2003 ANNUAL REPORT

FOR

END-STAGE RENAL DISEASE NETWORK 9

THE RENAL NETWORK, INC.

Submitted By: The Renal Network, Inc.
The Renal Network, Inc.
911 East 86th Street, Suite 202
Indianapolis, IN 46240

Sponsored By: Centers for Medicare & Medicaid Services
Contract Numbers: 500-03-NW9

Date: June 30, 2004
1. PREFACE
# THE RENAL NETWORK, INC.
## 2003 ANNUAL REPORT
### TABLE OF CONTENTS

## 1. PREFACE

President's Statement

## 2. INTRODUCTION

A. Network Description

B. Network Structure
   1. Staffing
   2. Committees

## 3. CMS NATIONAL GOALS AND NETWORK ACTIVITIES

**GOAL 1:** *Improving the quality of care of health care services and quality of life for ESRD beneficiaries, including assistance in resolving patient complaints and grievances.*

**A. Clinical Performance Measures Project**

- Chart A.1. 2003 4th Quarter HD Patient Demographics
- Chart A.2. 2003 PD Patient Demographics
- Chart A.3. Patients with HGB \(\geq 11 \text{ gm/dl}\)
- Chart A.4. Distribution of HD HGB Values Network & US
- Chart A.5. Distribution of HD HGB Values by State
- Chart A.6. HD Anemia Management Measures by State & Network
- Chart A.7. Anemia Management Measures HD
- Chart A.8. PD Patients with HGV \(\geq 11 \text{ gm/dl}\)
- Chart A.9. PD HGB Values by State & Network
- Chart A.10. PD Anemia Management Measures
- Chart A.11. Paired TSAT \(< 20\% \& \text{ Ferritin} < 100 \text{ ng/ml}\)
- Chart A.12. HD Patients with URR \(\geq 65\%\)
- Chart A.13. HD Patients with \(Kt/V\) by State & Network
- Chart A.15. Distribution of URR Values
- Chart A.16. Distribution of \(Kt/V\) Values from Selected Years
- Chart A.17. \(CrCl\) or \(Kt/V\) in PD Patients in Network 9/10
- Chart A.18. \(CrCl\) or \(Kt/V\) in PD Patients by State and Network
- Chart A.19. Vascular Access Type

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Chart A.20 Reasons for Catheter Use
Chart A.21 Albumin by State and Network
Chart A.22 HD Patients with Average Albumin > = 3.5 gm/dl
Chart A.23 Distribution of HD Average Albumin
Chart A.24 PD Patients with Average Albumin > = 3.5 gm/dl
Chart A.25 PD Patients Albumin by State and Network
Chart A.26 Distribution of HD Average Albumin

B. Network 9/10 CPM Intervention
Chart B.1 Needs Assessment Report for Adequacy
Chart B.2 Needs Assessment Report for Anemia Management

C. CMS National CPM Project
Chart C.1 National Ranking for HD Patients
Chart C.2 National CPM Network Random Samples

D. Network Special Projects/Studies
1. Quality Improvement Projects
   1.a. Network 9 Hemodialysis Adequacy of Dialysis QIP
   1.b. Network 10 Hemodialysis Adequacy of Dialysis QIP
   1.c. Fistula First-National Vascular Access Improvement Initiative
Chart D.1 Fistula First Learning Sessions
Chart D.2 Network 9 Fistula Rate
Chart D.3 Network 10 Fistula Rate
Chart D.4 Network 9 Fistula – Incident
Chart D.5 Network 10 Fistula - Incident

E. Focused Quality Assurance Activities
1. Intervention Profiling
2. Cooperative Activities w/Other Agencies

F. Grievance Activities
1. 2003 Investigations
2. 2003 Formal Grievances
Chart F.1 2003 Formal Grievances
Chart F.2 2003 Grievance Categories

GOAL 2: Establishing and improving partnerships and cooperative activities among and between the ESRD Networks QIOs, state survey agencies, ESRD facilities/providers, ESRD facility owners, professional groups, and patient organizations.

A. Professional Affiliations
B. Patient Interaction in Network Activities
C. Community Outreach Activities  46
   1. Newsletters  46
   2. Network 9/10 Handbook  47
   3. Web Sites  47
   Chart C.1 2003 Total Web Hits  47
   4. New and Updated Resources  48
   5. Educational and Cooperative Activities  48
   6. Nephrology Conference  48
   Chart C.2 Nephrology Conference Attendance  49
   Chart C.3 Network Awards  50
   7. Other Activities  50

GOAL 3:  Supporting the marketing, deployment, and maintenance of CMS approved software.  51

GOAL 4: Improving Data Reliability, Validity, and Reporting Between ESRD Facilities/Providers, Network, and CMS and other related agencies.  51

A. Facility Compliance  51
B. System Description  52
C. Compliance Reporting  52
D. Patient Tracking System  52
E. Community Outreach through Data  53

4. SANCTION RECOMMENDATIONS  53

5. RECOMMENDATIONS FOR ADDITIONAL FACILITIES  54

6. DATA TABLES  55

Kentucky 1 - 2003 Chronic Services Rendered  56
Kentucky 1 - 2003 Current Operations  57
Kentucky 1 - 2003 ESRD Patient Capacity by Facility  58
Kentucky 1 - 2003 Actual Patient Load  59
Kentucky 2 - 2003 Chronic Services Rendered  60
Kentucky 2 - 2003 Current Operations  61
Kentucky 2 - 2003 ESRD Patient Capacity by Facility  62
Kentucky 2 - 2003 Actual Patient Load  63

Ohio 1 - 2003 Chronic Services Rendered  64
Ohio 1 - 2003 Current Operations  65
Ohio 1 - 2003 ESRD Patient Capacity by Facility  66
Ohio 1 - 2003 Actual Patient Load  67
Ohio 2 - 2003 Chronic Services Rendered 68
Ohio 2 - 2003 Current Operations 69
Ohio 2 - 2003 ESRD Patient Capacity by Facility 70
Ohio 2 - 2003 Actual Patient Load 71

Ohio 3 - 2003 Chronic Services Rendered 72
Ohio 3 - 2003 Current Operations 73
Ohio 3 - 2003 ESRD Patient Capacity by Facility 74
Ohio 3 - 2003 Actual Patient Load 75

Ohio 4 - 2003 Chronic Services Rendered 76
Ohio 4 - 2003 Current Operations 77
Ohio 4 - 2003 ESRD Patient Capacity by Facility 78
Ohio 4 - 2003 Actual Patient Load 79

Ohio 5 - 2003 Chronic Services Rendered 80
Ohio 5 - 2003 Current Operations 81
Ohio 5 - 2003 ESRD Patient Capacity by Facility 82
Ohio 5 - 2003 Actual Patient Load 83

Ohio 6 - 2003 Chronic Services Rendered 84
Ohio 6 - 2003 Current Operations 85
Ohio 6 - 2003 ESRD Patient Capacity by Facility 86
Ohio 6 - 2003 Actual Patient Load 87

Ohio 7 - 2003 Chronic Services Rendered 88
Ohio 7 - 2003 Current Operations 89
Ohio 7 - 2003 ESRD Patient Capacity by Facility 90
Ohio 7 - 2003 Actual Patient Load 91

Ohio 8 - 2003 Chronic Services Rendered 92
Ohio 8 - 2003 Current Operations 93
Ohio 8 - 2003 ESRD Patient Capacity by Facility 94
Ohio 8 - 2003 Actual Patient Load 95

Ohio 9 - 2003 Chronic Services Rendered 96
Ohio 9 - 2003 Current Operations 97
Ohio 9 - 2003 ESRD Patient Capacity by Facility 98
Ohio 9 - 2003 Actual Patient Load 99

Ohio 10 - 2003 Chronic Services Rendered 100
Ohio 10 - 2003 Current Operations 101
Ohio 10 - 2003 ESRD Patient Capacity by Facility 102
Ohio 10 - 2003 Actual Patient Load 103
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
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<td>2003</td>
<td>Chronic Services Rendered</td>
<td>136</td>
<td></td>
</tr>
<tr>
<td>Illinois 6</td>
<td>2003</td>
<td>Current Operations</td>
<td>137</td>
<td></td>
</tr>
<tr>
<td>Illinois 6</td>
<td>2003</td>
<td>ESRD Patient Capacity by Facility</td>
<td>138</td>
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<tr>
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<td>2003</td>
<td>Actual Patient Load</td>
<td>139</td>
<td></td>
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<td>Illinois 7</td>
<td>2003</td>
<td>Chronic Services Rendered</td>
<td>140</td>
<td></td>
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<tr>
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<td>2003</td>
<td>Current Operations</td>
<td>141</td>
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<td>2003</td>
<td>ESRD Patient Capacity by Facility</td>
<td>142</td>
<td></td>
</tr>
<tr>
<td>Illinois 7</td>
<td>2003</td>
<td>Actual Patient Load</td>
<td>143</td>
<td></td>
</tr>
<tr>
<td>Illinois 8</td>
<td>2003</td>
<td>Chronic Services Rendered</td>
<td>144</td>
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</tr>
<tr>
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<td>Current Operations</td>
<td>145</td>
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<td>2003</td>
<td>ESRD Patient Capacity by Facility</td>
<td>146</td>
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<td>2003</td>
<td>Actual Patient Load</td>
<td>147</td>
<td></td>
</tr>
<tr>
<td>Illinois 9</td>
<td>2003</td>
<td>Chronic Services Rendered</td>
<td>148</td>
<td></td>
</tr>
<tr>
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</tr>
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<td>152</td>
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</tr>
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<td>ESRD Patient Capacity by Facility</td>
<td>154</td>
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<td>Actual Patient Load</td>
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<td>156</td>
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</tr>
<tr>
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<td>157</td>
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</tr>
<tr>
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<td>2003</td>
<td>ESRD Patient Capacity by Facility</td>
<td>158</td>
<td></td>
</tr>
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<td>2003</td>
<td>Actual Patient Load</td>
<td>159</td>
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</tr>
<tr>
<td>Pediatric Facilities</td>
<td>2003</td>
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<td>160</td>
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</tr>
<tr>
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<td>2003</td>
<td>Current Operations</td>
<td>161</td>
<td></td>
</tr>
<tr>
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<td>2003</td>
<td>ESRD Patient Capacity by Facility</td>
<td>162</td>
<td></td>
</tr>
<tr>
<td>Pediatric Facilities</td>
<td>2003</td>
<td>Actual Patient Load</td>
<td>163</td>
<td></td>
</tr>
<tr>
<td>ESRD Incidence 2003</td>
<td></td>
<td></td>
<td>164</td>
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</tr>
<tr>
<td>ESRD Prevalence 2003</td>
<td></td>
<td></td>
<td>165</td>
<td></td>
</tr>
<tr>
<td>Total Patient Population Year-End</td>
<td></td>
<td></td>
<td>166</td>
<td></td>
</tr>
<tr>
<td>Patient Modality Breakdown 12/31/2003</td>
<td></td>
<td></td>
<td>167</td>
<td></td>
</tr>
<tr>
<td>Patient Population 2003 - Network 9/10</td>
<td></td>
<td></td>
<td>168</td>
<td></td>
</tr>
<tr>
<td>Patient Population 2003 - Indiana</td>
<td></td>
<td></td>
<td>169</td>
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</tr>
<tr>
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<td>Patient Population 2003 - Illinois</td>
<td></td>
<td></td>
<td>177</td>
<td></td>
</tr>
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</table>
Patient Population 2003 by Age, Race and Sex

In-Center Patient Population Year-End, 1990 - 2003
In-Center Patient Population 2003 - Network
In-Center Patient Population 2003 - Indiana
In-Center Patient Population 2003 - Kentucky
In-Center Patient Population 2003 - Ohio
In-Center Patient Population 2003 - Illinois

Home Patient Population Year-End, 1990 - 2003
Home Patient Population 2003 - Network
Home Patient Population 2003 - Indiana
Home Patient Population 2003 - Kentucky
Home Patient Population 2003 - Ohio
Home Patient Population 2003 - Illinois

Patients Completing Home Training During 2003 - Network
Patients Completing Home Training During 2003 - Indiana
Patients Completing Home Training During 2003 - Kentucky
Patients Completing Home Training During 2003 - Ohio
Patients Completing Home Training During 2003 - Illinois

New Starts 1990 – 2003
Additions During 2003 - Home and In-Center Patients - Network
Additions During 2003 - Home and In-Center Patients - Indiana
Additions During 2003 - Home and In-Center Patients - Kentucky
Additions During 2003 - Home and In-Center Patients - Ohio
Additions During 2003 - Home and In-Center Patients - Illinois

Deaths 1990 - 2003
Losses During 2003 Home and In-Center Patients - Network
Losses During 2003 Home and In-Center Patients - Indiana
Losses During 2003 Home and In-Center Patients - Kentucky
Losses During 2003 Home and In-Center Patients - Ohio
Losses During 2003 Home and In-Center Patients - Illinois

Patient Population at Year-end Transplantation Rates 1990 - 2003
Transplants 2003 - Network
Transplants 2003 - Indiana
Transplants 2003 - Kentucky
Transplants 2003 - Ohio
Transplants 2003 - Illinois
Comparative Performance of Facilities and Providers on 12/31/2003 by Facility for Transplantation - Indiana 254
Comparative Performance of Facilities and Providers on 12/31/2003 by Facility for Transplantation - Kentucky 256
Comparative Performance of Facilities and Providers on 12/31/2003 by Facility for Transplantation - Ohio 258
Comparative Performance of Facilities and Providers on 12/31/2003 by Facility for Transplantation - Illinois 262

Transplants Performed by Type 2003 266

7. CMS SIMS DATA TABLES 267

Table 1: 2003 ESRD Incidence 268
Table 2: 2003 ESRD Prevalence 271
Table 3: 2003 Dialysis Modality, Home Care 274
Table 4: 2003 Dialysis Modality, In-Center 287
Table 5: 2003 Renal Transplant by Transplant Center 301
Table 6: 2003 Renal Transplant Recipients 303
Table 7: 2003 Dialysis Deaths 306
Table 8: 2003 Vocational Rehabilitation 310
June 30, 2004

I am proud to present the 2003 Annual Statistical Report for End-Stage Renal Disease (ESRD) Network 9/10, which outlines a year of Network activities, and is made possible by the coordinated effort among health care providers, patients, and Network staff.

The Renal Network, Inc. (ESRD Network 9/10) is an independent agency that monitors the treatment of patients with ESRD in Illinois, Indiana, Kentucky, and Ohio. A total of 18 ESRD Networks throughout the country 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 Centers for Medicare and Medicaid Services (CMS).

The Renal Network, Inc., fosters and appreciates patient participation at all levels of its operation from the Board of Trustees, the Medical Review Board, the Patient Leadership Committee and Network Coordinating Council to each individual dialysis unit.

Network Coordinating Council and committee members are volunteers who have given of their time to improve 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 is grateful for the contributions of all of our volunteers. Their contributions of time, effort, dedication and expertise have enabled our Network to go well beyond the requirements of our CMS contract to drive a progressive pro-active organization.

I wish to thank all the dedicated professionals, including those in each of our dialysis and transplant facilities and the Network administrative office, without whose hard work 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.
2003 ANNUAL REPORT

2. INTRODUCTION

A. Network Description


Small increases in incidence and prevalence during 2003 for Network 9 and increases in prevalence for Network 10 illustrate that the chronic dialysis population continues to grow. A one-year comparison of incidence and prevalence of all ESRD patients is shown below.

<table>
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<th>Incidence</th>
<th>2002</th>
<th>2003</th>
<th>Percentage Change</th>
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<tbody>
<tr>
<td>Network 9</td>
<td>7,487</td>
<td>7,743</td>
<td>+3%</td>
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<tr>
<td>Network 10</td>
<td>4,601</td>
<td>4,416</td>
<td>-4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prevalence</th>
<th>2002</th>
<th>2003</th>
<th>Percentage Change</th>
</tr>
</thead>
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<tr>
<td>Network 9</td>
<td>21,281</td>
<td>22,290</td>
<td>+4%</td>
</tr>
<tr>
<td>Network 10</td>
<td>12,647</td>
<td>13,126</td>
<td>+4%</td>
</tr>
</tbody>
</table>


Illinois, "The Prairie State," ranks 5th among all states in population at 12,600,620. Figures from the U.S. Department of Commerce, Bureau of the Census, show the population divided by race as:

- White: 73.5%
- Other: 11.4%
- Black: 15.1%

About 12% of the population is defined as Hispanic in ethnicity. Divided by age groups, approximately 26% of the population was under the age of 18; 61% were between the ages of 18 and 64; and 12% were aged 65 or greater. Currently, the female population is approximately 51% and the male population is 49%.

One-half of the population of the state lives 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 14th among all states in population at 6,159,068. Figures from the U.S. Department of Commerce, Bureau of the Census show the population divided by race as:

<table>
<thead>
<tr>
<th>Race</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>White</td>
<td>87.5%</td>
</tr>
<tr>
<td>Black</td>
<td>8.4%</td>
</tr>
<tr>
<td>Other</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

About 3.5% of the population is defined as Hispanic in ethnicity. Divided by age groups, approximately 26% of the population was at age 18 or under; 62% were between the ages of 18 and 65; and 12% were over the age of 65. Currently, the female population is approximately 51% and the male population is 49%.

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 25th among all states in population at 4,092,891. Figures from the U.S. Department of Commerce, Bureau of the Census show the population divided by race as:

<table>
<thead>
<tr>
<th>Race</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>White</td>
<td>90.1%</td>
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<tr>
<td>Black</td>
<td>7.3%</td>
</tr>
<tr>
<td>Other</td>
<td>2.6%</td>
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</tbody>
</table>

About 1.5% of the population is defined as Hispanic in ethnicity. Divided by age groups, approximately 25% of the population was at age 18 or under; 62% were between the ages of 18 and 65; and 13% 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 7th among all states in population at 11,421,267. Figures from the U.S. Department of Commerce, Bureau of the Census show the population divided by race as:

<table>
<thead>
<tr>
<th>Race</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>White</td>
<td>85%</td>
</tr>
<tr>
<td>Black</td>
<td>11.5%</td>
</tr>
<tr>
<td>Other</td>
<td>3.5%</td>
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</tbody>
</table>

About 1.9% of the population is defined as Hispanic in ethnicity. Divided by age groups, approximately 25% of the population was at age 18 or under; 61% were between the ages of 18 and 65; and 14% were over the age of 65. Currently, the female population is approximately 52% of total population and the male population is 48%.

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 17 full-time employees:

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 coordinating activities for Medical Review Board, the Pediatric Renal Group, the Nominating Committee and the annual Nephrology Conference.

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

Raynel Kinney, R.N., C.N.N., C.P.H.Q., Quality Improvement Director: oversees all quality improvement projects and intervention activities, and coordinates the clinical performance measures project.

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

Patricia Coryell-Hendricks, R.N., C.N.N., Quality Improvement Coordinator: assists with quality improvement and intervention activities.

Janie Hamner, Quality Improvement Assistant: responsible for support to Quality Improvement Department.

Dolores Perez, M.S., Communications Director: oversees the Network Web sites, publications and resource information; assists with implementation of all patient activities.

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

Leanne Emery, M.A., Patient Services Assistant, provides secretarial support to the Patient Services Department.

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

Christina Harper, Data Manager: oversees the day-to-day operation of the Data Services Department.

Marietta Gurnell, Data Coordinator: responsible for administering data clean-up tools and CMS notifications on the SIMS database to correct errors in the system.
Helen McFarland, Data Specialist: Responsible for tracking patients for Network 10 facilities.

Deborah Laker, Data Specialist: responsible for tracking patients for Network 9 facilities.

Katy Simmons, Data Specialist: Responsible for tracking patients in Network 9 facilities.

Rita Cameron, Secretary: responsible for reception and secretarial support.

2. Committees

Network Coordinating Council: The Network Coordinating Council (NCC) is composed of representatives of ESRD providers in Illinois, Indiana, Kentucky, and Ohio which are certified by the Secretary of Health and Human Services to furnish at least one specific ESRD service. The NCC includes a representative of each of the current Medicare approved ESRD 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 2003, the Council met on May 15.

During 2003, the following occurred:

◆ The 2003 slates for membership on the Board of Trustees and Medical Review Board were presented and approved. Nominations were accepted from January through May 15 (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, 2004 and end on December 31, 2006.

◆ 2002 data were presented and the 2002 Annual Report was distributed and posted to the Network Web site (www.therenalnetwork.org).

◆ The Network Coordinating Council was updated on activities with CMS and the Forum of Renal Networks, and CMS contract issues.

◆ The 2003 Nephrology Conference was held at the Indianapolis Marriott in downtown Indianapolis on May 15 and 16. The Conference offered educational programs for administrators, physicians, nurses, social workers, dietitians, and technicians. A BONENT certification examination was held for nurses and technicians on May 14th.

◆ Dialysis facilities within Network 9/10 were informed of and participated in the CMS Clinical Performance Measures Project and the Fistula First: National Vascular Access Improvement Initiative.

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 CMS, and is responsible for meeting contract deliverables and oversight of the administration of the Network budget.
In 2003, the Board of Trustees was composed of 24 members, elected for three year terms of office including:

- Eight Renal Physicians
- Four ESRD Patients
- Two Non-Categorical Positions
- 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 Legal Representative
- One Financial Representative
- The Past President

The Board of Trustees met on February 13, 14 and 15, May 27 and 28, and in joint session with the MRB on August 27. A conference call was held for the BOT on November 21.

Members of the Board of Trustees for 2003 were:

- Jay B. Wish, M.D., President
- Chester Amedia, Jr., M.D., Treasurer
- George Aronoff, M.D., Ntwk 9 MRB Chair
- Emil P. Paganini, M.D., Past President
- Evernard Davis
- Brian Duffy, M.D.
- Billie Goble, M.S.W.
- Richard J. Hamburger, M.D.
- Mark Parks, C.H.T.
- Jane Robinson, M.S.N., R.N.
- Joseph Scodro, Esq.
- Craig Stafford, M.D., Vice President
- Pat Gunnerson, Secretary
- Robert Mutterperl, D.O., Ntwk 10 MRB Chair
- William (Dirk) Combs
- Leslie DeBaun, R.N.
- Jeffrey Fehn, C.P.A.
- Thomas Golubski, M.D.
- Stephen Korbet, M.D.
- Janeen Beck Leon, R.D.
- Stanton Schultz, M.D.
- Cheryl Sweeney, R.N., C.N.N.

During 2003, 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 Pediatric Renal Group, the Patient Advisory Councils, the Nominating Committee, the Strategic Planning Committee, and the Nephrology Conference Program Committee. These updates included committee activities and action items.
The Board of Trustees was updated on activities with CMS, The Forum of ESRD Networks, and contract issues. In dealing with the new CMS contract, the Board empowered the Nominating & Bylaws committees to work together to suggest changes in the membership of the Board and the MRB. Eliminating several positions from both committees was necessitated by the new CMS contract awarded on July 1, 2003. It was necessary to accomplish the required downsizing through bylaws changes. The Nominating & Bylaws committees worked together to suggest a downsizing plan; this plan was approved by the Board of Trustees at year-end 2003. The bylaws changes will be voted on during 2004 and, if approved, implemented in 2005.

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 Social Workers
- 3 ESRD Facility Administrators
- 3 ESRD Technicians
- 3 ESRD Nurses
- 3 ESRD Dietitians
- 4 ESRD Patients

The Medical Review Board functions with the concurrence and subject to the review and control of the Board of Trustees. The President of the Board of Trustees serves in an ad hoc capacity. The MRB 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 February 11 and 12, April 30 and May 1, August 26 and 27 (joint session with Board of Trustees), and November 4 and 5.

Members of the MRB for 2003 were:

- George Aronoff, M.D., Chairperson
- Ashwini Sehgal, M.D., Vice Chairperson
- Dianne Carter
- David Charney, M.D.
- Catherine Colombo, RN
- John Ducker, M.D.
- Andrew Finnegan, C.H.T.
- Elisabeth Fry, R.D., L.D.
- Janet Hanson
- Grant McDougal, M.D.
- Romeo Micat, M.D.
- Dennis Muter, C.H.T.
- Kathy Olson, R.N.
- Julie Prinsen, R.D.
- Harry Rubinstein, M.D.
- Marcia Silver, M.D.
- Charles Sweeney, M.D.
- Linda Ulerich, R.D.
- Jay B. Wish, M.D.
- Steven Zelman, M.D.

- Robert Mutterperl, D.O., Ntwk 10 MRB Chair
- Steve Adley, B.S.N.
- Deepa Chand, M.D.
- Paul Crawford, M.D.
- Peter DeOreo, M.D.
- Lorraine Edmond
- Sandra Fritzsche, R.N., J.D.
- Clifford Glynn, C.H.T.
- Carol Jackson, M.S.W.
- Stephen McMurray, M.D.
- Jackie Miller
- Andrew O’Connor, D.O.
- Bonnie Orlins, MSSA
- Rosemary Ouseph, M.D.
- C. Frederic Strife, M.D.
- Martinlow Spaulding
- Eddie Taylor
- Margaret Westbrook, M.S.W.
- Elaine Worcester, M.D.
During 2003, the Medical Review Board:

♦ Oversaw 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). This report was mailed to more than 600 nephrologists during April 2003. Production of the report was suspended thereafter due to the termination of the 100 percent collection of Clinical Performance Measures (CPM) data in July.

♦ Oversaw the distribution of the Facility Clinical Performance Measures Reports that included the Needs Assessment Reports for hemodialysis adequacy and anemia management. These reports show facility data compared to the top 20-percentile facility rates for adequacy and anemia management care processes. These reports were distributed to facility medical directors, administrators, and nurse managers. These reports were mailed to more than 450 dialysis programs and 600 nephrologists during April. Production of the report was suspended due to the termination of the 100 percent collection of Clinical Performance Measures (CPM) data in July.

♦ Implemented the CMS Fistula First: National Vascular Access Improvement Initiative. A special Vascular Access Advisory Panel was assembled to assist the MRB in implementation. The Network 9/10 Fistula First included Learning Sessions and dissemination of educational resources.

♦ 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 their own quality improvement endeavors. Data from TRNDS was used to present four abstracts at the 2003 meeting of the American Society of Nephrology.

1. Factors Associated with High Phosphorus Levels in Current Hemodialysis Patients. Rosemary Ouseph, Alfred A. Jacobs, Michael E. Brier, Medical Review Board.

2. Impact of Current Management of Phosphorus, Calcium, Calcium-Phosphorus Product and Parathyroid Hormone in Hemodialysis Patients. Rosemary Ouseph, Alfred A. Jacobs, Michael E. Brier, Medical Review Board.


♦ 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, including 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 Intervention Profile Reports dissemination and activities. Hemodialysis and peritoneal dialysis programs were reviewed for statistical differences and assigned points for performance in adequacy, anemia management, grievances, participation in MRB-approved activities, mortality, catheter use, hospitalization, patient tracking and CMS form compliance. Programs with high points are required to implement action plans and report the improvements to the MRB. These reports were mailed in August and September. The activity was terminated in November due to the suspension of the 100 percent data collection. The MRB will consider reinstatement of this activity once data is available through the National Core Dataset.

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 March 14, May 14 and September 25 and 26. Subcommittee work was accomplished through conference calls during the year.

Received continuous updates on the activities of CMS and the ESRD Network Scope of Work, the United States Renal Data System (USRDS), The Forum of ESRD Networks, and the Quality Assurance Committee of The Forum.

Sponsored a Community Patient Safety Day on February 11 where interested members of the four state area came together to learn about patient safety and share concerns about this issue. The MRB was also apprised of patient safety initiatives being developed by Dr. Stephen Small of the University of Chicago.

Reviewed data profiles, including rates for clinical performance measures, mortality, home therapy, and transplantation.

Reviewed grievances filed with the Network.

Oversaw the implementation of the CMS clinical performance measures project.

Approved of the Network plan to participate in the Dialysis Infection Surveillance Network of the Centers for Disease Control.

Formulated a response to the CMS request for re-evaluation of Epotein reimbursement.

Developed a plan for MRB review of 2728 forms for GFR.

Transplantation Task Force. 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 2003, the task force focused on drafting a facility-specific report to 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 met on February 11, 2003, and held conference calls throughout the year.
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
Roseann Sweda, R.N.
   Department of Transplant Surgery, University of Chicago
Linda Ulerich, R.D.
   Methodist Hospital/Clarian Health, Indianapolis
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

Academic Consortium: The purpose of the Academic Consortium is to bring together the chairs of the nephrology programs in academic institutions throughout The Renal Network. The consortium met on May 16. The members discussed ways to promote education and networking among the academic community. As a result, the Network will co-sponsor a Chicago Nephrology Day during the 2004 Nephrology Conference. The day will be open to physicians and physicians-in-training from throughout the four-state area.

Dr. Emil Paganini, past president and BOT member, serves as chair for the consortium. Other members include:

George R. Aronoff, M.D.
   University of Louisville - Kidney Disease Program
Jose Arruda, M.D.
   University of Illinois - Section of Nephrology
Daniel Batlle, M.D.
Northwestern University Medical School - Division of Nephrology and Hypertension

William Bay, M.D.
OSU University Medical Center - Department of Internal Medicine – Nephrology

Anil Bidani, M.D.
Loyola University Chicago - Stritch School of Medicine
Department of Medicine, Division of Nephrology

Michael E. Brier, Ph.D.
University of Louisville - Kidney Disease Program

Deepa Chand, M.D.
The Cleveland Clinic Foundation - Pediatric Nephrology

Vincent Dennis, M.D.
The Cleveland Clinic Foundation - Department of Nephrology and Hypertension

Paolo Fanti, M.D.
Division of Nephrology - University of Kentucky Medical Center

Karen Griffin, M.D.
Loyola University Chicago - Stritch School of Medicine

Lee A. Hebert, M.D.
The Ohio State University, Department of Internal Medicine, Division of Nephrology

Richard N. Hellman, M.D.
Indiana University, Division of Nephrology

Donald Hricik, M.D.
University Hospitals of Cleveland - Division of Nephrology

Edmund J. Lewis, M.D.
Rush-Presbyterian St. Luke’s

Deepak Malhotra, M.D.
Medical College of Ohio

Hartmut Malluche, M.D.
University of Kentucky, Division of Nephrology, Bone and Mineral Metabolism

Bruce A. Molitoris, M.D.
Indiana University Department of Medicine - Division of Nephrology

Andrew S. O'Connor, D.O.
MetroHealth Medical Center

Richard Quigg, M.D.
University of Chicago - Section of Nephrology

Ash Sehgal, M.D.
MetroHealth Medical Center

Nicole Stankus, M.D.
The University of Chicago - Section of Nephrology

Elaine Worcester, M.D.
University of Chicago – Lake Park

Jay B. Wish, M.D.
University Hospitals of Cleveland
Patient Leadership Committee: The purpose of the Patient Leadership Committee (PLC) is to identify and address ESRD patient needs and concerns through the development of educational projects and activities. The PLC met on March 20, June 20, September 18, and November 14, 2003.

Members of the Patient Leadership Committee during 2003:
Katrina Boehmer                  Celia Chretien
William Combs                    Leslie DeBaun
Loraine Edmond                   Donna Felton
Caig Fisher                      Barbara Gronefeld
Sonia Juhasz                      Kathy Kirk-Franklin
Ellen Newman                    Ron Pinchback
Mary Ramsey                        Nina Ray
Janet Schueller                  David Schwoegler
Fonda Setters                   Martinlow Spaulding
Julie Thompson                    Guy Tibbels
Nancy Ware, L.I.S.W.

The PLC accomplished during 2003:

The Pediatric Subcommittee developed the information for an educational project entitled Your Kidneys and You. It is geared toward school age children to educate them about the kidney disease of their loved ones and to help them cope with chronic illness in their family.

A CD-ROM with educational games for children who have kidney disease was developed jointly with IUPUI New Media Program and distributed to all facilities.

The Family Subcommittee developed articles for the Renal Outreach on issues related to families and having a family member with kidney failure. The committee also began the development of a multimedia project with IUPUI New Media Program for families.

The Special Projects Subcommittee developed a monthly calendar for dialysis facilities on Vascular Access that has monthly activities and is part of the Fistula First project. The committee also reviewed and gave suggestions for the patient and Network Web sites.

The Patient Education Subcommittee investigated problems that staff and patients have with each other and developed potential solutions on how to resolve these issues in a power point presentation. It also began to address issues of interest to peritoneal dialysis patients.

The Vocational Rehabilitation Subcommittee gathered and edited rehabilitation stories from patients to include in future Network newsletters and began to address issues facilities and patients have in the area of vocational rehabilitation.

Patient Advisory Council: The Patient Advisory Council (PAC) became totally facility-based in 2003. A PAC Rep Facility Guide was developed and made available to all facilities that wanted to start or continue a patient representative program in their facility.
3. CMS NATIONAL GOALS & NETWORK ACTIVITIES

All ESRD Network organizations are responsible for the goals listed in the following section. Under each goal are the activities accomplished during 2003 toward meeting each goal:

**GOAL 1: Improving the quality of care of health care services and quality of life for ESRD beneficiaries, including assistance in resolving patient complaints and grievances.**

Improving quality of care for ESRD beneficiaries was accomplished through clinical initiatives developed and supervised by the Medical Review Board and implemented by the Quality Improvement Department of The Renal Network, Inc.

These activities can be categorized in five main subject areas; each is described in the following section of this report:

A. The Clinical Performance Measures Project
B. Network 9/10 CPM Interventions
C. CMS National CPM Project
D. Network Special Projects/Studies
E. Focused Quality Assurance Activities
F. Grievance Activities

A. The Clinical Performance Measures Project

The Clinical Performance Measures (CPM) Project contributes to 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 April 2003, all hemodialysis facilities and in the January-April 2003 PD cycle, all peritoneal dialysis facilities participated in the Network-wide improvement project. In 4th quarter 2003 (October, November and December) approximately 80% of hemodialysis facilities and in the October 2003–March 2004 PD cycle approximately 60% of peritoneal dialysis facilities voluntarily participated in the CPM data collection for Network 9/10.

The goals of the project were 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 maintains a process to collect, analyze, and provide data feedback reports to facilities. In the April hemodialysis (HD) and January-April peritoneal dialysis (PD) Network–wide CPM project, facilities collected data on 100% of prevalent patients and electronically submitted this to the Network for analysis. In the 4th quarter HD and October 2003-March 2004 PD CPM data collection facilities were asked to voluntarily submit data via collection form. The data were analyzed by the MRB
and feedback reports were distributed after each collection. The patient demographics and facility participation rates by state and Network 9/10 are described in Charts A.1 and A.2.

**Chart A.1. 2003 4\textsuperscript{th} Quarter Hemodialysis (HD) Patient Demographics & Facility Participation**

<table>
<thead>
<tr>
<th>Patient Demographics</th>
<th>Illinois</th>
<th>Indiana</th>
<th>Kentucky</th>
<th>Ohio</th>
<th>Network 9/10</th>
</tr>
</thead>
<tbody>
<tr>
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<td>3094</td>
<td>9308</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>54%</td>
<td>52%</td>
<td>53%</td>
<td>54%</td>
<td>54%</td>
</tr>
<tr>
<td>Women</td>
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<td>33%</td>
<td>28%</td>
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<td>1</td>
<td>2</td>
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<td>*%</td>
<td>*%</td>
<td>1%</td>
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<td>16</td>
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<td>19</td>
<td>25</td>
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<td></td>
</tr>
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<td>44%</td>
<td>43%</td>
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<tr>
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<td>*</td>
<td>*</td>
<td>2</td>
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</tr>
<tr>
<td>% Facility Participation</td>
<td>83</td>
<td>71</td>
<td>90</td>
<td>77</td>
<td>80</td>
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</table>

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

**Chart A.2. 2003 Peritoneal Dialysis (PD) Patient Demographics & Facility Participation**

<table>
<thead>
<tr>
<th>Patient Demographics</th>
<th>Illinois</th>
<th>Indiana</th>
<th>Kentucky</th>
<th>Ohio</th>
<th>Network 9/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number</td>
<td>909</td>
<td>536</td>
<td>319</td>
<td>988</td>
<td>2754</td>
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<tr>
<td>Men</td>
<td>51%</td>
<td>48%</td>
<td>55%</td>
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<tr>
<td>Women</td>
<td>48</td>
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<td>Race</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>22%</td>
<td>17%</td>
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<td>24%</td>
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<tr>
<td>White</td>
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<td>Age in years</td>
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<td>&lt;18</td>
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<td>2%</td>
<td>3%</td>
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<td>Primary Dx</td>
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<td>DM</td>
<td>35%</td>
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<tr>
<td>% Facility Participation</td>
<td>57</td>
<td>54</td>
<td>63</td>
<td>59</td>
<td>58</td>
</tr>
</tbody>
</table>

*% represents less than one percent. Subgroup total may not add to 100% due to rounding or missing data elements.
Comparison of HD Outcomes from 4th Quarter 2002 to 4th Quarter 2003

- % patients with average URR $\geq 65\%$ increased from 86% to 87.7%
- Average URR increased from 71.72% to 72.35%
- % patients with average Kt/V Daugirdis II $\geq 1.2$ increased from 89.6% to 90.9%
- Average Kt/V Daugirdis II increased from 1.54 to 1.57
- Average hemoglobin increased from 11.87 to 11.95 gm/dL
- % patients with average hemoglobin $\geq 11$ gm/dL increased from 78.9% to 81.21%
- % patients with average hemoglobin between 11-12 gm/dL increased from 33% to 33.72%
- % patients with average hemoglobin $\geq 12$ gm/dL increased from 49% to 51.19%
- % of patients with average albumin $\geq 3.5$ gm/dL decreased from 81.5% to 81.15%
- Average albumin decreased slightly from 3.79 to 3.78 gm/dL

Comparison of PD Outcomes from September – December 2002 to October 2003 – March 2004 Collections

- % patients with measurement of weekly Creatinine Clearance(CrCl) or weekly Kt/V decreased from 85% to 83%
- % patients meeting weekly CrCl or Kt/V target increased from 86% to 87%
- Average hemoglobin increased from 12.0 to 12.1 gm/dL
- % patients with average hemoglobin $\geq 11$ gm/dL increased from 75.9% to 81.35%
- % patients with average hemoglobin between 11-12 gm/dL increased from 29% to 31.6%
- % patients with albumin $\geq 3.5$ gm/dL decreased from 65% to 62.64%
- Average albumin decreased from 3.59 to 3.56 gm/dL

1. CPM Results.

Three clinical areas are addressed in the CPM project. The treatment of anemia includes the pre-dialysis hemoglobin (HGB), transferrin saturation (TSAT), serum ferritin concentration from the monthly lab draw and weekly Epogen (Epo) dosage. HD adequacy contains the paired pre/post serum urea nitrogen values from the monthly lab draw 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 from the monthly lab draw; bromocresol purple (BCP) assay measurements are adjusted by $+0.3$ for comparison with the bromocresol green (BCG) measurements.

2.a. Treatment of Anemia - Hemodialysis. Chart A.3 shows the percentage of patients with average pre-dialysis HGB $\geq 11$ gm/dL. Network 9/10 rates had a statistical increase of 2% between the fourth quarter of 2002 and the fourth quarter of 2003; state rate increases ranged from 1%-3%. The increases for Illinois and Ohio were statistically significant using a 95% confidence interval.
Chart A.3 shows the percentage of HD patients with HGB $\geq$ 11 gm/dL by state and Networks 9/10 for selected collection periods. The percentage has increased from 4Q98 to 4Q03. For example, in IL, the percentage increased from 55% in 4Q98 to 82% in 4Q03. Similar trends are observed in IN, KY, OH, and Network 9/10.

Chart A.4 and Chart A.5 show the distribution of HGB values for the states, Network 9/10, and the United States. The average HGB has increased for the past five years in all states. Network 9/10 data for the fourth quarter of 2003 showed an increase to 11.95 gm/dL over the previous year, which was 11.9 gm/dL. In all states, the percentage of patients with average HGB $\geq$ 12 gm/dL increased; this percentage is higher than the national comparative.
Chart A.6 compares average and standard deviation values by state for HGB, TSAT, ferritin and Epo dose. The more frequent route of Epogen™ administration was reported as intravenous at 91%. This was an increase of 3% from the fourth quarter of 2002. The average Epogen™ dose decreased from 287 to 285 units/kilogram/week in the fourth quarter 2003. Iron prescriptions were reported for 14,958 HD patients in the fourth quarter of 2003. Of the patients who were prescribed iron, 94% were prescribed intravenous iron, an increase of 1% from the previous fourth quarter. Between the fourth quarters of 1998 and 2003, the average TSAT range stayed between 28.4% and 29.3%. The average ferritin decreased from 654 ng/mL to 653 ng/mL from 2002 to 2003.

Chart A.5. Distribution of HD HGB values (gm/dL) by State for Selected Collection Periods

<table>
<thead>
<tr>
<th>State</th>
<th>IL 4Q98</th>
<th>IL 4Q00</th>
<th>IL 4Q02</th>
<th>IL 4Q03</th>
<th>IN 4Q98</th>
<th>IN 4Q00</th>
<th>IN 4Q02</th>
<th>IN 4Q03</th>
<th>KY 4Q98</th>
<th>KY 4Q00</th>
<th>KY 4Q02</th>
<th>KY 4Q03</th>
<th>OH 4Q98</th>
<th>OH 4Q00</th>
<th>OH 4Q02</th>
<th>OH 4Q03</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 9</td>
<td>8%</td>
<td>4%</td>
<td>2%</td>
<td>2%</td>
<td>5%</td>
<td>3%</td>
<td>2%</td>
<td>1%</td>
<td>8%</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
<td>7%</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>9 – 9.9</td>
<td>12%</td>
<td>7%</td>
<td>6%</td>
<td>5%</td>
<td>10%</td>
<td>6%</td>
<td>5%</td>
<td>4%</td>
<td>12%</td>
<td>8%</td>
<td>5%</td>
<td>5%</td>
<td>12%</td>
<td>8%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>10 – 10.9</td>
<td>25%</td>
<td>16%</td>
<td>13%</td>
<td>12%</td>
<td>23%</td>
<td>16%</td>
<td>13%</td>
<td>11%</td>
<td>24%</td>
<td>17%</td>
<td>14%</td>
<td>14%</td>
<td>24%</td>
<td>19%</td>
<td>15%</td>
<td>13%</td>
</tr>
<tr>
<td>11 – 11.9</td>
<td>32%</td>
<td>30%</td>
<td>29%</td>
<td>29%</td>
<td>35%</td>
<td>31%</td>
<td>28%</td>
<td>28%</td>
<td>34%</td>
<td>32%</td>
<td>33%</td>
<td>31%</td>
<td>34%</td>
<td>33%</td>
<td>31%</td>
<td>31%</td>
</tr>
<tr>
<td>≥12</td>
<td>23%</td>
<td>43%</td>
<td>51%</td>
<td>52%</td>
<td>26%</td>
<td>44%</td>
<td>52%</td>
<td>55%</td>
<td>23%</td>
<td>41%</td>
<td>46%</td>
<td>49%</td>
<td>24%</td>
<td>37%</td>
<td>46%</td>
<td>49%</td>
</tr>
</tbody>
</table>

Subgroup total may not add to 100% due to rounding
Chart A.7 compares the percent of HD patients with paired TSAT <20% and Ferritin <100 ng/mL from selected years during 4th quarter 1998-2003.

**Chart A.7. Anemia Management Measures for Percentage of HD Patients from Selected Years during 4th Quarter 1998-2003 with Paired TSAT <20% & Ferritin < 100 ng/mL by State and Networks 9/10**

<table>
<thead>
<tr>
<th>4th Quarter – Year</th>
<th>Illinois</th>
<th>Indiana</th>
<th>Kentucky</th>
<th>Ohio</th>
<th>Net 9/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>8%</td>
<td>7%</td>
<td>12%</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>2000</td>
<td>4%</td>
<td>5%</td>
<td>6%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>2002</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td><strong>2003</strong></td>
<td><strong>2%</strong></td>
<td><strong>2%</strong></td>
<td><strong>2%</strong></td>
<td><strong>3%</strong></td>
<td><strong>3%</strong></td>
</tr>
</tbody>
</table>
2.b. Treatment of Anemia – Peritoneal Dialysis. Anemia management measures show improvement in each of the reporting cycles.

Chart A.8 shows the percentage of patients with average HGB $\geq$ 11 gm/dL for the states and Network 9/10. Network 9/10 rates improved to 81% an increase of 5% from the September–December 2002 PD cycle to the October 2003–March 2004 PD cycle. This was above the U.S. rate of 79% in 4th quarter 2002, an increase of 3%.

<table>
<thead>
<tr>
<th>State</th>
<th>S-D 99</th>
<th>S-D 01</th>
<th>S-D 02</th>
<th>O 03-M 04</th>
<th>Net 9/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>IL</td>
<td>65%</td>
<td>71%</td>
<td>76%</td>
<td>80%</td>
<td>81%</td>
</tr>
<tr>
<td>IN</td>
<td>70%</td>
<td>78%</td>
<td>79%</td>
<td>83%</td>
<td>81%</td>
</tr>
<tr>
<td>KY</td>
<td>68%</td>
<td>76%</td>
<td>77%</td>
<td>80%</td>
<td>81%</td>
</tr>
<tr>
<td>OH</td>
<td>68%</td>
<td>71%</td>
<td>74%</td>
<td>82%</td>
<td>81%</td>
</tr>
<tr>
<td>Net 9/10</td>
<td>68%</td>
<td>73%</td>
<td>76%</td>
<td>81%</td>
<td>81%</td>
</tr>
</tbody>
</table>
Chart A.9 shows the distribution of HGB values for the states. The distribution is shifting to the right, indicating improvement.

**Chart A.9. Distribution of PD HGB values (gm/dL) by State & Network 9/10 for Selected Collection Periods**

<table>
<thead>
<tr>
<th></th>
<th>&lt; 9</th>
<th>9-9.9</th>
<th>10-10.9</th>
<th>11-11.9</th>
<th>12+</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IL S-D99</strong></td>
<td>6%</td>
<td>10%</td>
<td>20%</td>
<td>25%</td>
<td>40%</td>
</tr>
<tr>
<td><strong>IL S-D01</strong></td>
<td>4%</td>
<td>8%</td>
<td>17%</td>
<td>24%</td>
<td>48%</td>
</tr>
<tr>
<td><strong>IL S-D02</strong></td>
<td>4%</td>
<td>6%</td>
<td>15%</td>
<td>26%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>IL O03-M04</strong></td>
<td>3%</td>
<td>5%</td>
<td>12%</td>
<td>28%</td>
<td>53%</td>
</tr>
<tr>
<td><strong>IN S-D99</strong></td>
<td>4%</td>
<td>9%</td>
<td>18%</td>
<td>27%</td>
<td>43%</td>
</tr>
<tr>
<td><strong>IN S-D01</strong></td>
<td>3%</td>
<td>5%</td>
<td>15%</td>
<td>25%</td>
<td>53%</td>
</tr>
<tr>
<td><strong>IN S-D02</strong></td>
<td>2%</td>
<td>4%</td>
<td>14%</td>
<td>25%</td>
<td>55%</td>
</tr>
<tr>
<td><strong>IN O03-M04</strong></td>
<td>1%</td>
<td>3%</td>
<td>13%</td>
<td>28%</td>
<td>56%</td>
</tr>
<tr>
<td><strong>KY S-D99</strong></td>
<td>6%</td>
<td>6%</td>
<td>18%</td>
<td>25%</td>
<td>46%</td>
</tr>
<tr>
<td><strong>KY S-D01</strong></td>
<td>3%</td>
<td>4%</td>
<td>17%</td>
<td>29%</td>
<td>47%</td>
</tr>
<tr>
<td><strong>KY S-D02</strong></td>
<td>2%</td>
<td>5%</td>
<td>16%</td>
<td>24%</td>
<td>53%</td>
</tr>
<tr>
<td><strong>KY O03-M04</strong></td>
<td>2%</td>
<td>6%</td>
<td>13%</td>
<td>27%</td>
<td>52%</td>
</tr>
<tr>
<td><strong>OH S-D99</strong></td>
<td>4%</td>
<td>9%</td>
<td>19%</td>
<td>27%</td>
<td>40%</td>
</tr>
<tr>
<td><strong>OH S-D01</strong></td>
<td>2%</td>
<td>10%</td>
<td>17%</td>
<td>29%</td>
<td>42%</td>
</tr>
<tr>
<td><strong>OH S-D02</strong></td>
<td>3%</td>
<td>8%</td>
<td>16%</td>
<td>27%</td>
<td>46%</td>
</tr>
<tr>
<td><strong>OH O03-M04</strong></td>
<td>2%</td>
<td>4%</td>
<td>12%</td>
<td>30%</td>
<td>52%</td>
</tr>
<tr>
<td><strong>Net 9/10 S-D99</strong></td>
<td>5%</td>
<td>9%</td>
<td>19%</td>
<td>26%</td>
<td>41%</td>
</tr>
<tr>
<td><strong>Net9/10 S-D01</strong></td>
<td>3%</td>
<td>8%</td>
<td>17%</td>
<td>26%</td>
<td>46%</td>
</tr>
<tr>
<td><strong>Net 9/10 S-D02</strong></td>
<td>3%</td>
<td>6%</td>
<td>15%</td>
<td>26%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Net 9/10 O03-M04</strong></td>
<td>2%</td>
<td>5%</td>
<td>12%</td>
<td>28%</td>
<td>53%</td>
</tr>
</tbody>
</table>

Subgroup total may not add to 100% due to rounding
Chart A.10 on the following page reports averages and standard deviations of the HGB, TSAT, Ferritin and EPO dose measurements. In the October 2003-March 2004 PD cycle, the more frequent route of Epogen™ administration was reported as subcutaneous at 98%. The average Epogen™ dose increased from 152 to 160 units/kilogram/week between the September-December 2002 PD cycle to the October 2003-March 2004 PD cycle.

Chart A.10. PD Anemia Management Measures by State & Networks 9/10 for Selected Collection Periods

<table>
<thead>
<tr>
<th></th>
<th>Illinois</th>
<th>Indiana</th>
<th>Kentucky</th>
<th>Ohio</th>
<th>Net 9/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>HGB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S-D99</td>
<td>11.6</td>
<td>1.7</td>
<td>11.7</td>
<td>1.6</td>
<td>11.8</td>
</tr>
<tr>
<td>S-D01</td>
<td>11.8</td>
<td>1.7</td>
<td>12.1</td>
<td>1.6</td>
<td>12.0</td>
</tr>
<tr>
<td>S-D02</td>
<td>11.9</td>
<td>1.6</td>
<td>12.2</td>
<td>1.7</td>
<td>12.1</td>
</tr>
<tr>
<td>HGB O03-M04</td>
<td>12.0</td>
<td>1.5</td>
<td>12.2</td>
<td>1.4</td>
<td>12.0</td>
</tr>
<tr>
<td>TSAT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S-D99</td>
<td>29.8</td>
<td>13.9</td>
<td>29.1</td>
<td>14.5</td>
<td>28.9</td>
</tr>
<tr>
<td>S-D01</td>
<td>30.1</td>
<td>13.7</td>
<td>29.1</td>
<td>13.4</td>
<td>28.7</td>
</tr>
<tr>
<td>S-D02</td>
<td>30.9</td>
<td>13.5</td>
<td>31.1</td>
<td>14.4</td>
<td>32.3</td>
</tr>
<tr>
<td>TSAT O03-M04</td>
<td>30.2</td>
<td>13.6</td>
<td>30.5</td>
<td>12.2</td>
<td>30.1</td>
</tr>
<tr>
<td>Ferritin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S-D99</td>
<td>436</td>
<td>418</td>
<td>465</td>
<td>505</td>
<td>294</td>
</tr>
<tr>
<td>S-D01</td>
<td>463</td>
<td>492</td>
<td>470</td>
<td>422</td>
<td>403</td>
</tr>
<tr>
<td>S-D02</td>
<td>447</td>
<td>455</td>
<td>521</td>
<td>490</td>
<td>463</td>
</tr>
<tr>
<td>Ferritin O03-M04</td>
<td>447</td>
<td>448</td>
<td>474</td>
<td>390</td>
<td>463</td>
</tr>
<tr>
<td>Epo Dose</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>u/kg/wk S-D99</td>
<td>147</td>
<td>127</td>
<td>147</td>
<td>127</td>
<td>147</td>
</tr>
<tr>
<td>u/kg/wk S-D01</td>
<td>159</td>
<td>151</td>
<td>156</td>
<td>138</td>
<td>184</td>
</tr>
<tr>
<td>u/kg/wk S-D02</td>
<td>155</td>
<td>149</td>
<td>145</td>
<td>118</td>
<td>171</td>
</tr>
<tr>
<td>u/kg/wk O03-M04</td>
<td>165</td>
<td>158</td>
<td>158</td>
<td>142</td>
<td>158</td>
</tr>
</tbody>
</table>

Chart A.11 shows state comparisons for paired TSAT <20 % and ferritin <100 ng/mL measures. The Network 9/10 rate is 6% as compared to the U.S. rate of 5% for the October 2002-March 2003 PD cycle. Iron prescriptions were reported for 1,445 patients in the October 2003–March 2004 PD cycle; 23% of these patients were reported having an IV iron prescription. This represents an increase of 8% from the same time period in 2002.

**Chart A.11. Percentage of Patient Measurements from Selected Years during September-December 1999 to 2002 with Paired TSAT <20% & Ferritin <100 ng/mL by State & Networks 9/10**

<table>
<thead>
<tr>
<th></th>
<th>Illinois</th>
<th>Indiana</th>
<th>Kentucky</th>
<th>Ohio</th>
<th>Network 9/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-D99</td>
<td>10</td>
<td>9</td>
<td>8</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>S-D01</td>
<td>8</td>
<td>6</td>
<td>10</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>S-D02</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>O03-M04</td>
<td>7</td>
<td>4</td>
<td>4</td>
<td>7</td>
<td>6</td>
</tr>
</tbody>
</table>
2.c. Adequacy of Hemodialysis. Chart A.12 shows the percentage of patients with an average URR of 65% or greater by state, Network 9/10, and by year. An increase of 2% was noted from the fourth quarter of 2002 to the fourth quarter of 2003. There has been progressive improvement for the last seven years with a total increase of 22%.

![Chart A.12. Percentage of HD Patients with URR>= 65% by State & Networks 9/10 for Selected Collection Periods](chart.png)
Chart A.13 shows the percentage of patients with an average Kt/V \textsubscript{Daugirdas II} of 1.2 or greater. There was a 1% increase from one year ago in the Network 9/10 rate. The fourth quarter 2003 average URR was 72.4% with a standard deviation of 6.9 and the average Kt/V \textsubscript{Daugirdas II} of 1.57 (standard deviation of 0.33). The average HD treatment time decreased one and a half minutes, from 224 to 222.5.
Chart A.14 shows URR, Kt/V Daugirdis II and treatment time averages and standard deviations by state and Network 9/10.

<table>
<thead>
<tr>
<th></th>
<th>Illinois</th>
<th>Indiana</th>
<th>Kentucky</th>
<th>Ohio</th>
<th>Net 9/10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>avg</td>
<td>sd</td>
<td>avg</td>
<td>sd</td>
<td>avg</td>
</tr>
<tr>
<td>URR 4Q96</td>
<td>66.3</td>
<td>9.2</td>
<td>68.6</td>
<td>7.9</td>
<td>65.9</td>
</tr>
<tr>
<td>URR 4Q98</td>
<td>68.5</td>
<td>8.5</td>
<td>70.7</td>
<td>7.3</td>
<td>68.4</td>
</tr>
<tr>
<td>URR 4Q00</td>
<td>69.6</td>
<td>7.8</td>
<td>71.5</td>
<td>7.2</td>
<td>70.1</td>
</tr>
<tr>
<td>URR 4Q02</td>
<td>71.5</td>
<td>7.2</td>
<td>72.4</td>
<td>7.1</td>
<td>71.4</td>
</tr>
<tr>
<td><strong>URR 4Q03</strong></td>
<td><strong>72.5</strong></td>
<td><strong>7.1</strong></td>
<td><strong>73.1</strong></td>
<td><strong>6.7</strong></td>
<td><strong>71.6</strong></td>
</tr>
<tr>
<td>Kt/V 4Q96</td>
<td>1.32</td>
<td>.35</td>
<td>1.39</td>
<td>.32</td>
<td>1.30</td>
</tr>
<tr>
<td>Kt/V 4Q98</td>
<td>1.43</td>
<td>.36</td>
<td>1.52</td>
<td>.35</td>
<td>1.43</td>
</tr>
<tr>
<td>Kt/V 4Q00</td>
<td>1.47</td>
<td>.36</td>
<td>1.56</td>
<td>.35</td>
<td>1.49</td>
</tr>
<tr>
<td>Kt/V 4Q02</td>
<td>1.53</td>
<td>.32</td>
<td>1.59</td>
<td>.35</td>
<td>1.54</td>
</tr>
<tr>
<td><strong>Kt/V 4Q03</strong></td>
<td><strong>1.58</strong></td>
<td><strong>.34</strong></td>
<td><strong>1.61</strong></td>
<td><strong>.34</strong></td>
<td><strong>1.54</strong></td>
</tr>
<tr>
<td>Min 4Q96</td>
<td>209</td>
<td>31</td>
<td>209</td>
<td>36</td>
<td>209</td>
</tr>
<tr>
<td>Min 4Q98</td>
<td>217</td>
<td>28</td>
<td>222</td>
<td>30</td>
<td>214</td>
</tr>
<tr>
<td>Min 4Q00</td>
<td>223</td>
<td>27</td>
<td>227</td>
<td>30</td>
<td>218</td>
</tr>
<tr>
<td>Min 4Q02</td>
<td>223</td>
<td>28</td>
<td>230</td>
<td>32</td>
<td>219</td>
</tr>
<tr>
<td><strong>Min 4Q03</strong></td>
<td><strong>222</strong></td>
<td><strong>28</strong></td>
<td><strong>229</strong></td>
<td><strong>31</strong></td>
<td><strong>219</strong></td>
</tr>
</tbody>
</table>

Charts A.15 and A.16 show the distribution of URR and Kt/V Daugirdis II values from selected years during the fourth quarters of 1996-2003. The curves shift to the right, which indicates adequacy outcome improvements over time.
2.d. Adequacy of Peritoneal Dialysis. Two cycles of PD Clinical Performance Measures were collected in 2003, January–April 2003 (J-A03) and October 2003-March 2004 (O03-M04). 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 declined from 85% to 83%. Chart A.17 shows the percentage of PD patients in Network 9/10 measured and meeting weekly CrCl or Kt/V DOQI™ guidelines for selected collection periods from the September – December 1999-2002 PD cycles and the October 2003-March 2004 PD cycle. In the last reporting cycle of 2003 (O03-M04), 28% of the PD population was not measured or did not meet DOQI™ guidelines.
2.e. Hemodialysis Vascular Access. Chart A.19 shows the percentage of patients greater than 90 days ESRD with catheter, fistula and graft in Network 9/10 for selected years in December 1997-2003. Catheter and fistula rates have increased.
Chart A.20 shows the reason for catheter use within the same time frame. Information on reasons for catheter placement was collected in order to identify 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, and (5) other reasons. More than 50% of the reasons for catheters were reported as “no fistula/graft created” or “other reasons,” an increase of 3%.

Chart A.20. Reasons for Catheter Use in Patients (ESRD >90 days) in Network 9/10 for Selected Years December 1997-2003

2.f. Nutritional Status. The serum albumin was measured as a nutritional outcome. 91% of the HD patients had an albumin measured with the bromocresol green (BCG) assay and 9% were reported with the bromocresol purple (BCP) assay. 87% of the PD patients had an albumin measured with a BCG assay, and 13% with a BCP assay. An adjustment of +0.3 was made to serum albumin measured using the BCP assay for comparisons.

Hemodialysis - Albumin. Chart A.21 outlines the average and standard deviation values by state and by Network 9/10. The average albumin in the fourth quarter 2003 was 3.78 gm/dL. The percentage of patients with an average albumin ≥ 3.5 gm/dL remained the same at 81%. 38% of the patients had an average albumin ≥ 4.0 gm/dL, no change from previous year.

Chart A.21. HD Average (avg) and Standard Deviation (sd) Values for Albumin by State & Networks 9&10 for Selected Collection Periods

<table>
<thead>
<tr>
<th>Albumin 4Q96</th>
<th>Illinois 3.67 .49</th>
<th>Indiana 3.74 .40</th>
<th>Kentucky 3.71 .42</th>
<th>Ohio 3.67 .44</th>
<th>Network 9/10 3.69 .45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albumin 4Q98</td>
<td>3.78 .43</td>
<td>3.81 .42</td>
<td>3.78 .45</td>
<td>3.75 .44</td>
<td>3.77 .44</td>
</tr>
<tr>
<td>Albumin 4Q00</td>
<td>3.78 .42</td>
<td>3.71 .50</td>
<td>3.69 .42</td>
<td>3.69 .43</td>
<td>3.73 .44</td>
</tr>
<tr>
<td>Albumin 4Q02</td>
<td>3.83 .45</td>
<td>3.79 .44</td>
<td>3.76 .44</td>
<td>3.76 .44</td>
<td>3.79 .44</td>
</tr>
<tr>
<td>Albumin 4Q03</td>
<td>3.81 .46</td>
<td>3.78 .44</td>
<td>3.78 .43</td>
<td>3.76 .45</td>
<td>3.78 .45</td>
</tr>
</tbody>
</table>
Chart A.22 compares the percentage of patients with average albumin \( \geq 3.5 \text{ gm/dL} \) by state and by Network 9/10 from the fourth quarters of selected years between 1996-2003.
Chart A.23 shows the distribution of average albumin by state and Network 9/10 from the fourth quarters of selected years between 1996-2003.

Chart A.23. Distribution of HD Average Albumin Values (gm/dl) by State & Networks 9/10 for Selected Collection Periods

<table>
<thead>
<tr>
<th></th>
<th>&lt; 2.0</th>
<th>2.0-2.4</th>
<th>2.5-2.9</th>
<th>3.0-3.4</th>
<th>3.5+</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IL 4Q96</strong></td>
<td>0.3%</td>
<td>1.0%</td>
<td>4.2%</td>
<td>18.6%</td>
<td>76.0%</td>
</tr>
<tr>
<td><strong>IL 4Q98</strong></td>
<td>0.1%</td>
<td>0.6%</td>
<td>3.3%</td>
<td>14.0%</td>
<td>82.0%</td>
</tr>
<tr>
<td><strong>IL 4Q00</strong></td>
<td>0.2%</td>
<td>0.8%</td>
<td>3.3%</td>
<td>13.7%</td>
<td>82.1% (36.1)*</td>
</tr>
<tr>
<td><strong>IL 4Q02</strong></td>
<td>0.2%</td>
<td>0.7%</td>
<td>3.3%</td>
<td>12.8%</td>
<td>83.1% (42.1)*</td>
</tr>
<tr>
<td><strong>IL 4Q03</strong></td>
<td>0.2%</td>
<td>0.9%</td>
<td>3.4%</td>
<td>13.4%</td>
<td>82.1% (41.5)*</td>
</tr>
<tr>
<td><strong>IN 4Q96</strong></td>
<td>0.1%</td>
<td>0.6%</td>
<td>2.4%</td>
<td>15.3%</td>
<td>81.7%</td>
</tr>
<tr>
<td><strong>IN 4Q98</strong></td>
<td>0.1%</td>
<td>0.6%</td>
<td>2.6%</td>
<td>13.9%</td>
<td>82.8%</td>
</tr>
<tr>
<td><strong>IN 4Q00</strong></td>
<td>0.1%</td>
<td>0.6%</td>
<td>3.9%</td>
<td>17.5%</td>
<td>77.9% (24.9)*</td>
</tr>
<tr>
<td><strong>IN 4Q02</strong></td>
<td>0.3%</td>
<td>1.0%</td>
<td>3.2%</td>
<td>13.9%</td>
<td>81.9% (37.9)*</td>
</tr>
<tr>
<td><strong>IN 4Q03</strong></td>
<td>0.2%</td>
<td>1.0%</td>
<td>3.4%</td>
<td>14.0%</td>
<td>81.4% (37.1)*</td>
</tr>
<tr>
<td><strong>KY 4Q96</strong></td>
<td>0.2%</td>
<td>0.3%</td>
<td>3.7%</td>
<td>14.9%</td>
<td>80.8%</td>
</tr>
<tr>
<td><strong>KY 4Q98</strong></td>
<td>0.2%</td>
<td>0.8%</td>
<td>3.5%</td>
<td>15.9%</td>
<td>79.5%</td>
</tr>
<tr>
<td><strong>KY 4Q00</strong></td>
<td>0.2%</td>
<td>0.8%</td>
<td>4.6%</td>
<td>17.3%</td>
<td>77.1% (26.0)*</td>
</tr>
<tr>
<td><strong>KY 4Q02</strong></td>
<td>0.2%</td>
<td>0.9%</td>
<td>3.7%</td>
<td>15.1%</td>
<td>80.2% (34.4)*</td>
</tr>
<tr>
<td><strong>KY 4Q03</strong></td>
<td>0.1%</td>
<td>0.7%</td>
<td>3.2%</td>
<td>13.8%</td>
<td>82.2% (36.7)*</td>
</tr>
<tr>
<td><strong>OH 4Q96</strong></td>
<td>0.2%</td>
<td>0.7%</td>
<td>3.5%</td>
<td>16.7%</td>
<td>78.8%</td>
</tr>
<tr>
<td><strong>OH 4Q98</strong></td>
<td>0.2%</td>
<td>0.8%</td>
<td>4.0%</td>
<td>16.2%</td>
<td>78.8%</td>
</tr>
<tr>
<td><strong>OH 4Q00</strong></td>
<td>0.4%</td>
<td>1.1%</td>
<td>4.3%</td>
<td>17.6%</td>
<td>76.7% (27.3)*</td>
</tr>
<tr>
<td><strong>OH 4Q02</strong></td>
<td>0.2%</td>
<td>1.0%</td>
<td>3.8%</td>
<td>15.1%</td>
<td>79.9% (35.0)*</td>
</tr>
<tr>
<td><strong>OH 4Q03</strong></td>
<td>0.2%</td>
<td>1.0%</td>
<td>3.9%</td>
<td>15.2%</td>
<td>79.7% (35.6)*</td>
</tr>
<tr>
<td><strong>Net 9/10 4Q96</strong></td>
<td>0.2%</td>
<td>0.7%</td>
<td>3.6%</td>
<td>16.9%</td>
<td>78.7%</td>
</tr>
<tr>
<td><strong>Net 9/10 4Q98</strong></td>
<td>0.1%</td>
<td>0.7%</td>
<td>3.4%</td>
<td>14.9%</td>
<td>80.8%</td>
</tr>
<tr>
<td><strong>Net 9/10 4Q00</strong></td>
<td>0.2%</td>
<td>0.9%</td>
<td>3.9%</td>
<td>16.0%</td>
<td>79.0% (30.2)*</td>
</tr>
<tr>
<td><strong>Net 9/10 4Q02</strong></td>
<td>0.2%</td>
<td>0.8%</td>
<td>3.5%</td>
<td>14.0%</td>
<td>81.5% (38.1)*</td>
</tr>
<tr>
<td><strong>Net 9/10 4Q03</strong></td>
<td>0.2%</td>
<td>1.0%</td>
<td>3.5%</td>
<td>14.2%</td>
<td>81.2% (38.2)*</td>
</tr>
</tbody>
</table>

*The percentage of patients with average albumins ≥ 4.0 gm/dL are noted in parentheses for 4Q00-4Q03 only.

Peritoneal Dialysis - Albumin. The Network 9/10 average albumin for the October 2003-March 2004 PD reporting cycle was 3.56 gm/dL.

Chart A.24. PD Average and Standard Deviation Values for Albumin by State & Network 9/10 for Selected Collection Periods

<table>
<thead>
<tr>
<th></th>
<th>Illinois avg</th>
<th>Illinois sd</th>
<th>Indiana avg</th>
<th>Indiana sd</th>
<th>Kentucky avg</th>
<th>Kentucky sd</th>
<th>Ohio avg</th>
<th>Ohio sd</th>
<th>Network 9&amp;10 avg</th>
<th>Network 9&amp;10 sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albumin S-D99</td>
<td>3.60</td>
<td>.52</td>
<td>3.61</td>
<td>.50</td>
<td>3.59</td>
<td>.51</td>
<td>3.48</td>
<td>.54</td>
<td>3.55</td>
<td>.53</td>
</tr>
<tr>
<td>Albumin S-D01</td>
<td>3.61</td>
<td>.50</td>
<td>3.64</td>
<td>.48</td>
<td>3.54</td>
<td>.55</td>
<td>3.50</td>
<td>.50</td>
<td>3.57</td>
<td>.50</td>
</tr>
<tr>
<td>Albumin S-D02</td>
<td>3.60</td>
<td>.53</td>
<td>3.68</td>
<td>.52</td>
<td>3.50</td>
<td>.55</td>
<td>3.55</td>
<td>.47</td>
<td>3.59</td>
<td>.51</td>
</tr>
<tr>
<td>Albumin O03-M04</td>
<td>3.57</td>
<td>.52</td>
<td>3.60</td>
<td>.48</td>
<td>3.61</td>
<td>.50</td>
<td>3.51</td>
<td>.53</td>
<td>3.56</td>
<td>.51</td>
</tr>
</tbody>
</table>
Chart A.25 compares the percentage of patients with an average albumin $\geq 3.5$ gm/dl by state and Networks 9/10 for selected years during the September–December 1999–2002 and the October 2003-March 2004 PD reporting cycles and shows the percentage of patients in Networks 9/10 with an average albumin $\geq 3.5$ gm/dL was 63%.

Chart A.26 shows the distribution of average albumin values by state and Network 9/10.
B. Network 9/10 CPM Interventions.

The goals of the CPM interventions are to:

(1) increase the knowledge of the CPM project to Network 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 K/DOQI™ guidelines, physician-patient outcome data, and facility plans for improvement. Feedback reports were specifically targeted to physicians, medical directors, administrators and nurse managers. In addition to the physician reports, 18 physician practice reports were requested and distributed. Multi-color reports displayed data in tables and charts.

In 2003, hemodialysis adequacy and anemia management Needs Assessment Reports were distributed as a part of the facility feedback reports. Charts B.1 and B.2 show the Needs Assessment Reports for Network 9/10 rates compared to the April 2003 top 20-percentile facility rates. Areas for comparison were (1) percentage of patients with URR ≥ 65%, (2) average treatment time, (3) frequency table of treatment time distribution, (4) average blood flow at one hour, (5) frequency table of blood flow distribution, and (6) percentage patients with catheter. These reports were distributed after the April 2003 and 4th quarter 2003 collection cycles.
The three major barriers to adequate hemodialysis are underprescription, catheter use, and shortening of treatment time. Included in this table are data from the top 20% of the facilities in the Network based on Kt/V outcomes. For additional information, look at American Journal of Kidney Diseases, 1998;31:593-601 (copy can be requested from Network).


<table>
<thead>
<tr>
<th></th>
<th>December 2002</th>
<th>April 2003</th>
<th>October 2003</th>
<th>November 2003</th>
<th>December 2003</th>
<th>Average Top 20% Facility Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Pts URR &gt;= 65%</td>
<td>85%</td>
<td>85%</td>
<td>87%</td>
<td>86%</td>
<td>87%</td>
<td>94%</td>
</tr>
<tr>
<td>% Pts Kt/V &gt;= 1.2</td>
<td>88%</td>
<td>88%</td>
<td>89%</td>
<td>89%</td>
<td>90%</td>
<td>98%</td>
</tr>
<tr>
<td>Average Actual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment Time (hours)</td>
<td>3.73</td>
<td>3.73</td>
<td>3.71</td>
<td>3.71</td>
<td>3.70</td>
<td>3.82</td>
</tr>
<tr>
<td>Minutes of treatment</td>
<td>3.1</td>
<td>3.1</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.1</td>
</tr>
<tr>
<td>time per kg of body</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>weight</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Actual Treatment Time</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>% Pts Breakdown</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;= 3.0 hours</td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
<td>11%</td>
</tr>
<tr>
<td>3.1 - 3.5 hours</td>
<td>27%</td>
<td>26%</td>
<td>28%</td>
<td>28%</td>
<td>28%</td>
<td>25%</td>
</tr>
<tr>
<td>3.6 - 4.0 hours</td>
<td>42%</td>
<td>41%</td>
<td>40%</td>
<td>41%</td>
<td>40%</td>
<td>41%</td>
</tr>
<tr>
<td>&gt; 4.0 hours</td>
<td>19%</td>
<td>19%</td>
<td>19%</td>
<td>19%</td>
<td>19%</td>
<td>23%</td>
</tr>
<tr>
<td>Average Blood Flow</td>
<td></td>
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<tr>
<td>@ 1 hour</td>
<td>401</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>408</td>
</tr>
<tr>
<td>Blood Flow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Pts Breakdown</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>&lt;= 300 ml/min</td>
<td>12%</td>
<td>12%</td>
<td>12%</td>
<td>12%</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td>301 - 350 ml/min</td>
<td>15%</td>
<td>16%</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>14%</td>
</tr>
<tr>
<td>351 - 400 ml/min</td>
<td>31%</td>
<td>31%</td>
<td>31%</td>
<td>31%</td>
<td>31%</td>
<td>30%</td>
</tr>
<tr>
<td>401 - 450 ml/min</td>
<td>23%</td>
<td>23%</td>
<td>23%</td>
<td>23%</td>
<td>24%</td>
<td>20%</td>
</tr>
<tr>
<td>&gt; 450 ml/min</td>
<td>19%</td>
<td>18%</td>
<td>19%</td>
<td>18%</td>
<td>18%</td>
<td>21%</td>
</tr>
<tr>
<td>% Pts with HD Catheter</td>
<td>30%</td>
<td>31%</td>
<td>31%</td>
<td>31%</td>
<td>31%</td>
<td>30%</td>
</tr>
<tr>
<td>% Pts on Hi-Flux</td>
<td>80%</td>
<td>82%</td>
<td>82%</td>
<td>82%</td>
<td>81%</td>
<td>82%</td>
</tr>
<tr>
<td>Dialyzers (Kuf &gt;= 20)</td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>% Pts HGB &gt;= 11 mg/dL</td>
<td>77%</td>
<td>79%</td>
<td>79%</td>
<td>79%</td>
<td>79%</td>
<td>90%</td>
</tr>
<tr>
<td>% Pts HGB &gt;= 11 mg/dL with SQ EPO Rx</td>
<td>78%</td>
<td>76%</td>
<td>78%</td>
<td>77%</td>
<td>76%</td>
<td>89%</td>
</tr>
<tr>
<td>% Pts HGB &gt;= 11 mg/dL with IV EPO Rx</td>
<td>76%</td>
<td>78%</td>
<td>78%</td>
<td>78%</td>
<td>78%</td>
<td>87%</td>
</tr>
<tr>
<td>Average HGB mg/dL</td>
<td>11.9</td>
<td>12.0</td>
<td>12.0</td>
<td>11.9</td>
<td>12.0</td>
<td>11.9</td>
</tr>
<tr>
<td>Average HGB mg/dL with SQ EPO Rx by ESRD length in months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;= 3.0 months</td>
<td>11.2</td>
<td>11.2</td>
<td>11.2</td>
<td>11.2</td>
<td>11.4</td>
<td>11.8</td>
</tr>
<tr>
<td>3.1 - 5.9 months</td>
<td>12.3</td>
<td>12.3</td>
<td>12.2</td>
<td>12.4</td>
<td>12.1</td>
<td>12.2</td>
</tr>
<tr>
<td>6.0 - 11.9 months</td>
<td>12.1</td>
<td>12.1</td>
<td>11.9</td>
<td>12.0</td>
<td>12.0</td>
<td>12.4</td>
</tr>
<tr>
<td>&gt; 12 months</td>
<td>12.0</td>
<td>11.8</td>
<td>11.9</td>
<td>11.8</td>
<td>11.8</td>
<td>11.9</td>
</tr>
<tr>
<td>Average HGB mg/dL with IV EPO Rx by ESRD length in months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>&lt;= 3.0 months</td>
<td>11.2</td>
<td>11.4</td>
<td>11.5</td>
<td>11.5</td>
<td>11.5</td>
<td>11.2</td>
</tr>
<tr>
<td>3.1 - 5.9 months</td>
<td>12.2</td>
<td>12.3</td>
<td>12.3</td>
<td>12.3</td>
<td>12.4</td>
<td>11.9</td>
</tr>
<tr>
<td>6.0 - 11.9 months</td>
<td>12.0</td>
<td>12.1</td>
<td>12.1</td>
<td>12.1</td>
<td>12.1</td>
<td>12.1</td>
</tr>
<tr>
<td>&gt; 12 months</td>
<td>11.8</td>
<td>11.9</td>
<td>11.9</td>
<td>11.9</td>
<td>11.9</td>
<td>11.8</td>
</tr>
<tr>
<td>% Pts with SQ EPO Rx</td>
<td>11%</td>
<td>9%</td>
<td>9%</td>
<td>8%</td>
<td>9%</td>
<td>7%</td>
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<tr>
<td>Average SQ EPO dose units/kg/week</td>
<td>225</td>
<td>234</td>
<td>232</td>
<td>245</td>
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<td>Average SQ EPO dose units/kg/week by ESRD length in months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>&lt;= 3.0 months</td>
<td>296</td>
<td>322</td>
<td>346</td>
<td>354</td>
<td>295</td>
<td>297</td>
</tr>
<tr>
<td>3.1 - 5.9 months</td>
<td>271</td>
<td>314</td>
<td>335</td>
<td>332</td>
<td>332</td>
<td>279</td>
</tr>
<tr>
<td>6.0 - 11.9 months</td>
<td>217</td>
<td>229</td>
<td>222</td>
<td>223</td>
<td>211</td>
<td>168</td>
</tr>
<tr>
<td>&gt; 12 months</td>
<td>215</td>
<td>218</td>
<td>215</td>
<td>233</td>
<td>199</td>
<td>186</td>
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<tr>
<td>Average IV EPO dose units/kg/week</td>
<td>286</td>
<td>286</td>
<td>287</td>
<td>281</td>
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<td>268</td>
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<tr>
<td>Average IV EPO dose units/kg/week by ESRD length in months</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>&lt;= 3.0 months</td>
<td>361</td>
<td>378</td>
<td>359</td>
<td>348</td>
<td>357</td>
<td>337</td>
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<tr>
<td>3.1 - 5.9 months</td>
<td>337</td>
<td>341</td>
<td>339</td>
<td>329</td>
<td>308</td>
<td>313</td>
</tr>
<tr>
<td>6.0 - 11.9 months</td>
<td>274</td>
<td>275</td>
<td>280</td>
<td>276</td>
<td>271</td>
<td>265</td>
</tr>
<tr>
<td>&gt; 12 months</td>
<td>276</td>
<td>273</td>
<td>278</td>
<td>273</td>
<td>271</td>
<td>256</td>
</tr>
<tr>
<td>% Pts TSAT &gt;= 20%</td>
<td>77%</td>
<td>75%</td>
<td>78%</td>
<td>80%</td>
<td>79%</td>
<td>76%</td>
</tr>
<tr>
<td>% Pts Ferritin &gt;= 100 mg/dL</td>
<td>95%</td>
<td>94%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>94%</td>
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<tr>
<td>% Pts with IV Iron Rx</td>
<td>51%</td>
<td>52%</td>
<td>54%</td>
<td>52%</td>
<td>51%</td>
<td>47%</td>
</tr>
<tr>
<td>Average IV Iron dose/unit</td>
<td>290</td>
<td>297</td>
<td>289</td>
<td>288</td>
<td>288</td>
<td>316</td>
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<tr>
<td>% Pts TSAT &gt;= 20% with IV Iron Rx</td>
<td>74%</td>
<td>72%</td>
<td>75%</td>
<td>76%</td>
<td>76%</td>
<td>71%</td>
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<tr>
<td>% Pts Ferritin &gt;= 100 mg/dL with IV Iron Rx</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>96%</td>
<td>95%</td>
<td>96%</td>
</tr>
</tbody>
</table>
The following describes the current indicator level, along with the change in percentage, from the fourth quarter of 2002 to the fourth quarter of 2003 for hemodialysis patients in Network 9/10 meeting the recommended DOQI™ Guidelines for care:

- Hemoglobin between 11-12 gm/dL 34% + 1%
- Hemoglobin > 12 gm/dL 47% + 2%
- Epo dose between 120-180 u/kg/wk 16% no change
- TSAT between 20-50% 76% +2%
- Ferritin between 100-800 ng/ml 65% no change
- Albumin ≥ 4.0 gm/dL 38% no change
- URR ≥ 65% 88% +2%
- Kt/V Daugirdas II ≥ 1.2 91% +1%
- % Catheters (pts >90 days ESRD) 31% +4%
- % Fistula (pts >90 days ESRD) 31% - 2%

The following describes the current level, along with the change in percentage, from the September-December 2002 PD cycle compared to the October 2003-March 2004 PD cycle for peritoneal dialysis patients in Network 9/10 meeting the recommended DOQI™ Guidelines for care:

- Hemoglobin between 11-12 gm/dL 32% +3 %
- Albumin ≥ 4.0 gm/dL 22% -2%
- Weekly CrCl or Kt/V 87% +2%

In 2003, Network 9/10 Clinical Performance Goals for adequacy of dialysis, anemia management, and vascular access were available on the Network 9/10 Web site, www.therenalnetwork.org.

**Adequacy of Dialysis Goals 2002-2003 - Hemodialysis**
All patients measured for adequacy every month.
- ≥ 95% of patient population achieve URR ≥65%
- ≥ 95% of patient population achieve Kt/V Daugirdas II ≥1.2

**Adequacy of Dialysis Goals 2002-2003 - Peritoneal Dialysis**
All patients measured for adequacy every four months.
- CAPD ≥ 85% of patient population achieve weekly creatinine clearance ≥ 60 L/bsa or weekly Kt/V ≥2.0
- CCPD ≥ 85% of patient population achieve weekly creatinine clearance ≥ 63 L/bsa or weekly Kt/V ≥2.1

**Anemia Management Goals 2002-2003**
**Hemodialysis & Peritoneal Dialysis**
All patients measured every month of PD clinic visit.
- ≥ 85% of patient population achieve hemoglobin ≥11 gm/dL
- ≥ 40% prevalent patient population fistula rate DOQI™
- ≤ 10% prevalent patient population catheter rate DOQI™

C. CMS National CPM Project.

All 18 Networks participated in the national Clinical Performance Measures (CPM) project. Random samples of hemodialysis and peritoneal dialysis patients were drawn. The hemodialysis sample had sufficient size to be representative of each Network. The peritoneal dialysis sample size was used for national rates only. Chart C.1 shows the national comparison of Network 9 and Network 10 rankings for clinical outcomes to the other 16 networks for the past four years.

<table>
<thead>
<tr>
<th>Clinical Characteristic</th>
<th>Network 9 4Q96</th>
<th>4Q97</th>
<th>4Q98</th>
<th>4Q99</th>
<th>4Q00</th>
<th>4Q01</th>
<th>4Q02</th>
<th>Network 10 4Q96</th>
<th>4Q97</th>
<th>4Q98</th>
<th>4Q99</th>
<th>4Q00</th>
<th>4Q01</th>
<th>4Q02</th>
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<tr>
<td>Percentage Patients with Average:</td>
<td></td>
<td></td>
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<tr>
<td>URR ≥ 65%</td>
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<td>9</td>
<td>8</td>
<td>4</td>
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<td>5</td>
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<td>Kt/V ≥ 1.2</td>
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<td>9</td>
<td>8</td>
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<td>5</td>
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<td>Percentage Prevalent Patients:</td>
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<tr>
<td>AV Fistula</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>10</td>
<td>13</td>
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<td>13</td>
<td>13</td>
<td>8</td>
<td>10</td>
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<tr>
<td>Catheter (low rate)</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>13</td>
<td>12</td>
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<tr>
<td>Albumin ≥3.5 gm/dL</td>
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<td>--</td>
<td>12</td>
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<td>15</td>
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<td>10</td>
<td>1</td>
<td>7</td>
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<tr>
<td>Hgb ≥ 11 gm/dL</td>
<td>--</td>
<td>--</td>
<td>10</td>
<td>16</td>
<td>16</td>
<td>14</td>
<td>14</td>
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<td>16</td>
<td>16</td>
<td>16</td>
<td>8</td>
<td>1</td>
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<tr>
<td>Ferritin ≥100 ng/mL</td>
<td>10</td>
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<td>17</td>
<td>8</td>
<td>4</td>
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<td>13</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>TSAT ≥ 20%</td>
<td>14</td>
<td>17</td>
<td>18</td>
<td>12</td>
<td>15</td>
<td>14</td>
<td>14</td>
<td>6</td>
<td>1</td>
<td>15</td>
<td>4</td>
<td>2</td>
<td>7</td>
<td>8</td>
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<tr>
<td>% patients receiving EPO with:</td>
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</tr>
<tr>
<td>Hgb value 11-12 gm/dL</td>
<td>--</td>
<td>6</td>
<td>9</td>
<td>--</td>
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<td>16</td>
<td>--</td>
<td>13</td>
<td>16</td>
<td>--</td>
<td>12</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>% patients prescribed IV Iron</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>13</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>8</td>
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<tr>
<td>% patients prescribed EPO Subc</td>
<td>--</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>--</td>
<td>13</td>
<td>11</td>
<td>12</td>
<td>18</td>
<td>9</td>
<td>1</td>
</tr>
</tbody>
</table>

Chart C.2 shows the Network 9 and Network 10 random samples for the CMS National CPM Project. Data validation of the national sample was conducted on five percent of the random sample. Network 9/10 staff abstracted patient charts for this process.
D. Network Special Projects/Studies

1. Quality Improvement Projects:

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

1.a. Network 9 Assessment and Reduction of Catheters in Hemodialysis QIP. This project was conducted throughout 2002 and the final report was approved on June 30, 2003.

1.b. Network 10 Assessment and Reduction of Catheters in Hemodialysis QIP. This project was conducted throughout 2002 and the final report was approved as of June 30, 2003.
1.c. Fistula First (NVAII – National Vascular Access Improvement Initiative)

**Background:** In 2003 the ESRD Networks and CMS, along with clinicians, dialysis providers, and patients, developed a three-year plan called the NVAII. This plan will implement strategies for the improvement of patient vascular access outcomes to reach the CPM and K/DOQI guidelines for AVF use of 50% incidence and 40% prevalence. The NVAII aims to build on prior work and to take advantage of system-level diagnosis and strategies for improvement. Collaboration between Networks, providers, physicians, vascular surgeons, and health professionals will be key to spread the “change” ideas for improving AV fistulas.

**Primary objectives:**
1. To increase prevalence rate of AVF in Network 9 from 30.3 percent in 2002 to 34.3 percent in 2006 (an increase of 4%) and increase Network 10 from 33.3 percent in 2002 to 37.3 percent in 2006 (an increase of 4%).
2. To increase the incidence rate of new ESRD patient AVF, i.e. increase 5% per year.
3. Educate providers, physicians, and vascular access surgeons on documentation of AVF assessment pre hemodialysis access placement
4. Educate providers, physicians, and vascular access surgeons on the AVF improvement strategy

**Methods:**
1. Establish a Vascular Access Advisory Panel (VAAP) to oversee the project and report to the MRB. Members of the Panel include:
   - Peter DeOreo, M.D., Chair, Centers for Dialysis Care, Cleveland, OH
   - Anil Agarwal, M.D., Ohio State University, Columbus, OH
   - George Aronoff, M.D., University of Louisville, Louisville, KY
   - Michael Brier, Ph.D., University of Louisville, Louisville, KY
   - Luis Cespedes, M.D., RCG-Villa Park, Elmhurst, IL
   - Wendy Jagusch, R.N., Centers for Dialysis Care, Cleveland, OH
   - Stephen Jensik, M.D., Rush Presbyterian, Chicago, IL
   - Gary Lemmon, M.D., Wright State University, Dayton, OH
   - Linda Luevana, R.N., Rush Presbyterian, Chicago, IL
   - Gordon McLennan, M.D., Indiana University Medical Center, Indianapolis, IN
   - Jackie Miller, R.N., Renal Care Group, Fort Wayne, IN
   - Douglas Mufuka, M.D., FMC-Jackson Park, Chicago, IL
   - Rino Munda, M.D., University of Cincinnati, Cincinnati, OH
   - Tim Pflederer, M.D., Renal Care Associates, Peoria, IL
   - Prabir Roy-Chaudhury, M.D., University of Cincinnati, Cincinnati, OH
   - Erdal Sarac, M.D., CDC-Canfield, Canfield, OH
   - Mary Showers, R.N., VA Medical Center, Cleveland, OH
   - Greg Stephens, M.D., The Christ Hospital, Cincinnati, OH
   - Jay B. Wish, M.D., University Hospitals of Cleveland, Cleveland, OH
2. Conduct regional Learning Sessions.
3. Conduct monthly Awareness/Educational Campaigns.
4. Maintain vascular access feedback reports to facility vascular access personnel and physicians.
5. Establish and maintain communication with facility vascular access personnel and physicians.

**Actions:**
1. Invite key individuals to participate on Vascular Access Advisory Panel (VAAP) and confirm membership.
2. Maintain and improve communication with vascular access stakeholders:
   a. Facility: medical director, administrator, vascular access coordinators, and nephrologists.
   This would include, and not be limited to, constructing a database of vascular access surgeons and coordinators.
3. Identify Health Service Areas (HSAs) and facilities for levels of participation:
   a. Areas of Networks 9/10 that demonstrated a need for improvement were targeted for Learning Session workshops. Utilizing demographic data from the Network 9/10 Health Service Area regions and vascular access data from our data collections 5 areas were identified that represent 46% of the network patient population. The Learning Sessions targeted physicians and vascular access surgeons in these areas.
   b. Facilities that had 30% fistulas and 30% catheters as of the 4th quarter 2002 CPM data (120 facilities) were encouraged to participate in the Learning Sessions.
4. Develop the project timeline.
5. Prepare the Internet communication:
   a. Update Network 9/10 Web sites.
   b. Populate the email service.
   c. Conduct Web-Ex conferences for communicating educational items and information to various target and participating groups, ie VAAP, corporate professionals, and vascular surgeon and/or nephrologists.
6. Maintain monthly educational communications with key individuals throughout the network area.

**Learning session findings:** Beginning in 2003, Network 9/10 sponsored regional Learning Sessions designed to complement the coordination of group practices, including multi-dimensional teams. These Learning Sessions targeted specific facility and physician care processes that will improve vascular access outcomes. The speakers were from the Nephrology, Vascular Surgery, and Interventional Radiology services. These physicians presented innovative ideas and demonstrated practices that promoted team-building processes to improve the AV fistula rate. Chart D.1 displays the statistics surrounding the Learning Sessions that were held beginning in 2003.
The Learning Sessions have fostered interest in the regional areas where they were held and have led to the development of Vascular Access (VA) Leadership Groups. Cincinnati was the first Learning Session and is the most advanced with meetings held to discuss commonalities and data collection. Network 9/10 is assisting at present to develop facility, nephrologist, and surgeon specific reports.

Review of the data:

**Chart D.2: Network 9 Fistula Rate:**
Percentage of Prevalent HD Patients

- **K/DOQI Goal:** 40%
- **CMS goal for 2006:** 34.3%
- **Current Prevalent Fistula Rates:**
  - Indiana - 31.7%
  - Kentucky - 32.4%
  - Ohio - 31.5%
  - U.S. (2002) - 33%
Chart D. 3: Network 10 Fistula Rate: 
Percentage of Prevalent HD Patients

K/DOQI Goal: 40%

CMS Goal for 2006

Current Prevalent Fistula Rates:
Illinois - 33.8%
U.S. (2002) - 33%

Chart D.4: Network 9 Fistula Rate: Percentage of Incident HD Patients

- Current Incident Fistula Rates:
  - Indiana - 9%
  - Kentucky - 14.8%
  - Ohio - 10.9%

(Incident = ESRD < 90 Days)

K/DOQI Goal: 50%

- Projection without intervention

39% Gap

Chart D.5: Network 10 Fistula Rate: Percentage of Incident HD Patients

- Current Incident Fistula Rates:
  - Illinois - 10.6%

(Incident = < 90 Days)

K/DOQI Goal: 50%

- Projection without intervention

40% Gap
Conclusions:
1. Efforts in improve vascular access must be timely, focused and coordinated by a multidisciplinary team approach to vascular access placement and care
2. Vascular access management must be the responsibility of the nephrologists and/or medical director
3. There are vascular access surgeons that are interested in doing the right thing and making sure that patients are evaluated and given a fistula if appropriate
4. Interested and motivated vascular access surgeons on the vascular access team assist in spreading the word to the surgeon community
5. Incident fistula rates have to make a significant move in Network 9/10

Future initiatives:
1. Focused Learning Sessions in target HSAs:
   a. There will be discipline specific “break-out” sessions for nephrologists, interventionalists, vascular surgeons, advanced practice nurses, and access coordinators/others
   b. The sessions will address specific concerns/needs for management of the change package
   c. Education tools, data collection tools, and information gathering will be explored.

2. Web-Ex conferences: The Web-Ex Conference Call concept will be utilized more frequently in order to reach more of the community and become more efficient.

3. Web site enhancement:
   a. The Network 9/10 Web site will be a reference point with multiple articles, data collection tools, monthly educational offerings, and recordings of the “break-out” Learning Sessions.
   b. A chat room will be developed for questions, answers, and information sharing area for the Fistula First initiative

4. CKD outreach:
   a. Education will be provided to primary physicians, internists, and nephrologists.
   b. The National Kidney Disease Education Project will be used as a reference.
   c. A comprehensive program noting ways to slow the progression of kidney disease, planning and placing accesses during stage 3-4, and discussing EPO with the patient will be implemented.
   d. A “Tool Kit” will be developed and distributed by Network 9/10 to promote early referral (stage 1-2 CKD) and will provide education for the physician as well as the patient.

2. Follow and assist regional VA Leadership Groups.

3. Develop “Centers of Excellence” award program for Fistula First.
   a. An award, based on the Malcolm Baldridge Award concept, will be given to facilities that can demonstrate, by data, that positive outcomes based on the K-DOQI (quality) guidelines and the team concept is in place.
   b. The award will be entitled “Superior Achievement in Fistula Management.”
   c. The focus is on the centers, not on the individual; it must be a team effort.
4. Continue educational campaign to renal community:
   a. The educational campaign will assist facilities in enhancing their vascular access programs
   b. Sending articles, tools, and/or resources to key individuals in the community will ensure that the Fistula First initiative remains the focus of quality improvement within dialysis facilities

E. Focused Quality Assurance Activities

1. Intervention Profiling. The MRB conducted an annual facility profiling process that integrates several quality domains:

   - CPM measurements for adequacy of dialysis and treatment of anemia
   - Standardized mortality ratio (SMR)
   - Standardized catheter ratio (SCR)
   - Standardized hospitalization ratio (SHR)
   - Data compliance
   - MRB project participation
   - Grievances.

The facility profiling process identified facility outliers in order to assist in improving quality of care. The process assigned points (weights) to each quality indicator based on its importance to patient care.

Facilities acquired points when the facility rate was statistically different from the Network or the standardized rate using a 95% confidence interval or p value < 0.05. Consumer grievances were reviewed by the MRB and points were assigned on a case-by-case basis.

Based on the number of points, an intervention is determined. 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 goal is that all facilities have zero points.

<table>
<thead>
<tr>
<th>Point Level</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Process Notification</td>
</tr>
<tr>
<td>1 - 9</td>
<td>Process Notification and no required action</td>
</tr>
<tr>
<td>10 - 40</td>
<td>Facility internal review</td>
</tr>
<tr>
<td>40 - 49</td>
<td>MRB required facility review and action plans</td>
</tr>
<tr>
<td>50 or more</td>
<td>MRB required facility review, action plans and site visit</td>
</tr>
</tbody>
</table>

In 2003, eight facilities were assigned 40 or more points (based on 2002 data). Facility Intervention Profile Reports were mailed to the Medical Directors and Administrators in August and September. Network staff maintains contact with facilities acquiring 40 points or greater to offer assistance and monitor for improvement. The MRB receives reports on facility action plan updates and outcomes quarterly. By December one facility was closed and the others had shown improvement in areas they received points.
In November, the MRB voted to suspend the Intervention Profiling system until the Core Data Set is finalized. It advised the Network staff to continue to work with the outlier facilities to offer help and assistance toward improvement.

2. Cooperative Activities with Other Agencies

2.a. Network 9/10 distributed the 2003 Dialysis Facility Reports for the KECC in July 2003 to facility medical directors and administrators. This year the reports were a combination of the Unit-Specific Reports and the Facility Data Reports for State Surveyors. The reports included standardized mortality ratios (SMR), standardized total admission ratios (STAR), and standardized transplant ratio (STR) for Medicare-only patients for 1999-2002.

2.b. Network 9/10 cooperated with the Centers for Disease Control and Prevention (CDC) to collect the National Surveillance of Dialysis Associated Diseases survey. The survey forms were distributed in February to all facilities with in-center chronic hemodialysis patients. The completed forms were sent to Network 8 in May.

2.c. Dr. Jerome Tokars of the CDC invited the Network to participate as a group in the Dialysis Infection Surveillance Network. This involvement was approved by both the Board of Trustees and the Medical Review Board. The Network sent information on the project to all units in the four-state area and invited them to join this voluntary project. At year-end the recruitment was on-going. The goal is to form a Network pool of facilities to enter data into the CDC infection Web site. In this way aggregate numbers for the pool can be trended to show comparisons between individual facilities, the Network pool and national statistics. Individual facility information will only be available to the facility and will not be shared in group reports.

2.d. Network 9/10 cooperated with the USRDS to distribute and collect the Cardiovascular Study forms. Because the large dialysis chains instructed their facilities not to complete the data collection form on their patients, Network staff became more involved in the data collection process. The consent forms for the living patient sample were mailed in October. Those facilities that chose to participate returned the consents to the Network so data abstraction by the Network staff could begin in 2004.

F. Grievance Activities

1. 2003 Investigations. Investigations performed independently of a grievance are described in Section 4. Recommended Sanctions.

2. 2003 Formal Grievances

The Medical Review Board updated its "Policy and Procedure For Complaints and Grievances” which addresses grievances filed with the Network. This policy is in compliance with the CMS national policy for evaluating and resolving patient grievances. In addition, a special subcommittee of the Medical Review Board is designated to review grievances.

The Network used a variety of formats to make information available to the dialysis community, including the following activities:
Providing information on the grievance process as well as proactive activities toward grievance prevention.

- A Grievance Packet was developed and made available to patients who preferred an established format.
- A grievance poster and additional grievance information was sent to each facility.
- Articles entitled “Network Complaints and Grievances for 2002” and “Network Participation in Involuntary Patient Discharge Survey” were published in Progress Notes, the professionals’ newsletter of Network 9/10 and an article entitled “Have a Problem or a complaint related to your treatment? Here are Some Things you can do” was published in Renal Outreach, the patient newsletter of Network 9/10.
- A presentation was given to administrators at the Network’s annual Nephrology Conference entitled “The ESRD Network and the Provider: Working Together to Resolve Patient Differences.”
- Network staff attended a Forum-sponsored workshop on Dialysis Patient-Provider Conflict and the Forum’s Patient Services Coordinators Group worked on the development of an internal tool that can be used with non-adherent patients.
- A summary of the grievance process is available on the Network Web site and information about filing a grievance is also available on the patient 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 involve supplying information from various sources available from the Network, such as location of dialysis centers, help with transient dialysis, location of isolation stations, and specific federal regulations. The Network provides assistance to facilities to avoid discharging patients involuntarily, to develop effective behavioral agreements, and works with patients and facilities to resolve issues before they become grievances. In some instances, the Network may act as a go-between, making an initial contact for an individual who is seeking assistance. These contacts are tracked by the SIMS information system.

The complaints are reported through the CMS quarterly report format as investigations or grievances. Investigations are the result of complaints brought to the attention of the Network through a variety of means. Grievances are formal, written complaints filed by patients or their representatives, or by facility staff members.

There were seven grievances filed by patients or their family members during 2003. Table F-1 shows the number that were referred as well as the number resolved.

<table>
<thead>
<tr>
<th>Chart F.1: 2003 Formal Grievances</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Grievances</strong></td>
</tr>
<tr>
<td>7</td>
</tr>
</tbody>
</table>
3. Grievance by Category of Complaint.

This chart represents the seven grievances filed in 2003. In many instances, one grievance will include several of the complaint categories listed above.

![Chart F.3: 2003 Network 9/10 Categories of Grievances (N=7)](chart)

**GOAL 2: Establishing and improving partnerships and cooperative activities among and between the ESRD Networks, QIOs, state survey agencies, and ESRD facilities/providers, ESRD facility owners, professional groups, and patient organizations.**

During 2003, the Network maintained ongoing cooperative relationships with a wide variety of organizations within the renal and Medicare communities.

A. Professional Affiliations.

The Network maintains an ongoing relationship with Health Care Excel, the agency which administers the quality improvement organization (QIO) for both Kentucky and Indiana. The Network is represented on cooperative committees organized by Health Care Excel.

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

During the early months of 2003, the Network received calls from its Indiana facilities with questions on citations issued by the surveyors. To facilitate discussion between the surveyors and the facilities, Network 9/10 organized a cooperative meeting for several interested groups. A meeting was held on July 24, 2003 at the Network office with the program director of the Indiana State Department of Health and the Indiana State Nurses Association executive director to present an overview of the Network and to discuss current trends the surveyors are finding in our dialysis facilities. Discussion was centered on the
use of unlicensed personnel. A meeting was held with the Indiana Dialysis Facility Administrators on September 30, 2003 to further discuss these issues. The focus was on the use of technicians in the dialysis settings. Discussions on how to resolve the issue were ongoing at year-end.

On August 26, 2003, Network staff gave an overview presentation of the Network and dialysis to the Illinois Department of Public Health at their staff meeting in Tinley Park, Illinois. An overview of dialysis and renal failure was presented to the Indiana surveyors at the Indiana State Department of Health meeting in Indianapolis on October 2, 2003.

The Network also provides resources and contacts with other dialysis agencies, such as 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.

B. Patient Interaction in Network Activities.

To promote patient input and participation in the Network, the following activities were conducted during 2003.

- New patients were informed about the Network through a New Patient Packet that the Forum distributes to new patients.
- Patients participated on Network Committees.
- Patients participated in the Robert Felter Memorial Award program, both in choosing a recipient for the facility award as well as the patient award.
- Throughout the year, information about the PLC and Patient-to-Patient Program as well as other patient resources were sent to patients and staff who expressed an interest in becoming involved with any of the programs.
- Patients participated in the development of the CD-ROM educational games for pediatric patients.

C. 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 2003 information was distributed Network-wide in the following manner:

1. Newsletters, Renal Outreach and Progress Notes.

The Renal Network publishes two newsletters for the different renal audiences newsletter in the four-state area. Renal Outreach is directed toward the community of ESRD patients, but ESRD professionals and members of the renal community receive the newsletter, as well. In total, about 10,000 copies are distributed with each mailing. Progress Notes is written for the community of renal professionals; about 5,000 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, rehabilitation, 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 or family member. Progress Notes contains updates on Network activities and nephrology news of national interest for the renal professional.


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, in the policies and guidelines section.

3. Web Sites

The main Network Web site is found at the www.therenalnetwork.org. This site is intended to provide information about Network 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.

A second Web site is devoted to issues of interest to patients and family members. This site, www.kidneypatientnews.org, contains articles and information with a patient focus. There are links to other sites as well as the ability to download and/or order Network materials. It is updated on a regular basis.
4. **New and Updated Resources:** During 2003, resources were added and/or updated, including the following:

- Kidney Games - A CD-ROM for pediatric school age children
- PAC Rep Facility Guide
- Patient Grievance Packet and Poster
- 2004 Network Calendar: Vascular Access, A Proactive Approach to Successful Patient Outcomes
- Updated Patient Manual
- Renal Outreach
- Progress Notes

5. **Educational and Cooperative Activities:**

- The Network collaborated with the New Media Department, School of Informatics, at Indiana University-Purdue University at Indianapolis for the development of Kidney Games, a CD-ROM and the upcoming family animation and interviews.
- Materials were provided for nine events including health fairs and workshops/training programs.
- CMS booklets on emergency planning for facilities and patients were sent to all facilities.
- The Network collaborated with the Indiana National Kidney Foundation and Genzyme to present a workshop for patients and staff entitled “Beating the Odds with Spirited Joy.”
- The Network collaborated with the Indiana Alzheimer’s Association and Indiana University Hospitals to present the workshop “When Dementia Is Not The Only Diagnosis.”
- The Network provided presentations for the Illinois Department of Health on “The Role of the Network and the Grievance Process.”
- The Network participated in NKDEP’s initiative to prevent and increase an awareness of kidney disease in the African American community in Cleveland, Ohio.
- The Network participated in Forum-sponsored activities related to challenging patients, including the Involuntary Patient Discharge Survey, the Dialysis Patient–Provider Conflict: Designing a Collaborative Action Plan with the ESRD Stakeholders, and the Forum Patient Services Coordinators Group’s development of an internal tool kit for non-adherence and Best Practices Session at the annual meeting.

6. **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 2003 Nephrology Conference was held on May 15 and 16 at the Indianapolis Marriott Downtown. This annual 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 the meeting of the Network Coordinating Council. The chart below shows attendance rates for 2001 - 2003.

<table>
<thead>
<tr>
<th>Meeting</th>
<th>Vendors</th>
<th>Vendor Reps</th>
<th>MD</th>
<th>Admin</th>
<th>RN</th>
<th>Tech</th>
<th>SW</th>
<th>RD</th>
<th>Neph Update</th>
<th>TOTAL Registrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>35*</td>
<td>121</td>
<td>37</td>
<td>111</td>
<td>133</td>
<td>52</td>
<td>97</td>
<td>73</td>
<td>304</td>
<td>965</td>
</tr>
<tr>
<td>2002</td>
<td>33*</td>
<td>N/A</td>
<td>47</td>
<td>130</td>
<td>136</td>
<td>63</td>
<td>53</td>
<td>54</td>
<td>258</td>
<td>741</td>
</tr>
<tr>
<td>2001</td>
<td>35*</td>
<td>N/A</td>
<td>42</td>
<td>86</td>
<td>132</td>
<td>64</td>
<td>78</td>
<td>81</td>
<td>212</td>
<td>695</td>
</tr>
</tbody>
</table>

* Figure not included in TOTAL column.

The Conference is organized by the Conference Program 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 and sponsors a certification exam for technicians with BONENT.

All programs are designed to provide continuing education credits for participants, to enhance 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.

Topics for presentations included:
- Infection Control Guidelines
- KDOQI Guidelines & Bone Disease Management
- Carnitor Reimbursement
- Dealing with the Difficult Patient
- Improving Vascular Access/Promoting Fistula Placement
- New Studies in Dialysis That May Change Our Practice
- Update in Continuous Therapies from the ICU Bedside to Home Bedroom
- Update on Calcium, Phosphorous & PTH in CKD & ESRD
- Anemia & Iron Update in CKD
- Regulatory Update
- HIPAA Issues
- The Providers’ Challenge – Balancing Provision of Care, Setting, Reasonable Behavioural Expectations & Enforcing Consequences
- The Provider Perspective & The Network Perspective in Resolving Differences
- Opportunities in Maximizing Facility Reimbursement
- Hiring Winning People & Keeping Them!
• Legal Boundaries of Licensure & Certification
• Workplace Environments – A Major Factor in Staff Retention
• A Surgeon’s Perspective: From Pre-ESRD Vascular Access to Transplant
• The Master Cannulator Program
• Pastoral Counseling in the Dialysis Setting
• Single Use vs. Reuse of Hemodialyzers: Which is Better?
• The Role of the Social Worker on the Vascular Access Team
• Anger’s Slippery Slope: Anger Management for Patients & Staff
• Medical Nutritional Therapy
• The Role of the Dietitian on the Vascular Access Team
• Taste & Smell Dysfunction in ESRD

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 chart below illustrates the number of facilities that were recognized for achievement through the Network 9/10 Quality Awards Program.

<table>
<thead>
<tr>
<th>Network Quality Award</th>
<th>2000 # (% total)</th>
<th>2001 # (% total)</th>
<th>2002 # (% total)</th>
<th>2003 # (% total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anemia Management: a. Hemodialysis Programs</td>
<td>10 (3%)</td>
<td>44 (11%)</td>
<td>88 (21%)</td>
<td>96 (20%)</td>
</tr>
<tr>
<td>b. Peritoneal Dialysis Programs</td>
<td>10 (6%)</td>
<td>26 (15%)</td>
<td>32 (20%)</td>
<td>18 (9.5%)</td>
</tr>
<tr>
<td>Adequacy of Dialysis: a. Hemodialysis Programs</td>
<td>43 (11%)</td>
<td>16 (4%)</td>
<td>49 (11%)</td>
<td>102 (22%)</td>
</tr>
<tr>
<td>b. Peritoneal Dialysis Programs</td>
<td>1 (1%)</td>
<td>33 (18%)</td>
<td>56 (35%)</td>
<td>17 (9%)</td>
</tr>
<tr>
<td>Fistula ≥ 40%</td>
<td>23 (6%)</td>
<td>24 (6%)</td>
<td>70 (16%)</td>
<td>56 (12%)</td>
</tr>
<tr>
<td>Catheter ≤ 10%</td>
<td>10 (3%)</td>
<td>6 (1%)</td>
<td>16 (4%)</td>
<td>3 (.6%)</td>
</tr>
<tr>
<td>Sustaining Member: a. Hemodialysis Programs</td>
<td>8</td>
<td>17</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>b. Peritoneal Dialysis Programs</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>

7. Other Activities.

The Network has developed and maintained email list services for different audiences, including physicians, administrators and social workers. These list services are used as warranted to provide an expedient and inexpensive means to reach a large audience with information, such as 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 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.

**GOAL 3: Supporting the marketing, deployment, and maintenance of CMS approved software.**

ESRD Network 9/10 was an active partner in promoting CMS programs for data collection, specifically the VISION software package. The Data Manager and the Director of Data Services attended national meetings to learn about the updates in software and data collection tasks for the ESRD Networks.

During 2003, Network 9/10 conducted six training sessions and trained 95 individuals in 35 dialysis facilities. This number represents about 20% of eligible dialysis units, i.e., independent, non-large dialysis provider dialysis units. At year-end, 35 dialysis facilities were entering data through the VISION software. A total of 1,193 events had been received, 416 2728 CMS Medical Evidence forms and 303 2746 CMS Death Forms.

**GOAL 4: Improving data reliability, validity, and reporting between ESRD facilities/providers, Networks, and CMS and other related agencies.**

**A. Facility Compliance**

At the beginning of 2003 all dialysis and transplant facilities within the Network were participating as required by CMS and The Renal Network. At year-end 2003, all dialysis facilities within the Network 9/10 area were participating as required by CMS and The Renal Network.

During 1999, The Renal Networks converted to the Standardized Information Management System (SIMS) developed by the ESRD Networks and CMS; in 2003 work continued to update this system as needed.
B. System Description.

The data processing system is based on the generation of CMS 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.

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

- CMS 2728 - Chronic Renal Medical Evidence Report
- CMS 2744 - ESRD Facility Survey
- CMS 2746 - ESRD Death Notification

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

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.
- 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.

C. Compliance Reporting.

The SIMS 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 which fall below the CMS goals at their quarterly meetings.

D. Patient Tracking System.

In July 2003, to be in compliance with the new CMS Contract, The Renal Network ceased to use its NephTrak software. Facilities converted to paper hard copy submission of data or to the VISION software if appropriate.

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
Clinical Performance Measures

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

E. Community Outreach Through Data

Network 9/10 uses its database as a constant source of information on the ESRD population for the renal community. During 2003, 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 CMS 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.

4. SANCTION RECOMMENDATIONS.

No sanction recommendations were made during 2003. However, three instances arose where Network intervention was needed on an ongoing basis to assure the care within the dialysis unit was adequate.
1.) On February 25, 2003 the Network became involved with a facility in Ohio regarding quality of care issues. Complaints from patients included lack of staff (no RN’s, only technicians, no dietitian or social worker for several months); Epogen not being administered to patients due to “lack of money”; and infrequent contact with the Medical Director. Fearing an immediate jeopardy situation, the patients were encouraged to call the Ohio Department of Health. Network staff also notified the Department of Health, the project officer, and the regional offices of CMS. The Department of Health surveyed the facility on March 5, 2003. Complaints were substantiated. The Network monitored the situation at the facility continuously as the state worked with the facility to come into compliance. The facility currently has temporary staff in the unit. Plan of correction and follow-up with Department of Health continues. No further complaints were received from the patients.

2.) A facility in Indiana was monitored closely during 2003 for anemia and adequacy. This facility had 40 points on their Facility Intervention Profile report for 2002. No improvement was made after numerous contacts with Network staff, so the Indiana State Department of Health became involved as well as the facility corporate staff. Steady improvements were made in 2003. The percentage of patients meeting hemodialysis adequacy goals was approximately 80%.

3.) A facility in Ohio that had been assigned 57.5 points on their 2003 Facility Intervention Profile was reported to the Department of Health in December for not complying with the Network. The administrator had been contacted by phone on October 22 and December 3, in addition to receiving a letter in early September. Network goals and requirements were discussed, however there was no cooperation from the facility. The facility closed on 12-26-03.

5. RECOMMENDATIONS FOR ADDITIONAL FACILITIES

Each year through the patient tracking system, The Renal Network conducts a review of facility operations. This information is made available to the provider community for many uses, including estimating need for additional services.

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.
6. DATA TABLES