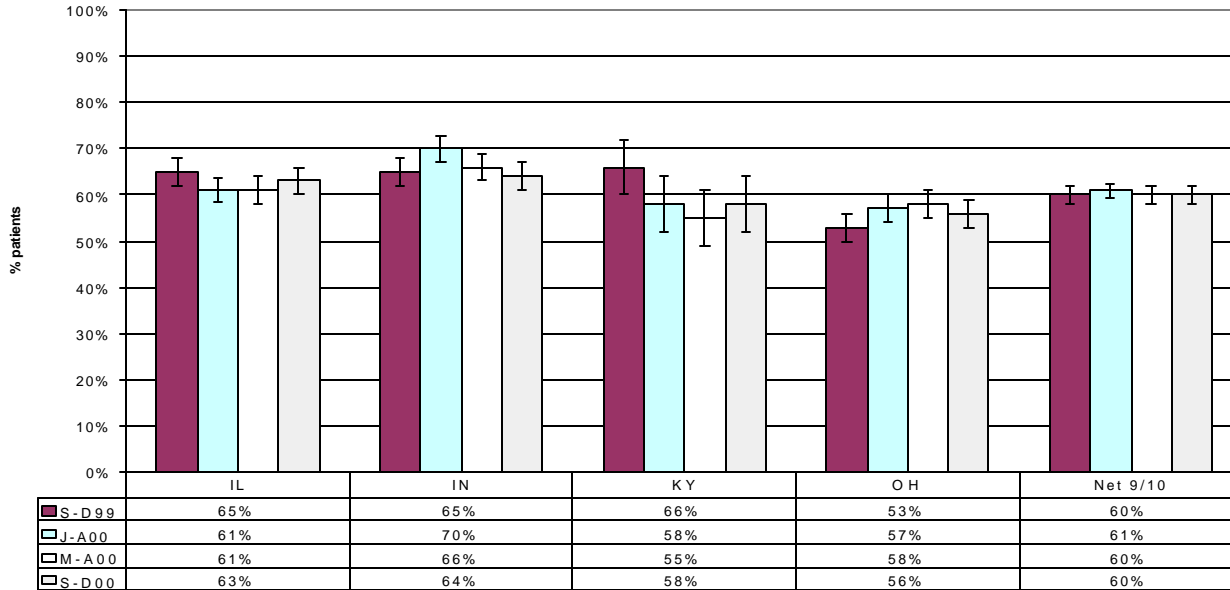
Figure D.15. compares the percentage of patients with an average albumin ≥ 3.5 gm/dl by state and Networks 9/10 for the 4 most current reporting cycles.

Table D.16. shows the distribution of average albumin values by state and Network 9/10.

**Table D.12. PD Average (avg) and Standard Deviation (sd) Values for Albumin by State & Network 9/10.**

	Illinois		Indiana		Kentucky		Ohio		Network 9&10	
	avg	sd	avg	sd	avg	sd	avg	sd	avg	sd
Albumin S-D99	3.60	.52	3.61	.50	3.59	.51	3.48	.54	3.55	.53
Albumin J-A00	3.55	.51	3.63	.49	3.50	.50	3.49	.50	3.54	.50
Albumin M-A00	3.55	.51	3.63	.49	3.50	.50	3.50	.50	3.54	.50
<b>Albumin S-D00</b>	<b>3.55</b>	<b>.48</b>	<b>3.59</b>	<b>.47</b>	<b>3.53</b>	<b>.53</b>	<b>3.49</b>	<b>.54</b>	<b>3.53</b>	<b>.51</b>

**Figure D.15. Percent PD Patients with Average Albumin  $\geq$  3.5 gm/dL by State & Networks 9/10**



**Table D.13. Distribution of Average Albumin Values by State & Networks 9&10**

	< 2.0	2.0-2.4	2.5-2.9	3.0-3.4	3.5+
IL S-D99	0.5%	1.7%	7.9%	24.8%	64.8% (25.0)*
IL J-A00	0.4%	2.2%	9.9%	26.3%	62% (22.8)*
IL M-A00	0.5%	1.9%	9.4%	27.1%	61.1% (21.5)*
<b>IL S-D00</b>	<b>0.2%</b>	<b>2.1%</b>	<b>9.1%</b>	<b>25.2%</b>	<b>63.2% (19.4)*</b>
IN S-D99	0.1%	1.6%	7.1%	25.9%	65.0% (23.3)*
IN J-A00	0.5%	0.9%	7.3%	20.9%	70.3% (30.3)*
IN M-A00	0%	1.4%	7.4%	25.5%	65.7% (24.7)*
<b>IN S-D00</b>	<b>0.4%</b>	<b>1.0%</b>	<b>7.4%</b>	<b>27.5%</b>	<b>63.7% (21.3)*</b>
KY S-D99	1.2%	1.2%	6.3%	25.6%	65.4% (23.9)*
KY J-A00	0%	2.3%	9.5%	30.2%	58.0% (18.3)*
KY M-A00	0.7%	1.4%	10.8%	31.8%	55.2% (18.1)*
<b>KY S-D00</b>	<b>0%</b>	<b>2.8%</b>	<b>10.1%</b>	<b>28.6%</b>	<b>58.5% (20.6)*</b>
OH S-D99	0.5%	2.9%	11.8%	34.7%	53.0% (18.3)*
OH J-A00	0.9%	2.2%	11.8%	28.2%	56.9% (20.0)*
OH M-A00	0.7%	2.2%	9.5%	30.1%	57.6% (15.3)*
<b>OH S-D00</b>	<b>1.0%</b>	<b>2.8%</b>	<b>10.5%</b>	<b>29.8%</b>	<b>55.8% (17.4)*</b>
Net 9/10 D-S99	0.5%	2.1%	9.2%	27.8%	60.1% (21.8)*
Net 9/10 J-A00	0.6%	1.9%	10.0%	26.1%	61.3% (23.0)*
Net 9/10 M-A00	0.5%	1.8%	9.1%	28.3%	60.3% (19.5)*
<b>Net 9/10 S-D00</b>	<b>0.6%</b>	<b>2.2%</b>	<b>9.4%</b>	<b>27.9%</b>	<b>60.0% (19.1)*</b>

\*The percent of patients with average albumin  $\geq$  4.0 gm/dL are noted in parentheses.

### 3. Networks 9/10 CPM Interventions.

The goals of the CPM interventions are to:

- (1) increase the knowledge of the CPM project to Networks 9/10 ESRD providers,
- (2) standardize the data collection process
- (3) analyze the applicability of the CPM on the facility and network levels, and,
- (4) implement programs and projects that can be repeated on a facility and Network-wide level.

Interventions included facility and physician data collection, feedback reports, and regional education workshops. The focus was on DOQI™ guidelines, physician-patient outcome data, and facility plans for improvement. Corporate and practice feedback reports were distributed. Feedback reports were specifically targeted to physicians, medical directors, administrators and nurse managers. Multi-color reports displayed data in tables, charts and health service area maps.

**Table D.14. Network 9/10 CPM Feedback Reports to Physicians and Dialysis Programs distributed in 2000 for each collection cycle.**

<b>Review Cycle:</b>	<b># Physicians</b>	<b># Facilities</b>
HD 4Q99	551	356
HD April 2000	536	360
HD July 2000	535	369
PD S-A99 – M-A00	369	172

The following describes the current level and the percent change from the 4Q99 to the 4Q00 of HD Network 9/10 patients meeting the recommended DOQI™ Guidelines for care:

			<u>change</u>
➤ Hemoglobin between 11-12 gm/dL	35%		- 1%
➤ Hemoglobin > 12 gm/dL	38%	+6%	
➤ Epo dose between 120-180 u/kg/wk	17%		- 1%
➤ TSAT between 20-50%	70%		+3%
➤ Ferritin between 100-800 ng/ml	67%		+4%
➤ Albumin ≥ 4.0 mg/dl	79%		no change
➤ URR ≥ 65%	86%		+2%
➤ Kt/V Daugirdas II ≥ 1.2	86%		+2%
➤ % Catheters (pts >90 days ESRD)	26%	+ 4%	
➤ % Fistulas (pts >90 days ESRD)	29%		+ 2%

The following describes the current level and the percent change from S-D99 to S-D00 of PD Network 9/10 patients meeting the recommended DOQI™ Guidelines for care:

		<u>change</u>
➤ Hemoglobin between 11-12 gm/dL	30%	- 17%
➤ Albumin ≥ 4.0 gm/dL	19%	- 3%
➤ Weekly CrCl or Kt/V	67%	+13%



In 2000, Network 9/10 Clinical Performance Goals 2000-2003 for adequacy of dialysis, anemia management, and vascular access were approved and published.

### **Adequacy of Dialysis Goals 2000-2003**

#### **Hemodialysis**

- All patients measured for adequacy every month
- $\geq 85\%$  of patient population achieve  $URR \geq 65\%$
- $\geq 85\%$  of patient population achieve  $Kt/V_{Daugirdas II} \geq 1.2$

#### **Peritoneal Dialysis**

- All patients measured for adequacy every 4 months
- CAPD  $\geq 85\%$  of patient population achieve weekly Creatinine Clearance  $\geq 60$  L/bsa or weekly  $Kt/V \geq 2.0$
- CCPD  $\geq 85\%$  of patient population achieve weekly Creatinine Clearance  $\geq 63$  L/bsa or weekly  $Kt/V \geq 2.1$

### **Anemia Management Goals 2000 – 2003**

#### **Hemodialysis & Peritoneal Dialysis**

- All patients measured every month of PD clinic visit
- $\geq 75\%$  of patient population achieve Hemoglobin  $\geq 11$  gm/dL

#### **Hemodialysis Vascular Access Goals 2000-2003**

- $\geq 40\%$  prevalent patient population Fistula rate <sup>DOQI™</sup>
- $\leq 10\%$  prevalent patient population Catheter rate <sup>DOQI™</sup>

2001 Interventions. Interventions will continue to include facility, physician, and corporate data collection, feedback reports, and regional education workshops. The focus will be on DOQI™ guidelines, physician-patient, corporate-facility - patient outcome data, and facility plans for improvement. Facilities will be targeted for specific interventions based on facility outcomes.

#### 4. HCFA National CPM Project.

All 18 Networks participated in the national Clinical Performance Measures (CPM) project. Random samples of HD and PD patients were drawn. The HD sample had sufficient size to be representative of each Network. The PD sample size was used for national rates only. Table D.15. shows the comparison of Network 9 and Network 10 rankings for clinical outcomes to the other 16 Networks in the nation for the past four years.

Table D.16. shows the Network 9 and Network 10 random samples for the HCFA National CPM Project. HD facility survey forms were collected from a national random sample, 16 from Network 9 and 7 from Network 10. The facility survey collected information on facility policies and procedures concerning post BUN sampling and dialyzer total cell volume measurement. Data validation of the national sample was conducted on 5% of the random sample. Network 9/10 staff abstracted patient charts for this process.

**Table D.15. Network 9/10 National Ranking for 4Q96-4Q99 Data for Adult (≥ 18 years) In-center Hemodialysis Patients.** Source: 2000 Annual Report, ESRD Core Indicators Project, HCFA, December 1997. 1998, 1999, 2000 Annual Report, ESRD Core Indicators Project, HCFA, December 2000.

Clinical Characteristic	Network 9				Network 10			
	4Q96	4Q97	4Q98	4Q99	4Q96	4Q97	4Q98	4Q99
Percent Patients with Average:								
URR ≥ 65%	10	9	8	<b>4</b>	18	17	17	<b>16</b>
Kt/V ≥ 1.2	12	7	9	<b>8</b>	17	17	18	<b>15</b>
Albumin ≥ 3.5 gm/dL	14	2	12	<b>10</b>	17	17	12	<b>10</b>
Hgb ≥ 11gm/dL	--	--	10	<b>5</b>	--	--	16	<b>15</b>
Ferritin ≥ 100 ng/mL	10	13	17	<b>8</b>	13	15	16	<b>16</b>
TSAT ≥ 20%	14	17	18	<b>12</b>	6	1	15	<b>4</b>
% patients receiving EPO with:								
HGB value 11-12 gm/dL	--	6	9	--	--	13	16	--
HGB value 11- 12.99 gm/dL	--	--	--	<b>7</b>	--	--	--	<b>17</b>
% patients prescribed IV Iron	4	1	1	<b>1</b>	13	4	6	<b>6</b>
% patients prescribed EPO Subcutaneous	--	1	1	<b>1</b>	--	5	6	<b>6</b>

**Table D.16. National Clinical Performance Measures Project Network Random Samples, 4Q99 – HD Oct99-Mar00 – PD**

Pt. Characteristic	Net 9 HD		Net 10 HD		U.S. HD*		Net 9 PD		Net 10 PD		U.S. PD*	
	#	%	#	%	#	%	#	%	#	%	#	%
Total	523	100	501	100	8154	100	159	100	80	100	1603	100
Male	256	49	270	54	4336	53	80	50	44	55	808	50
Female	267	51	230	46	3806	47	79	50	36	45	788	49
Race												
AI/AN	2	.4	1	.2	155	2	0	0	0	0	18	1
AS/PI	4	.8	10	.2	334	4	0	0	4	5	81	5
Black	173	33	237	47	2958	36	29	18	23	29	429	27
White	332	63	235	47	4444	55	128	80	52	65	1006	63
Oth/Unk	12	2	17	3	263	3	3	2	1	1	69	4
Ethnicity												
Hispanic	12	3	21	4	980	12	1	.6	0	0	173	11
Non-Hispanic	406	78	315	63	6731	83	115	72	54	68	1372	86
Oth/Unk	105	20	165	33	435	5	43	27	26	33	58	4
Age												
18 – 44	90	17	93	19	1399	17	34	21	22	28	423	26
45 – 54	58	11	74	15	1401	17	42	26	17	21	375	23
55 – 64	89	17	105	21	1673	21	35	22	17	21	355	22
65 – 74	147	28	119	24	2065	25	30	19	12	15	316	20
75 +	108	21	92	18	1616	20	18	11	12	15	134	8
Primary Diag.												
DM	190	36	163	33	3258	40	53	33	27	34	545	34
HTN	128	24	156	31	2103	26	23	14	19	24	338	21
GN	77	15	78	16	1006	12	36	23	17	21	306	19
Other/Unk	128	24	104	21	1787	22	43	27	16	20	401	26
Duration - years												
< 0.5	72	14	71	14	1080	13	14	9	12	15	332	21
0.5 – 0.9	75	14	81	16	1072	13	25	16	9	11	223	14
1.0– 1.9	109	21	94	19	1617	20	46	29	17	21	331	21
2.0+	267	51	251	50	4380	54	64	40	39	49	716	45

\*HCFA 2000 Annual Report, ESRD Core Indicators Project, December 2000.

May not add up to 100% due to rounding

## **E. Network Special Projects/Studies**

### **1. Quality Improvement Projects.**

The development of Quality Improvement Projects (QIP) is mandated in the Network 9/10 contract with HCFA. The QIPs are developed and directed by the Medical Review Board (MRB).

1.a. Hemodialysis Adequacy of Dialysis QIP. The development and implementation of the project started in 2000. Based on 4<sup>th</sup> quarter 1999 facility URR  $\geq 65\%$  rates, facilities in the lowest 25<sup>th</sup> percentile were selected to participate in the QIP. A total of 76 hemodialysis facilities were selected. The goals of the project are to increase the percentage of patients achieving URR  $\geq 65\%$ . Facilities in the project are required to attend workshops and implement local facility improvement projects that will achieve URR  $\geq 65\%$  rates of 80% by July 2001 and 85% by the fourth quarter 2001. Process indicators are (1) average blood flow, (2) average treatment time, percentage of patients on high flux dialyzers, and (3) the percentage of patients on catheters. Targeted facilities and non-targeted facilities rates will be compared. Interventions include feedback reports, needs assessment reports education materials in a Quality Improvement Kit (Q.I.K. box), workshops and local facility improvement projects targeting URR and adequacy of hemodialysis.

1.b. Peritoneal Adequacy of Dialysis Prescription QIP. The core indicator data from November 1996-April 1997 indicated that 33% of the PD patients were not measured for adequacy. Only 45% of the PD patients with reported measurements met DOQI<sup>TM</sup> recommendations for adequacy. The MRB targeted PD adequacy with increased focus on prescription for improvement. Improvement was observed in the PD core indicator data for measurement and adequacy outcomes from baseline year to year 2. Key findings from the prescription data and facility survey data showed a positive correlation between measurement frequency and outcomes.

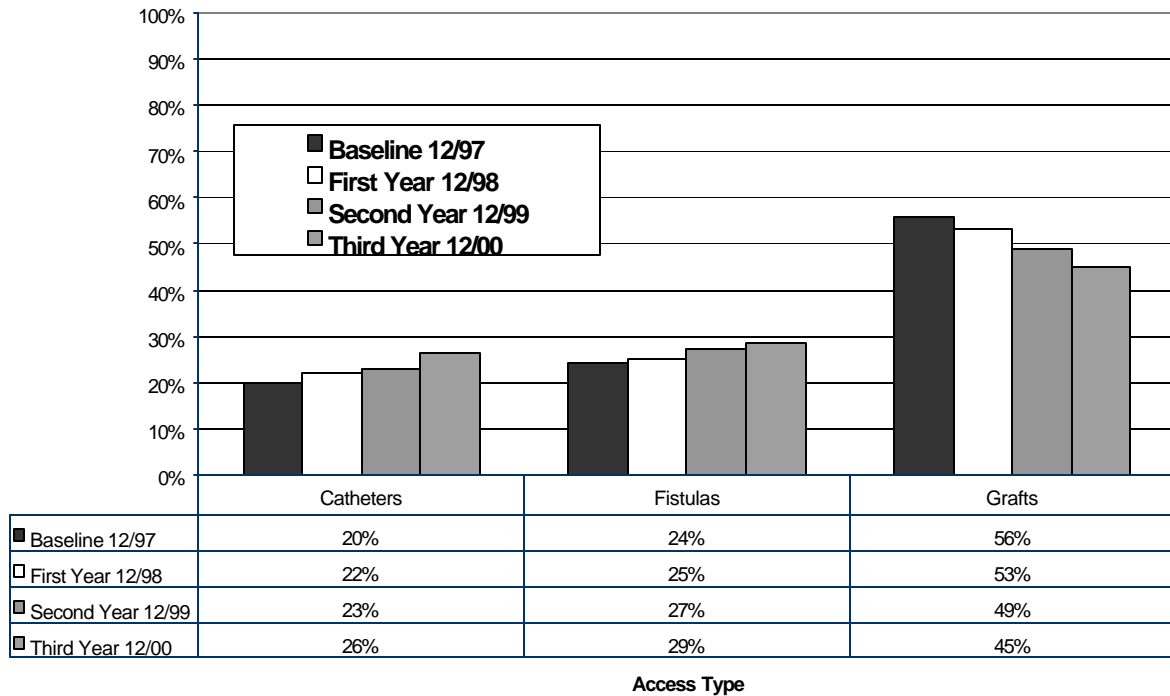
In 2000, the reporting cycles changed from three times in six months (two-month cycles) to three times in one year (four-month cycle). These changes are consistent with Network 9/10 data findings and the DOQI<sup>TM</sup> recommendations for adequacy measurements of every 4 months. Between September-December 1999-2000, an 11% improvement in the percentage of patients measured for adequacy and meeting DOQI was documented.

This quality improvement project concluded in 2000. Network 9/10 will continue to monitor peritoneal dialysis adequacy and report to facilities through feedback reports generated through CPM data collections.

1.c. Hemodialysis Central Venous Catheter QIP. The central venous catheter rate in Network 9/10 has been one of the highest in the nation according to the Centers for Disease Control & Prevention data, 1995-97. The MRB identified this process of care as an opportunity for improvement. The goal of the QIP is to lower the catheter rate in Network 9/10. The main interventions are (1) facility data feedback reports that adjust for the patient demographics and (2) educational resources.

Baseline data was collected in December of 1997. Patient vascular access data, i.e., access type, catheter type, location and reason for catheter, were entered for each facility prevalent patient sample. These data established baseline rates for all HD accesses for Network 9/10, state, health service area and facility.

**Figure E.1. Vascular Access Type in Patients >90 ESRD in Networks 9/10 for December 1997-2000**



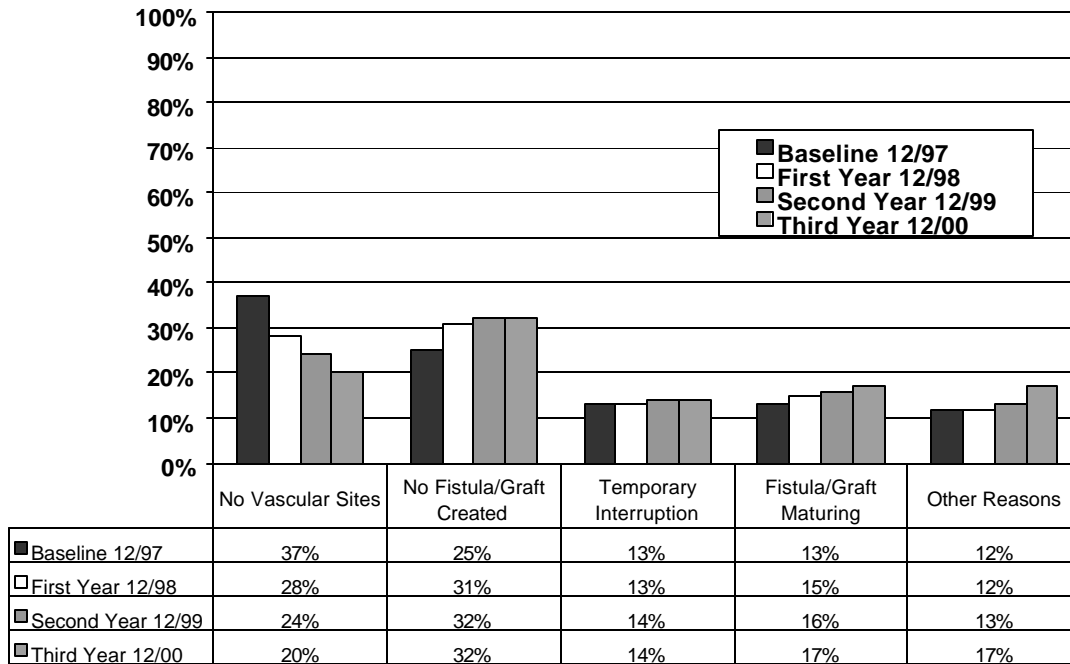
The type of vascular access in Network 9/10 has changed from the baseline year. Fistulas and catheters have increased 5% and 6%, respectively, from baseline rates for patients >90 days ESRD. Figure E.1. shows these changes.

Information on reasons for catheter placement was collected in this project in order to define care process areas that could be targeted for improvement. There are five categories:

- (1) No vascular sites
- (2) No fistula/graft created
- (3) Temporary interruption
- (4) Fistula/graft maturing
- (5) Other reasons

Figure E.2. shows reported reasons for catheters from baseline to December 2000 for patients >90 days ESRD. The percent of patients with no fistula/graft created at >90 ESRD has increased 7% from baseline. There was a 4% increase in the number of fistula/graft maturing in patients with catheters >90 days ESRD.

Figure E.2. Reasons for Catheter Use in Patients > 90 days ESRD in Networks 9/10 for December 1997, 1998 & 1999.



The methodology to adjust for patient demographics, i.e., age, race, sex, height/weight, cause of ESRD, and number of years on dialysis, was approved by the MRB. Facility access rates were calculated. The standardized ratio methodology includes patients who had been on dialysis greater than 90 days. Facilities were included in the analysis if the number of total patients was 30 or greater.

The standardized ratios for catheters (SCR), fistula (SFR) and grafts (SGR) are analogous to the standardized mortality ratio (SMR) or the standardized hospitalization ratio (SHR). The ratio is the actual number of patients with a specific access divided by the expected number of patients with the specific access. The SCR, SFR, and SGR for a facility are compared to the Network 9/10 ratios.

Table E.1. reports the number and percent of facilities with standardized access scores for each type of vascular access in December 1997 (baseline) to December 1999. Improvements were reported in the standardized vascular access facility ratios. The percentage of facilities having an SCR statistically less than 1.0 ranged from 10-18% from baseline to second year. The percent of facilities having an SFR statistically greater than 1.0 ranged from 13% to 24% in the same time frame.

In 2000, the MRB developed a facility survey to examine facility processes of care. Thirty facilities, 17 statistically high SCR and 13 statistically low SCR facilities were sent the survey. The analysis of the survey did not show differences between the two groups.

**Table E.1. Number and percent of facilities with standardized access scores statistically different than 1.0 in baseline and Year 1.**

# Facilities with:	Baseline December 1997		First Year December 1998		Second Year December 1999	
	#	%	#	%	#	%
SCR > 1.0*	32	15	28	12	36	18
SCR < 1.0*	38	18	24	10	30	15
SCR not different from 1.0	146	68	182	78	138	68
SFR > 1.0*	28	13	42	18	48	24
SFR < 1.0*	25	12	18	8	21	10
SFR not different from 1.0	163	75	174	74	135	66
SGR > 1.0*	18	8	8	3	6	3
SGR < 1.0*	23	11	29	12	49	24
SGR not different from 1.0	175	81	197	84	149	73
Total	216	100	234	100	204	100

\* Statistically different than 1.0

May not add to 100% due to rounding

Facility Access Reports were distributed in August. These reports compared the gross and standardized facility access rates to state and Network 9/10. These reports were distributed to facility medical directors, administrators and nurse managers.

An updated “Vascular Access Tool Kit” was distributed in August. It included the “Improving Outcomes: Vascular Access” bulletin, patient education video, a model form for recording patient vascular accesses, a model tracking log for recording facility vascular access events, NKF DOQI™ Guideline 10 reference and a form for ordering the patient brochure, “Access Care: Your Lifeline.”

This quality improvement project concluded in 2000. Network 9/10 will continue to monitor vascular access indicators and report to facilities through feedback reports generated by CPM data collections.

## 2. Focused Quality Assurance Activities

The MRB finalized an annual facility profiling process that integrates several quality domains. Each domain has indicators, they are: (1) Clinical Performance Measures (CPM) for adequacy of dialysis and treatment of anemia, (2) standardized mortality ratio, SMR, (3) standardized catheter ratio, SCR, (4) standardized hospitalization ratio, SHR, (5) data compliance, (6) MRB project participation, and (7) grievances.

The facility profiling process identifies facility outliers in order to assist in improving quality of care. The process assigns points (weights) to each quality indicator by its importance to patient care. Facilities acquire points when the facility rate is statistically different from the Network or the standardized rate using a 95% confidence interval or p value < 0.05. Consumer grievances are reviewed by the MRB and points are assigned on a case by case basis.

A total of 368 hemodialysis programs were reviewed. The following table shows the number and percentage of the total programs for each point level.

Point Level	Number of Hemodialysis Programs	Percent of Total	Cumulative Percentage
0	159	43%	43%
>0 ≤ 10	93	25%	68%
>10<40	100	27%	95%
≥40<50	13	4%	99%
≥ 50	3	1%	100%

A total of 191 peritoneal dialysis programs were reviewed. The following table shows the number and percentage of the total programs for each point level.

Point Level	Number of PD Programs	Percent of Total	Cumulative Percentage
0	97	51%	51%
>0 ≤ 10	59	31%	82%
> 10 < 40	33	17%	99%
≥ 40 < 50	1	1%	99%
≥ 50	0	0%	100%

In September, the MRB finalized interventions based on the number of acquired points. Interventions become more intensive with the number of points acquired. MRB - Facility interventions are based on the total points acquired in the profile year. The Network's goal is that all facilities have zero points.

Point Level	Intervention
0	Process Notification
>0 ≤ 10	Process Notification and no required action
> 10 < 40	Facility internal review
≥ 40 < 50	MRB required facility review and action plans
≥ 50	MRB required facility review, action plans and site visit

The MRB will review facilities on an annual basis for the previous year. The next review is scheduled for May 2001 using year 2000 data.

### 3. The University of Michigan Kidney Epidemiology and Cost Center

3.a. Network 9/10 distributed unit specific reports for the USRDS in July 2000 to facility medical directors and administrators. This report included standardized mortality ratios (SMR), standardized hospitalization ratios (SHR), and standardized transplant ration (STR) for Medicare-only patients for 1996-1998.

	# Facilities
Network 9	197
Network 10	110

3.b. Network 9/10 cooperated with the Centers for Disease Control and Prevention (CDC) to collect the national surveillance of dialysis associated diseases. A total of 357 forms were collected from facilities in Network 9/10 (245 Network 9 and 112 Network 10) for a response rate of 94%.

## **F. Community Outreach Activities.**

The Renal Network acts as a clearinghouse to provide information concerning ESRD technology and treatment advances to ESRD professionals, patients, and other interested persons and organizations. Information received or generated by the Network was disseminated to the appropriate individuals at the discretion of the Executive Director or other appropriate staff persons. During 2000 information was distributed Network-wide in the following manner:

### **1. Patient Newsletter, *Renal Outreach*.**

The Renal Network publishes a newsletter for patients in the four-state area. While ESRD patients are the primary audience, ESRD professionals and members of the renal community receive the newsletter, as well. In total, about 10,000 copies are distributed with each mailing.

*Renal Outreach* provides a continuing means of communication to all patients within Network 9/10. It contains information on new therapies, medications, nutrition, exercise, and general topics of interest, as well as news of Network 9/10 and Patient Leadership Committee activities. Patients are encouraged to submit their ideas for articles and to write articles for the newsletter. Each newsletter contains at least one article written by a patient.

### **2. Network 9/10 Handbook - Policies and Procedures.**

The Network 9 /10 Handbook was developed to ensure all member facilities are continuously apprised of Network 9/10 policies and procedures as approved by Network 9/10 Coordinating Council. The Handbook is updated periodically as policies are developed or are amended; materials are posted to the Network Web site at [www.therenalnetwork.org](http://www.therenalnetwork.org), in the policies and guidelines section.

### **3. Web Site: [www.therenalnetwork.org](http://www.therenalnetwork.org)**

This web site is intended to provide information about Networks 9/10 activities, and links to other resources in the renal community. The front page is updated monthly with news. Policies, procedures, and selected data items are added as they become available.

### **4. Patient Handbook, *Living With Kidney Disease: A Patient Manual*.**

During 2000, The Renal Network continued to distribute its patient manual to ESRD providers within Networks 9/10. The manual provides an overview of many different aspects of kidney failure, such as treatments (including transplantation), diet, exercise and activity, Medicare and insurance. In 2000, the manual was distributed on an “as available” basis.

### **5. New and Updated Resources:**

- ◆ PAC Representative Handbook
- ◆ PAC ActionGram on Access Care



- ◆ Viewpoint: Dialysis Technician
- ◆ Nutrition, A Resource Guide for ESRD Patients
- ◆ Training manual for Patient-to-Patient Program

## 6. Educational and Cooperative Activities:

- ◆ Article on Couples written for ikidney.com which also lists the availability of the Adventure Park, ESRD Special Edition game.
- ◆ Two patient workshops on Attitude were presented one in Indianapolis in July with the Director for the Center on Personal Development and one in Ohio in September.
- ◆ Two Patient-to-Patient Training Programs were conducted, both in Ohio.
- ◆ Three staff inservice programs on Attitude in the Workplace were conducted in Ohio in October.
- ◆ Presentation on Win-Win Communication was presented to the Pediatric Committee in October by Patient Services Staff.
- ◆ Patient Services staff participated in two health fairs, one conducted by Indiana University and the other by National Kidney Foundation of Illinois.

## 7. Other Activities.

During 2000, an email distribution list for physicians was developed. On average, one message was sent per week to physicians on this list. Information included news on a variety of topics, including FDA recalls, Network nominations process and election, Network meetings, and quality initiatives.

As events warrant, informational bulletins are sent to the appropriate individuals via regular mail. These releases of information may be sent to committee members, council members, professional disciplines, patients or other related organizations. If necessary, a general release may be sent to all interested parties.

News of general interest is included in the newsletters of Network 9/10 to ensure that the network membership is kept informed of activities on a continuing basis. Network 9/10 maintains a mailing list, by category, on computer to facilitate clearinghouse functions. This listing is continuously updated to provide an efficient mailing process.

Additionally, Network 9/10 responds to individual requests for information as these are received. The requests come from a variety of individuals, from dialysis patients and family members, renal professionals, students, researchers, and planning organizations and/or dialysis corporations.

## 8. ESRD Community Relations

Network 9/10 uses its database as a constant source of information on the ESRD population for the renal community. During 2000, Network 9/10 filled requests for Statistical Report data, for ZIP Code and county data, for facility demographic profiles, for SMR data, for core indicator data, and compliance data.

Data requests are received continuously from a variety of interested parties, including:

- ◆ Requests from facilities for information on their own programs. Often these requests ask for historical information to allow the facility to assess trends. SMR data was also released which displayed a facility's ratio compared to the Network. This allows the facility to make comparison of its ratio with its peers.
- ◆ Requests from organizations attempting to establish new ESRD programs within a given area, or from current providers who are attempting to expand their services. Data often requested includes capacity and utilization figures, and patients by residence, divided by county or ZIP Code. (All patient data released is done within the confines of established HCFA confidentiality rules.)
- ◆ Requests from state health planning agencies to assist them in assessing the need for ESRD service when reviewing Certificate of Need (CON) applications.
- ◆ Requests from researchers in a variety of interests, such as patients dialyzing by modality, by diagnoses, demographic information, and transplantation.

## 9. Nephrology Conference

In combining its roles as an information clearinghouse and a professional renal association, The Renal Network sponsors the Nephrology Conference each year. The 2000 Nephrology Conference was held on May 24, 25, and 26 at the Chicago Marriott Downtown. This annual, three-day event is designed to allow members of the Network to come together to conduct Network business while providing educational opportunities and allowing for the exchange of ideas among members of the renal community in Illinois, Indiana, Kentucky and Ohio.

The goal of the Conference is to offer a multi-disciplinary scientific seminar, individual meetings of different professional groups, and to provide awards to those individuals and facilities who have excelled in meeting of Network goals during the year. These activities are planned in conjunction with meetings of the Medical Review Board and the Network Coordinating Council.

The Network recognizes achievement among its members by presenting awards for individuals who have made outstanding contributions to the Network, and also who have gone above and beyond the minimum to meet network reporting requirements, both in data and quality assurance.

The event is organized by the Network Planning Committee to ensure input from the Network members. Additionally, Network-wide professional groups for administrators, social workers, technicians and registered dietitians were formed to facilitate planning individual sessions for these disciplines. The Network works in conjunction with the American Nephrology Nurses Association to plan a full-day session for nurses. All programs are designed to provide continuing education credits for participants, which enhances the value of these offerings to Network members.

To further integrate the conference into the renal community, businesses dealing in renal products are invited to exhibit during the event. This serves the dual purpose of providing useful information to conference participants while underwriting the event through these sponsors.

## 10. ARRT Special Supplement on Networks.

MRB members and Network staff wrote four articles for publication in the *Advances in Renal Replacement Therapy*, Volume 7, Number 4, supplement, October 2000, including:

"Adequacy of Peritoneal Dialysis: A Quality Improvement Project of the Renal Network, Inc. (Illinois, Indiana, Kentucky, and Ohio)." Michael E. Brier, Karen M. Erbeck, and the Medical Review Board of The Renal Network, Inc.

"Managing the Lifeline: Preemptive Access Management for Better Outcomes for Hemodialysis Patients and Programs." Marcia R. Silver and Jeannette A. Cain for the Medical Review Board of The Renal Network, Inc.

"Use of Transplant Status Codes to Monitor Access to Kidney Transplantation." Ashwini R. Sehgal, Richard Coffin, and Jeannette A. Cain.

"Wheels Within Wheels: Creating a Circle of Knowledge Through Communication." Kathi J. Niccum and Dolores Perez.

### **G. Grievances**

The Medical Review Board developed a "Policy and Procedure to Evaluate Formal Complaints" to address grievances filed with the Network. This policy is in compliance with the HCFA national policy for evaluating and resolving patient grievances. In addition, a special subcommittee of the Medical Review Board is designated to deal with grievances.

The Network 9 grievance policy was written and approved by the Medical Review Board, approved by the Executive Committee and approved and adopted by the Network Coordinating Council. A copy of the policy was then distributed to all facilities within the Network area. An article explaining the grievance policy was also published in *Renal Outreach*, the patient newsletter of Network 9/10. Additionally, a summary of the grievance process is available on the Network web site.

Network staff members routinely handle many requests for assistance directly from patients and their families, as well as facility staff members. These requests mainly involve supplying information from various sources available to the Network, such as location of dialysis centers, help with transient dialysis, location of isolation stations, specific federal regulations, etc. In some instances, the Network may act as a go-between, making an initial contact for an individual who is seeking assistance.

In total, the Medical Review Board heard 12 grievances during the course of 2000.

### **H. Vocational Rehabilitation.**

The area of renal rehabilitation was addressed in a number of ways by the PAC, the PLC, and Patient Services; the following actions were accomplished during 2000:

- ◆ Articles related to aspects of rehabilitation were included in the patient newsletter.

- ◆ Patient workshops on Attitude included segments on how attitude influences relationships and work.
- ◆ Staff inservice training programs on attitude in the workplace included tools that staff could use with patients for communication, motivation and goal setting.

### **III. NETWORK ADMINISTRATION**

#### **A. Facility Compliance**

At the beginning of 2000 all dialysis and transplant facilities within the Network were participating as required by HCFA and The Renal Network. At year-end 2000, all dialysis facilities within the Network 9/10 area were participating as required by HCFA and The Renal Network.

#### **B. Need for Additional/Alternative Services**

Each year through the patient tracking system, The Renal Network conducts a review of facility operations. From this report the following information is available:

"Services Rendered," describes each facility by area of location within the Network and the modes of therapy offered.

"Current Operations," shows the number of stations currently operating at each dialysis facility within the Network.

"Patient Capacity by Facility," calculates the total number of patients that could dialyze at each facility based on the number of shifts and stations available at that facility.

"Utilization," identifies the actual utilization of each dialysis facility at year-end 1999.

"Pediatric ESRD Facilities," shows the number of stations currently operating at each pediatric dialysis facility within the Network.

#### **C. Recommended Sanctions**

No requests were made during 2000 to the Health Care Financing Administration for sanctions of area facilities.

### **IV. DATA MANAGEMENT**

The Renal Network has designed a patient medical information system to enable the continual assessment of the ESRD patient population. A computer system has been designed to integrate data, generate internal reports, and contribute to the national database.

During 1999, The Renal Networks converted to the Standardized Information Management System (SIMS) developed by the ESRD Networks and HCFA and work continued to update this system as needed throughout the year 2000.

## **A. System Description.**

The data processing system is based on the generation of HCFA mandated forms and a Network tracking report by ESRD facilities. These forms provide the necessary information and updates that assure the accuracy of the data system.

HCFA Medical Information System (MIS) Forms that are processed through the Network office include:

- ◆ HCFA 2728 - Chronic Renal Medical Evidence Report
- ◆ HCFA 2744 - ESRD Facility Survey
- ◆ HCFA 2745-U3 - ESRD Transplant Information
- ◆ Transplant Follow-up Form
- ◆ HCFA 2746 - ESRD Death Notification

As these forms are received in the Network office, they are input on the patient database, a HCFA logging program, and a compliance program, and forwarded to HCFA.

The Network 9/10 Data Department routinely completes the following activities:

- ◆ Handling daily receipt of MIS forms and logging forms on the Network computer.
- ◆ Verifying information on MIS forms.
- ◆ Transmittal of HCFA MIS forms to HCFA monthly.
- ◆ Monthly review of facility compliance goals for forms submission.
- ◆ Input of MIS forms and tracking forms on Network patient information system.
- ◆ Processing of HCFA generated facsimile forms.

## **B. Compliance Reporting.**

A compliance program was implemented in January 1992. The program tracks compliance for forms submission and completion by each facility. The program generates a report showing each facility, which forms were received, and whether or not they were compliant. It also generates a master report showing compliance rates for all facilities within the Network. Compliance rates are reviewed monthly by Network staff. Quarterly, compliance reports are generated and sent to the facilities. The Medical Review Board routinely reviews compliance rates for those facilities who fall below the HCFA goals at their quarterly meetings.

### **C. Patient Tracking System.**

The Network upgraded its computer tracking system to a Windows™ based system and disseminated the new program to all dialysis facilities within its four states. The facilities report monthly to the Network via diskette. The update included the KDQOL™ quality of life survey instrument and scoring program for use by dialysis facilities. Use of this instrument is voluntary for the dialysis facilities and interested facility staff members are referred to RAND for instructions on proper implementation.

The data system has unlimited capability to collect information on ESRD patients. Currently, more than 33,000 active and inactive patient listings are in the system. Information collected on each patient includes:

- ◆ Full Patient Name
- ◆ Social Security Number
- ◆ Medicare Number
- ◆ Demographic Information
- ◆ Patient Address
- ◆ County of Residence
- ◆ Transfer Information and Date
- ◆ Initial and Subsequent Providers
- ◆ Modes of Therapy
- ◆ Primary Diagnosis and Co-morbid Conditions
- ◆ All Types of Changes in Patient Status
- ◆ Transplant Candidate Status
- ◆ Vocational Rehabilitation Status
- ◆ Number of Treatments Performed
- ◆ Date of First Dialysis
- ◆ Current Status
- ◆ Cause of Death

After the data is computerized, it is then available for statistical manipulation. Various statistics and data profiles are generated through the Network data system as described earlier in this report. The data tables contained in this report were generated through the Network data system as well.