3. CMS National Goals And Network Activities

A. Improving The Quality Of Health Care Services And Quality Of Life For ESRD Beneficiaries

TARC staff, Medical Review Board, Board of Trustees and the network Council developed goals and activities for three years. The goals are used to focus attention on and promote action in specific areas of nephrology to enhance the delivery of health care services. The goals that were effective as of July 1, 2005 were:

I. Promote consumer education to enable informed decision-making about treatment modalities, participation in care and optimum outcomes.

A. Each facility will educate patients about treatment modalities:
   1. All facilities will have a minimum of one transplant designee.
   2. All facilities will have a minimum of one home dialysis designee.
   3. 10% of the network wide dialysis patient caseload will use home dialysis.

B. Consumer Rights & Responsibilities/ Grievances
   1. Each facility will post in a prominent place, the TARC *Consumer Rights & Responsibilities* and the *Consumer Grievance Procedure*:
   2. Each facility will distribute the *Consumer Grievance Procedure* and the *Consumer Rights & Responsibilities* to the patients as needed.

Supportive Activities

All consumers need to receive information about treatment modality options prior to initiation of renal replacement therapy (RRT) and at regular intervals following initiation of therapy. While some consumers may have had ample time to learn about treatment modalities before starting treatment, others have little time between diagnosis and initiation of RRT. All consumers need to be aware that the option to be evaluated for a change in modalities is available at any given time.

To help consumers gain knowledge about treatment options, each unit will have a minimum of one transplant designee. TARC had 296 certified transplant designees in 2005. All 155 facilities within network 3 had at least one transplant designee. The vast majority of transplant designees received their certification from St. Barnabas Medical Center's program or Auxilio Mutuo Hospital's program. Both St. Barnabas Medical Center and Auxilio Mutuo Hospital have longstanding successful transplant designee programs.

Long waiting lists for organs are problematic both in network 3 and throughout the country. The network's six transplant facilities had a total of 3068 people on their kidney transplant waiting list as of December 31, 2005. This is only a slight increase from 3064 people on the waiting list from 2004. This list is not comprised solely of consumers within the network boundaries (information source: SIMS database, May 2005).

Many factors affected the actual number of kidney transplants performed: availability of transplant surgeons, operating rooms, intensive care facilities, specialized nurses and other ancillary staff. A major factor is the number of organs available. Historically, most people on transplant lists have had to wait for cadaveric kidneys.

Interstate transplant referral patterns have been operative for many years. Dialysis consumers sought transplant services not only at one of the six local programs but also at those in neighboring or distant states. For example, some New Jersey dialysis consumers received

cadaveric organs or transplant work-ups in New York, Maryland, and Pennsylvania during 2005. A number of Puerto Rico consumers received kidney transplants in Texas, Massachusetts and Florida.

While the six transplant programs provide convenient and state-of-the-art transplant services, the ultimate goal is for consumers to have choices among high-quality renal replacement therapies whether or not those services are located within the network's boundaries. The vast majority (89%) of the Medicare-approved and Veterans Administration dialysis programs in New Jersey at year's end had a minimum of one patient who received a kidney transplant in 2005 (facilities had to be in operation for at least nine months and have an ambulatory dialysis caseload to be included.) The range in number of dialysis consumers who received a transplant from those dialysis facilities ranged from one to twenty-seven consumers.

The transplant designees serve as the initial link between the consumer and the ultimate goal of transplantation. Their responsibilities include: educating the dialysis patients about transplantation, reviewing cases for medical suitability, reporting referrals to the transplant surgeons and documentation of transplant discussions in the medical record. Dialysis providers, by pursuing this activity, sought to make the option of a transplant work-up available to medically suitable consumers. Unfortunately during 2005, the number of organs available and suitable for use was still fewer than those needed or desired by network dialysis consumers.

Home dialysis as a selected modality showed a continued decline in the number of patients choosing this setting in 2005.

Percent of Home Patients per Year in Network 3

Year	% of Patients on Home Dialysis
2005	7%
2004	7%
2003	8%
2002	9%
2001	9%
2000	10%
1999	12%
1998	14%
1997	16%
1996	18%

Source: SIMS database, April 2006

Home hemodialysis has not been a popular modality for some years. In 2005, there were 29 patients receiving home hemodialysis. This year TARC had a facility introduce daily hemodialysis; the program consisted of 5 patients. There is great hope for this method but reimbursement has not been modified to make newer daily methods feasible. Twenty-four of these home hemodialysis patients were represented by 11 providers within the state of New Jersey. Two facilities provided home hemodialysis services within the Puerto Rico. There were no facilities performing home hemodialysis in 2005 within the United States Virgin Islands.

TARC recognized two variables that affect the number of home dialysis patients: a lack of patient education, and a shortage of qualified nurses available to provide education and training for home dialysis modalities.

To address these issues, TARC continued a home designee program designed to mirror the transplant designee program. The program educated staff nurses about home dialysis options and staff nurses provided current knowledge of home dialysis and resources for home programs

to patients. Patients were encouraged to pursue home dialysis as an option. The desired result was to have more patients knowledgeable about home dialysis and select home dialysis as their modality. The secondary gain to the facility was that they could improve their patient census; if more dialysis patients dialyzed using the home modality, fewer patients would be dialyzed in center, resulting in an improved nurse to patient ratio.

The planning committee met on December 4, 2005. The committee partnered with home dialysis providers to identify barriers to home dialysis and to refocus the home designee program. The committee identified lack of education on the part of the caregivers as a major barrier. The staff at the facility level do not have a good understanding of peritoneal dialysis or an understanding of the benefits of home hemodialysis.

The committee felt that a "hands on" approach may improve home dialysis referral. Recent literature comparing the risk for death with peritoneal dialysis and hemodialysis noted a ···*statistically significantly higher risk for death among patients receiving peritoneal dialysis compared with those receiving hemodialysis during the second, but not first, year of dialysis*[11] has presented a new challenge to the peritoneal dialysis referral process. The committee was composed of the following:

Member	Facility
Laura Suarez	Fresenius Medical Care
Robert Motacki, MA	DCI No Brunswick Dialysis Center
Liz Kilker	Fresenius Medical Care
Kathy Searson, RN BS CNN	DCI North Brunswick Dialysis Center
Ann Marie Duffy	Baxter Healthcare Corporation
Charlie Sandora	Aksys, Ltd Home
Joan Solanchick, Executive Director	Trans Atlantic Renal Council
Hazel Dennison, RN MSN CNN APN C	Trans Atlantic Renal Council
Beverly Hoek, RN, CNN	Trans Atlantic Renal Council

TARC believes home dialysis would be beneficial for many consumers and continues to develop programs to assist the consumer in making an educated decision for their healthcare. The development and inception of the home dialysis designee program is to insure the continued discussion and implementation of the activities resulting in all the multidisciplinary renal teams to consider all modality choices when orienting newly diagnosed ESRD consumers.

The *Consumer Rights & Responsibilities* flyer along with the *Consumer Grievances* were distributed to all facilities in English and Spanish. The facilities were asked to display the material in a prominent place such as the waiting room and distribute paper copies to all patients.

In addition to paper copies, TARC *Consumer Rights & Responsibilities* and the *Consumer Grievance Procedure* are posted on the TARC Web site in English and Spanish. When a new facility is approved as an ESRD provider by CMS, a package of materials is sent. In this package are copies of the *Consumer Rights & Responsibilities* and *Grievance Procedure*. Some facilities include TARC's rights as part of the patients' medical record.

The TARC Web site provides a question and answer section for patients. Patients can ask directly for information or have questions answered that relate to their renal disease or dialysis on this Web site. The questions are first answered by the patient services coordinator, reviewed by the quality improvement administrator and by a medical review board physician for clarity and

[11] A**nnals of Internal Medicine,** volume 143, pages 174-183

accuracy of information provided to consumers. The site is also available to consumers who utilize Spanish as their primary language.

The total number of inquiries to the Web site was 192. There were 68 questions written in English and 124 were in Spanish. Of the total questions, some did not pertain to dialysis, transplant or the field of nephrology; those questions were referred to alternate information sources and/or Web sites.

The English version of the questions consisted of a total of 68 responses. These questions originated from anyone with a renal-related issue, not just from consumers within network 3 boundaries. The distribution of responses included 10 transplant-related, 24 dialysis-related, 30 related to the category 'other renal.'

The subjects in each area were diverse and included, creatinine levels, dialysis access, kidney disease and hypertension in the dialysis field, exercise, edema and weight gain were examples of issues addressed. The 'other' field contained such subjects as, pre-renal disease, urine protein, financial help as well as a variety of nephrology disease states including horseshoe kidney, Bosniak cyst and polycystic kidney disease.

The Spanish questions originated from anyone with a renal related issue, not just from consumers within network 3 boundaries but from South America, Canada and Europe. Responses included 23 transplant-related, 71 dialysis-related and 30 related to the category of 'other renal.' The subjects in each area were diverse and included, transplant living related and non-related donor and recipient information, donor compatibility and transplant facilities as examples within the transplant category.

Within the dialysis field, peritoneal dialysis, dialysis medications, congestive heart failure, blood vascular access aneurysm, estimated dry weight, dialysis medications, creatinine clearance, and dialysis modalities were examples of issues addressed. The 'other' field contained such subjects such as new diagnosis of kidney disease, polycystic kidney disease, diabetes, hepatitis B blood results, infections and life expectancy on dialysis.

Effectiveness

All facilities within network 3 have a minimum of one transplant designee and one home dialysis designee. Seven percent of the network-wide patient caseload has chosen home dialysis as their modality. Additional effort will be directed toward home therapies.

Consumer Impact

All efforts were made to provide consumers with the knowledge base to choose the desired modality. Consumer rights, responsibilities and grievances were provided to facilities to encourage problem resolution.

II. Encourage facilities to develop continuous quality improvement systems that utilize current theories and promote patient safety.

The facilities will maintain an internal multidisciplinary QI process.

1. Facility management will have CQI meetings that are distinct from other meetings (such as care plan sessions) at least quarterly.
2. Medical directors will participate/lead multidisciplinary CQI teams and institute CQI methodology involving all privileged nephrologists of the facility, as appropriate.

Supportive Activities

The majority of facilities have distinct quality improvement meetings. TARC stresses the importance of multidisciplinary CQI meetings on a regular basis, meeting at least on a quarterly basis.

Consumer health and safety information that was sent to facilities included the following:

- CDC updated flu material was sent to all facilities
- Influenza pandemic preparedness information
- Article promoting patient safety *Staying Warm in the Winter can be a Matter of Life and Death for Older People*
- Article on infection control measures for the prevention/control of flu in health facilities
- *Spectrum of Bone Disorder in CKD 2005* from the Kidney & Urology Foundation
- Link on the TARC Web site for the *CMS Hospital Compare* Web site
- Pamphlets for patient education: *Caring for and Developing your fistula: What you should know* and *Fistula Complications: Stenosis & Thrombosis*
- Dialysis Patient Provider Conflict poster was sent to all facilities
- *Dialysis Patients Speak: A Conversation About the Importance of AV Fistulas*
- Article entitled, *Permangate as a Cause of Apparent Chloramine Breakthrough in Dialysis Water* to dialysis administrators
- Article entitled, *In Health Care*, *a Degrading Shift From Person*
- CMS Web-ex sessions for the new Medicare part D.
- Information on stroke awareness video for Hispanics by National Institute of Neurological Disorders and Stroke
- Educational video on buttonhole technique was distributed to facilities on request
- Article, *Medication-Related Problems in Ambulatory Hemodialysis Patients: A Pooled Analysis*
- Article *Changes in Medicare Reimbursement and Patient-Nephrologist Visits, Quality of Care*
- Article on Fistula First, *For Kidney Patients, Another Failure*
- September 2005 *Urgent Product Recall for Meridian Hemodialysis Instrument*
- Results of quality improvement projects

Effectiveness
TARC assisted several facilities to develop and operationalize an internal QI program. TARC supported facilities in QI activities including the Fistula First program.

TARC sent dialysis facilities information for distribution to consumers about patient safety and quality improvement. Additionally, the consumer Web site contains patient safety information about many things such as medications, immunizations/vaccinations, injury and accident prevention and safety and wellness.

Consumer Impact
Delivering safe and effective care provides significant benefits to consumers through better management of the comorbidities that effect ESRD consumers. These improvements allow a better quality of life as well as reduced morbidity.

III. Encourage utilization of the most recent scientific evidence to improve patient care.

A. Facilities will participate in quality improvement projects.
B. Facilities will participate in national and local clinical performance measures projects:
   1. *Adequacy of Dialysis*-facilities will maintain 80% of the hemodialysis patients with mid-week URR values of ≥ 65%.

2. *Anemia Management*-facilities will maintain 80% of their patients with pre-dialysis hemoglobin values ≥ 11gm/dL
3. *Vascular access*- all facilities will have a vascular access program that monitors stenosis, promotes AVF's and decreases catheter use
4. Encourage catheter rate of ≤ 25% for prevalent patients
5. *Nutrition*-each facility will have 35% of their patients with an Albumin of ≥ 4.0/3.7 gm/dL (BCG/BCP)

Supportive Activities

In 2003, CMS introduced the National Vascular Improvement Initiative (NVAII), a quality improvement project, to all the networks. This 3-year project was based on the K/DOQI guidelines that indicated that 40% of the prevalent hemodialysis patients should have an arteriovenous fistula (AVF) and 50% of the incident patients should have an arteriovenous fistula in use. The rationale for this project is hemodialysis patients with AVFs have improved morbidity and mortality outcomes.

Significant differences included: all networks would have the same project. The Institute for Healthcare Improvement (IHI) was hired as a consultant and the large dialysis organizations as well as other stakeholders would be active participants in the decision-making for this national project.

All eighteen networks participated in the same project with the same goals. The *Fistula First* project thus became a national project.

Fistula First Data

TARC collected vascular access data from facilities starting in 1997 as part of the local Hemodialysis Improvement Project (HIP). Although the HIP was terminated in 2003, the vascular access data was provided using the *Fistula First* data collection tool for non-LDOs. The LDOs provided vascular access data by facility to a central processor and data was forwarded to the networks. The charts and graphs in the following sections utilize the HIP data as a source from 1997 through June 2003. December 2003 to the present utilizes data that is from the *Fistula First* data collection tool.

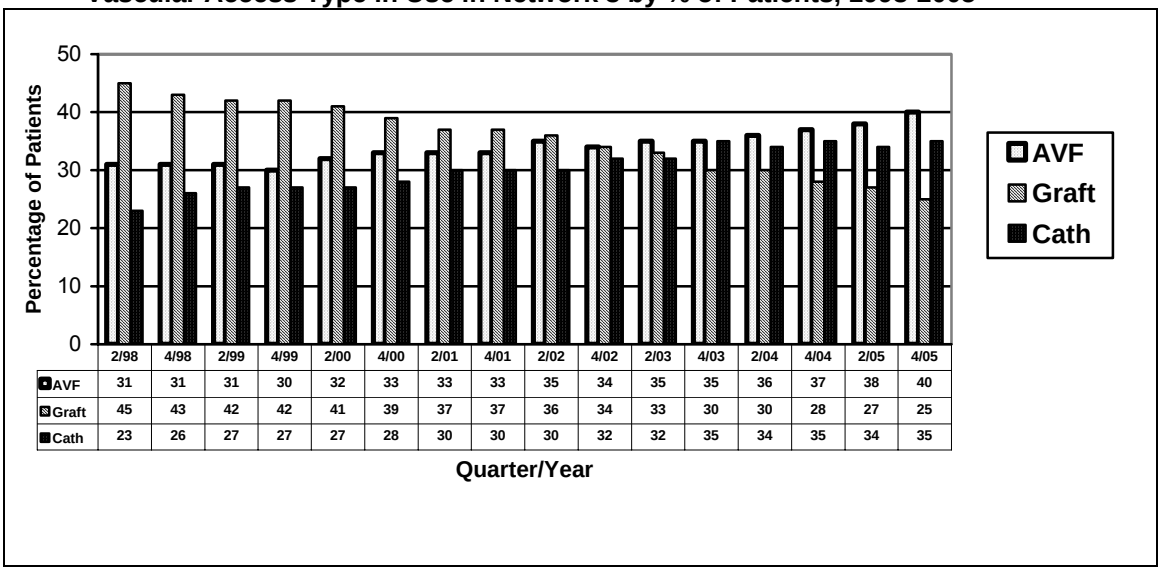
Network Results

Fistula rates within network 3 have increased in small increments since 1997, which was when the DOQI guidelines were published. The goal of the *Fistula First* project is to have 40% of prevalent patients using a fistula by 2006. This goal has been raised by CMS and will be 66% by 2009. Note that the vascular access data presented on these pages reflect prevalent patients. Historically, incident patients were not measured separately.

Although AVF rates have increased slowly, catheter rates appear to have reached a plateau. TARC's fistula rate has improved and was 40% as of December 2005.

Many authors have associated catheter rates with increased morbidity and mortality. In June 1997, TARC facilities reported 1,712 patients with catheters. In December 2005, there were 4,476 patients with catheters, which is an increase of 3% over the previous year. The percentage of patients at risk as of December of 2005 was 34.52% more than one-third of the hemodialysis population utilizing a catheter for hemodialysis.

Vascular Access Type in Use in Network 3 by % of Patients, 1998-2005



	2/98	4/98	2/99	4/99	2/00	4/00	2/01	4/01	2/02	4/02	2/03	4/03	2/04	4/04	2/05	4/05
AVF	31	31	31	30	32	33	33	33	35	34	35	35	36	37	38	40
Graft	45	43	42	42	41	39	37	37	36	34	33	30	30	28	27	25
Cath	23	26	27	27	27	28	30	30	30	32	32	35	34	35	34	35

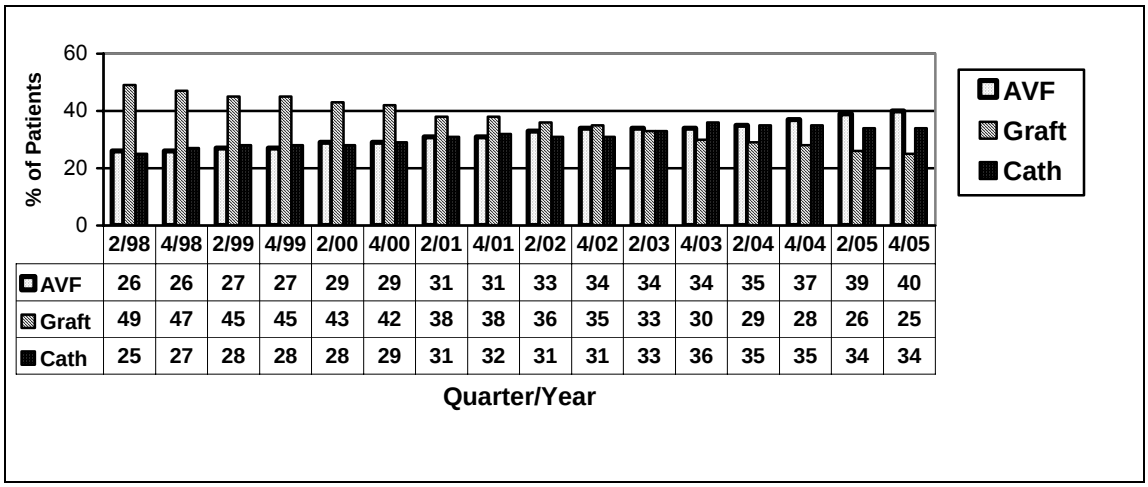
Area Specific Data

New Jersey

A key reason why there has been an increase in the overall rate of fistulae in network 3 is because New Jersey hemodialysis patients have had more functioning fistulae placed. The rate of fistulae increased from 24.7% in June 1997 to 39.51% as of December of 2005.

The rate of catheters decreased from 34.95% to 34.15% while the number of patients with AVF maturing increased by 15%. Decreasing catheter rates has been stressed by TARC.

Vascular Access Type in Use in New Jersey by Percent of Patients, 1998-2005

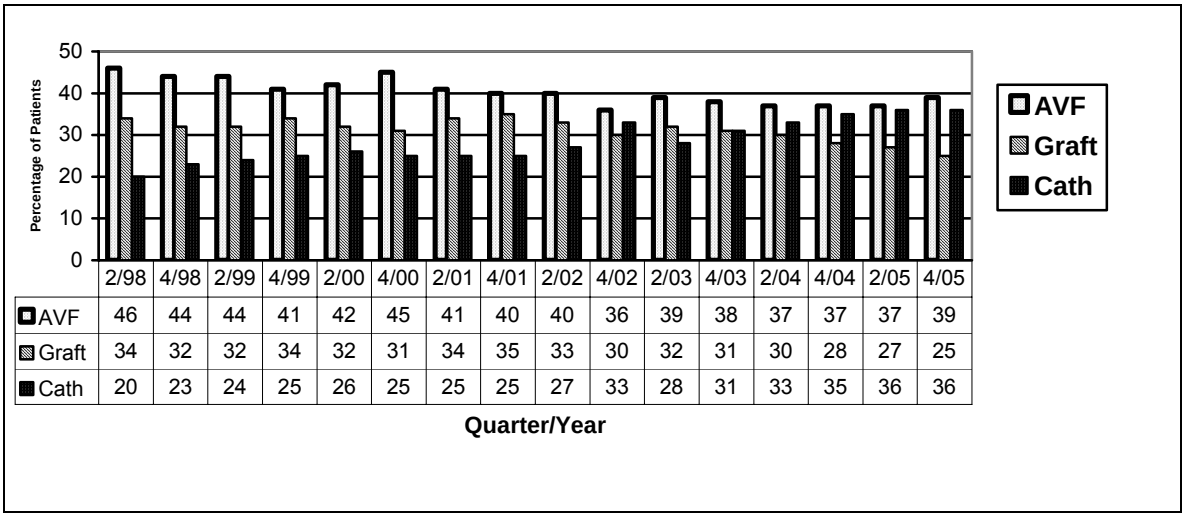


	2/98	4/98	2/99	4/99	2/00	4/00	2/01	4/01	2/02	4/02	2/03	4/03	2/04	4/04	2/05	4/05
AVF	26	26	27	27	29	29	31	31	33	34	34	34	35	37	39	40
Graft	49	47	45	45	43	42	38	38	36	35	33	30	29	28	26	25
Cath	25	27	28	28	28	29	31	32	31	31	33	36	35	35	34	34

Puerto Rico

There is regional variation in the distribution of access types. Historically, the majority of hemodialysis patients in Puerto Rico had arteriovenous fistulae. Although the majority of hemodialysis patients in Puerto Rico still have fistulae, there has been an increased use of catheters in recent years. The rate of fistulae in prevalent patients within the Puerto Rico has increased from 35.99% to 38.59% in 2005. The rate of catheter growth appears to have slowed.

Vascular Access Type in Use in Puerto Rico by Percent of Patients, 1998-2005



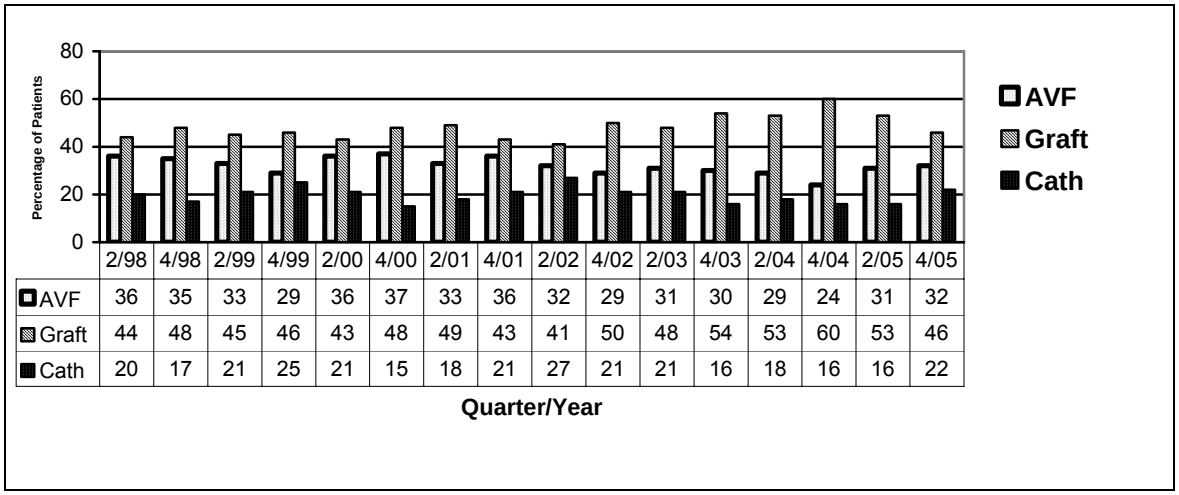
	2/98	4/98	2/99	4/99	2/00	4/00	2/01	4/01	2/02	4/02	2/03	4/03	2/04	4/04	2/05	4/05
AVF	46	44	44	41	42	45	41	40	40	36	39	38	37	37	37	39
Graft	34	32	32	34	32	31	34	35	33	30	32	31	30	28	27	25
Cath	20	23	24	25	26	25	25	25	27	33	28	31	33	35	36	36

Quarter/Year

Virgin Islands

The trend in the Virgin Islands also shows a decrease in fistulae and a decrease in the graft rate at facilities. The rate of catheters increased over the last 4 quarters of reported data. In the last quarter of 2005 there is an increase in the number a AVFs maturing. The 4th quarter 2005 data represents less than 160 patients within the Virgin Islands.

Vascular Access Type in Use in US Virgin Islands by % of Patients, 1998-2005



	2/98	4/98	2/99	4/99	2/00	4/00	2/01	4/01	2/02	4/02	2/03	4/03	2/04	4/04	2/05	4/05
AVF	36	35	33	29	36	37	33	36	32	29	31	30	29	24	31	32
Graft	44	48	45	46	43	48	49	43	41	50	48	54	53	60	53	46
Cath	20	17	21	25	21	15	18	21	27	21	21	16	18	16	16	22

Quarter/Year

2005 TARC Activities to Support Fistula First Project

The 2004 annual meeting videotape was distributed to all facilities, administrators and medical directors in Network # 3 for spread in the NVAII project.	January 5, 2005
Provided the NJ Department of Health and Senior Services with a list of facilities with high catheter rates (>30%).	February 23, 2005
Placed area-specific data on the Web site to provide comparative data between the north and south in NW3 reporting areas.	March 2, 2005
Fistula First topic paper sent to ANNA for inclusion in the NVAII ANNA journal utilizing change concept 2.	March 28, 2005
Distributed facility-specific vascular access reports and network and local area comparative data. Those with catheter rates above 30% were requested to develop improvement plans.	February 18, 2005 May 7, 2005 September 28, 2005
Held a medical directors meeting in Puerto Rico for the Fistula First initiative.	April 20, 2005
Held separate meeting the evening prior to the Puerto Rico meeting to review NVAII project with medical experts. Nephrologists, surgeons and interventional radiologists were invited.	April 20, 2005
The meeting held in Puerto Rico concentrated on NVAII. Several physicians from New Jersey presented their experience and 59 administrators, QI directors and nursing staff attended.	April 21, 2005
Reviewed Fistula First Initiative and visited targeted facilities	April 27, 2005
Targeted and visited twenty-one facilities throughout the network- Puerto Rico included. Data on fistula and catheter rates was obtained. The impact on facility specific visits has resulted in more facility phone calls to TARC.	April and May 2005 Results from data review indicated that 48% of facilities visited improved in AVF and catheter reductions
LDO administrators meeting held in East Brunswick; the Fistula First project was discussed in detail.	May 11, 2005
Newsletter, *FistulaGram,* provided facilities with an update of current NVAII activities. The newsletter included a list of "top twenty" NW3 centers with a current fistula rate above 40%. Sent to facilities, medical directors, surgeons, the departments of health and the quality improvement organizations in New Jersey, Puerto Rico and Virgin Islands.	June 21, 2005 & December 21, 2005
Partnered with NW 2 and NW 4 to present a surgeon course giving specific surgical procedures and techniques to improve fistula creation. Attendance was over 70 surgeons, 34 from New Jersey and Puerto Rico (1).	June 10, 2005
Surgeons from all Network # 3 facilities were sent NVAII video set of surgical presentations	June 23, 2005 NJ July 1, 2005 PR and the USVI
Altered data collection processes to monthly to mirror existing practices, as well as to have facilities become more familiar with their own access data	July 13, 2005

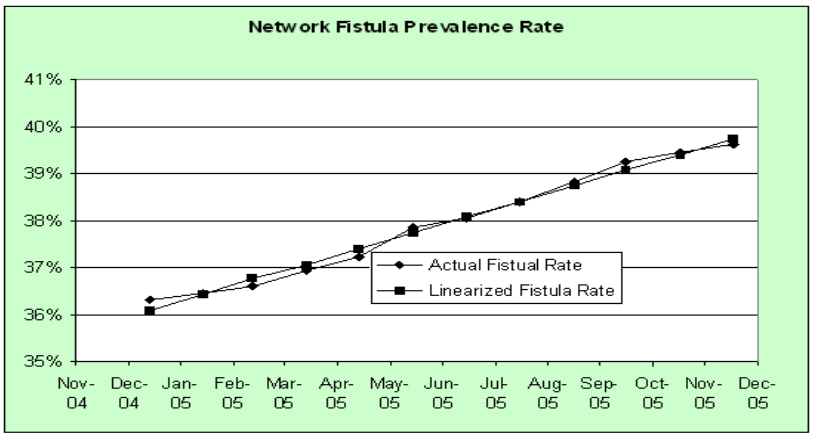
E-mailed QI coordinators a letter from Dr. Vo Nguyen describing the success some dialysis units have had utilizing a vascular access checklist for their surgeons. The email also had a link for them to access the checklist.	August 30, 2005
Sent buttonhole video to several dialysis facilities	September 18, 2005
Organized and planned first coalition meeting to evaluate new methods of achieving goals of the Fistula First Breakthrough. Developed two task forces: patient community education and professional education.	October 18, 2005
Fistula First progress report was provided to network members by Dr. Michael Conrad, Medical Review Board Chair	November 16, 2005
Patient/community education task force met to discuss patient education evaluation tool development.	November 16, 2005
Coordinated ANNA winter audio conference on cannulation for NW 3 facilities. TARC collaborated with ANNA to improve the audience size of this audio conference by allowing centers and individuals to dial into a TARC conference line and listen to the call. (ANNA hosts two sites, and thus attendance for these conferences can be less than desired due to the structure limitations of the conference.) ANNA used TARC as a "trial" network for this approach.	December 2005
Identified 3 groups in 2004 selected for their low fistula rates. TARC monitored each of these groups and provided feedback and support.	December 2005 Group (A) facilities showed increases in AVF rates and decreased catheter rates; group (B) some improvement in catheter rates and poor improvement in fistula rates; group (C) showed a trend toward an increase in fistula rates and a significant decline in catheter rates among the more than 350 patients at the facility.
A copy of the Network 1 video entitled, *Dialysis Patients Speak: A Conversation About the Importance of AV Fistulas* was distributed to all dialysis facilities.	December 28, 2005

Statistical Analysis for Network 3, New Jersey, Puerto Rico and US Virgin Islands

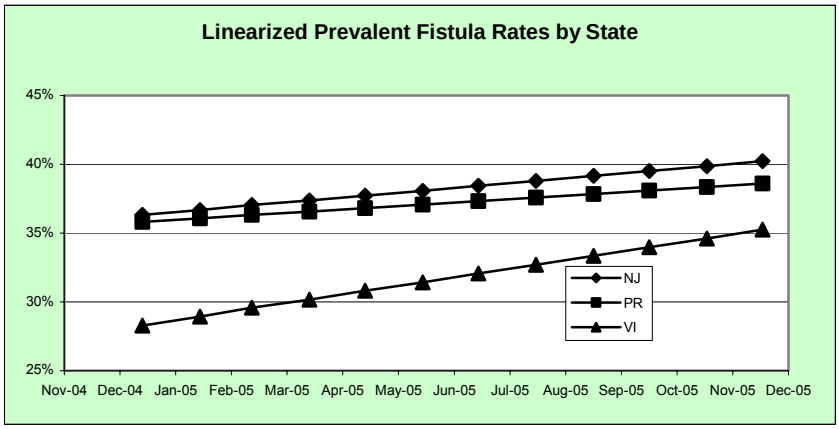
Improvement in Fistula rates

Overall, the results show a statistically significant increase (unweighted $p < 0.001$) during the measurement year (12/04 through 11/05) for the fistula prevalence rate. When discussing a change in rates over time for sequential measurements, the most accurate measure is the linearized change (i.e., the best fit line), due to its removal of monthly irregularities in the data. As is shown in the figure below, the network increased its linearized fistula prevalence rate by 3.7%,

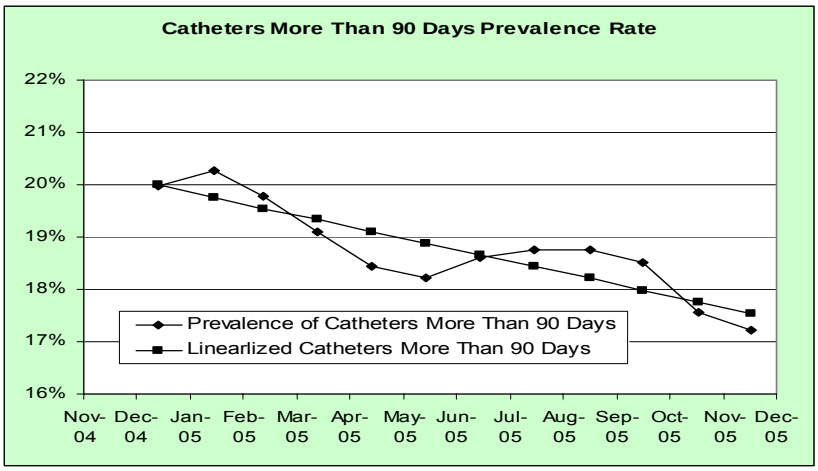
or .03 % per month. Importantly for the actual network patients, the raw data show an increase of 576 dialysis patients using a prevalent fistula at the end of the 12-month period compared with the beginning.



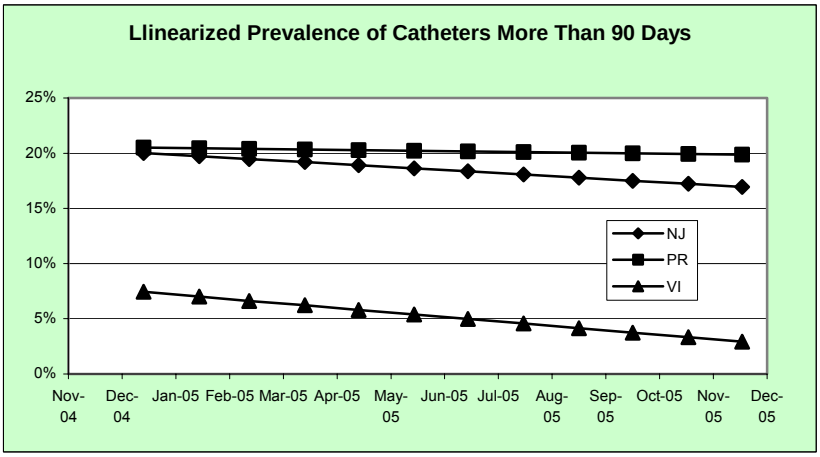
The next graph shows the linearized gains separately for each of the areas. The graph clearly shows that the area with the lowest fistula prevalence rate at the start of the 12 month period, the United States Virgin Islands gained the most during the 12 month period. In fact, the linearized gain from the USVI was 2.5 times as great as from Puerto Rico. All three gains were statistically significant (all unweighted $p < .002$). The linearized gains were 3.9%, 2.8%, and 7.0% for New Jersey, Puerto Rico and Virgin Islands, respectively.



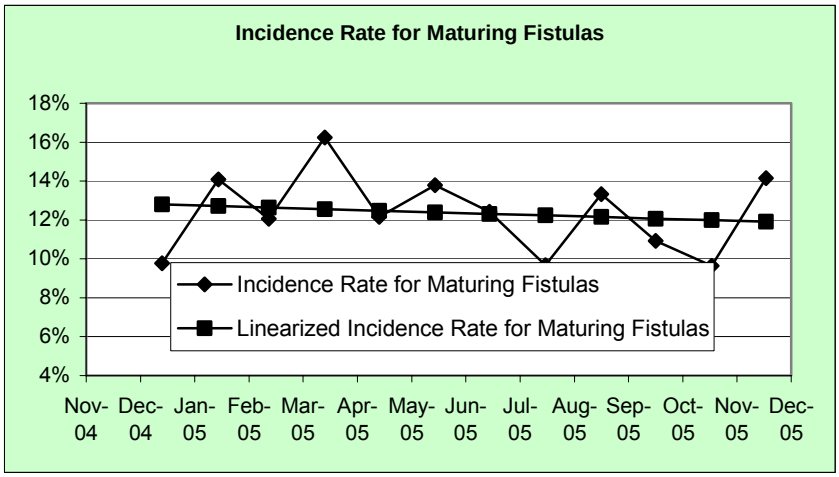
The next graph shows the prevalent catheter rate for the network overall. The graph clearly shows the rate falling at a significant (unweighted $p < 0.001$) 2.5% for the linearized trend. The graph also shows the importance of using a linearized trend to characterize change over time. The various portions of the graph show very different changes than does the overall linearized trend.



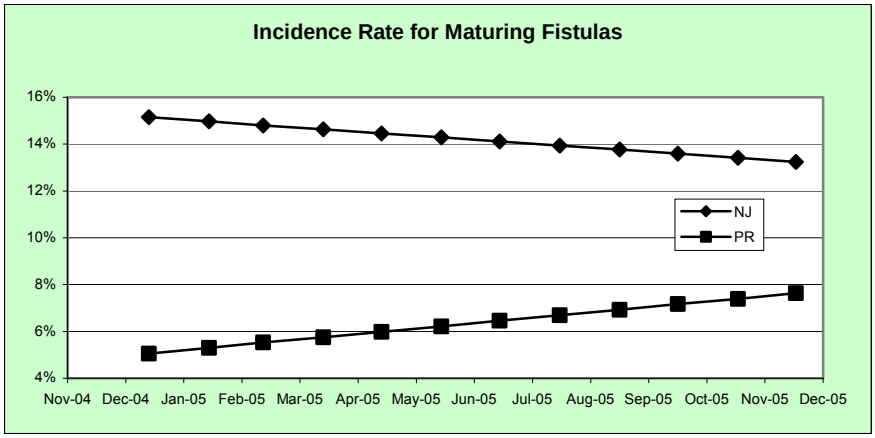
Statistically significant improvements in the catheter prevalence rates were achieved in New Jersey and in the Virgin Islands (unweighted $p < .001$ and $p = 0.002$, respectively), as the next graph shows. The linearized rate reductions were 3.1%, 0.6%, and 4.2%, for New Jersey, Puerto Rico and Virgin Islands, respectively. The Virgin Islands started with the best catheter prevalence rate and still showed the greatest improvement during the 12 months. With only 6 of 152 prevalence patients using a catheter more than 90 days old, the Virgin Islands might be approaching, or potentially up against, a functional floor for their performance on this measure.



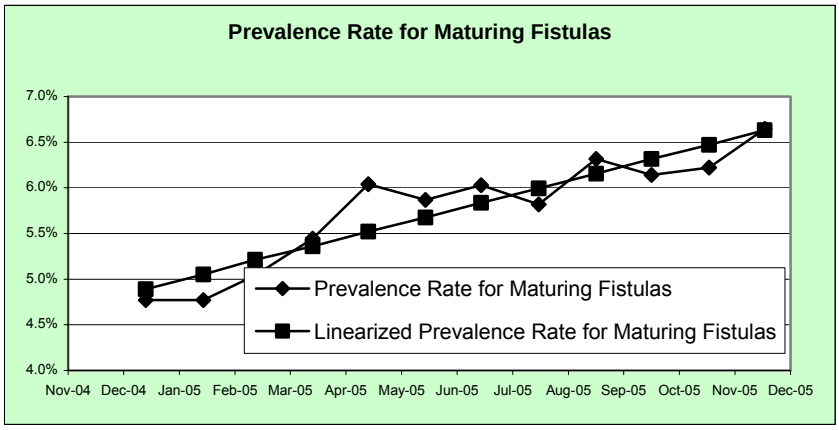
The linearized rate for the incidence of maturing fistulae was negative but not statistically significant. This result means that the network's rate for this measure was statistically flat. The graph below shows the results.



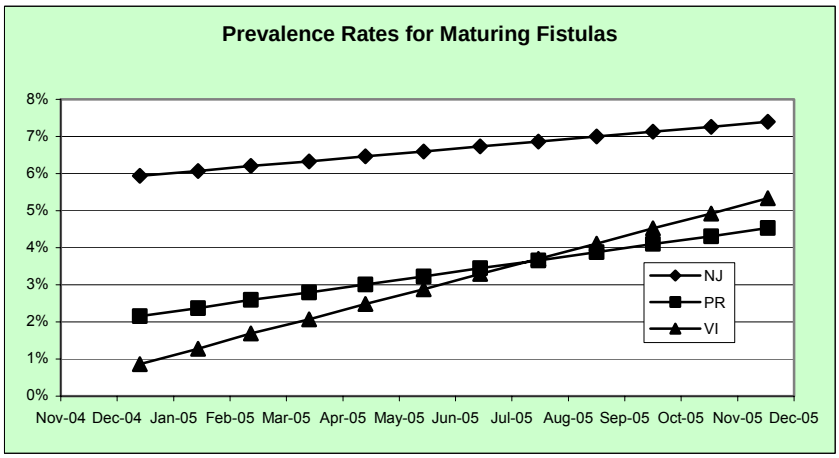
The separate linearized rates for New Jersey and Puerto Rico are shown next. The very small numbers of incidence patients in the Virgin Islands prevents the graph from being meaningful in that area. Again, neither of the rates is statistically significant, meaning that all of the rates are statistically indistinguishable from flat.



The prevalence rates for maturing fistulae is an important indicator of success in changing the way that dialysis is delivered within the network. Due to the delays involved with the eventual surgery for implanting a fistula, the prevalence rate gives a more accurate picture of change than does the incidence rate. The following graph shows the prevalence rate for maturing fistulae for the network. The increase in the rate is statistically significant (unweighted $p < 0.001$).



The individual states' results are shown next. All three states show statistically significant increases (unweighted $p < 0.001$, $p < 0.001$, $p < 0.02$, for New Jersey, Puerto Rico, and Virgin Islands, respectively). Although the Virgin Islands shows the greatest linearized gain, the smaller denominators there resulted in monthly rates with a larger variance than for the other states, which resulted in the higher p-value for Virgin Islands.



Overall, the analysis reveals that as a network, TARC increased the number of prevalent fistulas and decreased the number of catheters that are more than 90 days old while the impact on incident patients for early insertion of fistulae has shown no significant improvement to date. Issues that surround this area include making an impact on surgeons and early intervention for those with CKD.

Clinical Indicators From 2004 Annual Report ESRD Performance Measures Project

In 2003, CMS informed TARC that data collection for the Hemodialysis Improvement Project would terminate after the second quarter. TARC agreed to participate in data collection efforts through the electronic lab collection utility which had been started several years earlier. The intent of the lab collection utility was to assist individual facilities to submit data and laboratory results directly from the laboratories, thereby reducing facility workload.

CMS had directed that the lab data collection utility results from the last quarter of 2003 and 2004 could be collected. Large dialysis organizations' (LDO) data was provided electronically to the

network through the lab data collection utility by CMS. Those facilities without this capability submitted data to TARC via compact disc or spreadsheet. Facility-specific statistics were reviewed to assist in anemia management and URR evaluation as well as evaluating data at the network level against the preliminary CPM data.

The 2005 ESRD Clinical Performance Measures (CPM) project was the twelfth year of this data collection in more than 2,000 dialysis programs nationwide. CMS characterized the project as a 'snap-shot' description of peritoneal and in-center hemodialysis patients. The effort focused on the dose of delivered dialysis, anemia management, serum albumin values and vascular access.

The sample included hemodialysis patients, peritoneal dialysis patients and pediatric patients. The Veteran's Administration hospitals provided data on 100% of their population while all other facilities were subject to a 5% scientifically selected sample of study patients.

Number of Network 3 Clinical Performance Measures Participants, 2005

Area	No. Dialysis Facilities	No. HD Patients	No. HD Pediatric Patients	No. PD Patients	No. Total Patient forms
New Jersey	102	378	8	55	441
Puerto Rico	41	108	12	30	150
US VI	3	10	0	0	10
Network	146	496	20	85	601

On June 22, 2005, a total of a total of 579 forms, 513 hemodialysis forms (form 820) and 66 peritoneal dialysis forms (form 821) were sent to the dialysis facilities for completion. This was a 5% study sample of all facilities within Network # 3. The Veterans Administration (VA) dialysis facilities received and completed forms on their entire patient population consisting of 81 hemodialysis and 14 peritoneal dialysis patients for a total of 95 forms.

In July, CMS sent an additional patient sample. TARC received the completed redraw of the sample for the CPM project; there were 29 hemodialysis and 18 peritoneal dialysis forms that were included in the original sample that were part of the new sample. On July 22, the second set of CPM forms was sent to the dialysis facility quality improvement coordinators for completion by August 8. There were a total of 601 forms, which included 496 hemodialysis and 105 peritoneal dialysis forms.

The VA CPM forms, VA East Orange (44 hemodialysis forms and 3 peritoneal dialysis forms) and the VA San Juan MC (37 hemodialysis forms and 11 peritoneal dialysis forms) were completed and sent on August 16th to Network 9/10 for data entry

The independent dialysis facility CPM forms were received, reviewed and the data was entered by September 9. This was the second year that the LDO dialysis facilities submitted their CPM data electronically to CMS. CMS requested that the LDO dialysis facility staff verify all fields on both the hemodialysis and peritoneal dialysis forms for accuracy and completeness. The LDO dialysis facilities completed CPM forms were received, reviewed and entered by November 22.

The reliability CPM forms for 14 hemodialysis and 8 peritoneal dialysis patients for the reliability data were completed and entered in SIMS by November 30.

A total of 601 CPM forms were submitted for the CPM 5% sample study not including the Veterans Administration facilities or the reliability forms. There were three adult hemodialysis forms unable to be completed and one adult peritoneal dialysis unable to be completed due to the lack of post laboratory values for the hemodialysis patients (all 3 had started dialysis at the end of

December 2004) and one peritoneal dialysis patient had switched to hemodialysis. Of the 601 forms, data from 22 forms were re-abstracted as part of the reliability testing of this project.

Facilities were encouraged to compare nationwide information from the Clinical Performance Measures Project Annual Report with their local data and to examine their own patient care practices and processes. The network Medical Review Board and Board of Trustees used the information to identify progress over time and to compare the results of New Jersey, Puerto Rico, and the US Virgin Islands to other areas of the country.

The Clinical Performance Measures report was created to stimulate caregivers in dialysis facilities to ask questions such as *What percent of patients in our facility received the minimum adequate dose of hemodialysis*? If results were less than the national average or less than the threshold established by the Medical Review Board, facility caregivers were to consider their results as an opportunity to improve care. Overall, the goal of the project was that, collectively, providers would achieve the following intermediate outcomes for adult, in-center hemodialysis patients:

- Dialysis Adequacy: Urea reduction ratios of at least 65% (or a Kt/V of 1.2)
- Anemia Management: Hemoglobin values of 11 – 12 gm/dl.
- Albumin Management: Serum albumin values of at least 4.0 gm/dl

Dialysis Adequacy in Network 3

The goal for adequacy of dialysis was that 80% of the hemodialysis patients would have a URR of ≥ 65%. Review of the CPM data for 2004 showed that goal was met and exceeded. Within the United States, 87% of sampled adult, in-center hemodialysis patients achieved a URR of 65% or greater. The chart below shows data from the local discontinued HIP project and in 2004 from CPM data collection only. The network level of 86% remains consistent within a similar improvement rate noted throughout the previous year.

The preliminary CPM data only represents a 5% sampling of overall network data and cannot be extrapolated to specific regions within the network.

Percent of Hemodialysis Patients with URRs ≥ 65%
for Available Periods in 2002, 2003, 2004
Goal: 80 % of patients will have a URR of >/= 65%

Area	1st Qtr 02	2nd Qtr 02	3rd Qtr 02	4th Qtr 02	1st Qtr 03	2nd Qtr 03	2003 CPM	2004 CPM
New Jersey	86.4%	87.2%	87.4%	87.8	87.6%	90.0%		
Puerto Rico	82.1%	82.0%	82.0%	84.1	83.9%	84.4%		
US Virgin Islands	87.3%	80.9%	82.5%	85.3	83.9%	77.7%		
Network	**85.3%**	**85.8%**	**85.9%**	**87%**	**86.6%**	**87.1%**	**84%**	**86%**

Source HIP/2005 CPM data

Anemia Management in Network 3

The goal for anemia management was 80% of the hemodialysis patients would have a hemoglobin of ≥ 11 gm/dl. The chart below represents data from the discontinued local HIP project and from CPM data collection only in 2004. This goal was met.

It has been acknowledged that anemia management has more influencing factors than treatment adequacy. It has also been acknowledged that some of those influencing factors are outside of the control of the nephrology health care team and patient. TARC will continue to encourage facilities to follow anemia management closely, refer patients early when comorbidity is suspected as causing or influencing the anemia and continue to strive to achieve the goal. The

preliminary CPM data only represents overall network data and was unable to be extrapolated to specific regions within the network or individual facilities

In the United States, 80% of adult in-center hemodialysis patients had mean hemoglobin values of ≥11 gm/dL; in network 3 that percentage was 82% which was a 3% increase from the previous year.

The US average iron management data indicated 81% of patients had a mean TSAT of ≥ 20% and 94% of patients had ferritin levels ≥ 100ng/mL.nationally. In network 3, 80% of patients had a mean TSAT of ≥20% and 91% of patients had ferritins ≥ 100ng/mL. These percentages were slightly lower than the national rates despite having a higher than national average administration of intravenous (IV) iron.

Nationally, 65% of patients receive IV iron and in this network, 73% of patients received IV iron. The data were discussed with the Medical Review Board and Board of Trustees. Iron administration is provided to in-center hemodialysis patients as an adjunct to erythropoietin therapy. As evidenced by the CPM data collection, network 3 results indicate that utilization of iron within the network achieved the goal of improved hemoglobin levels.

Percent of Hemodialysis Patients with Hemoglobin Values ≥ 11 Grams for Available Periods in 2002, 2003, 2004

Goal: 80% of patients will have a hemoglobin >/= 11 GM/dl

Area	1st Qtr 02	2nd Qtr 02	3rd Qtr 02	4th Qtr 02	1st Qtr 03	2nd Qtr 03	2003 CPM	2004 CPM
New Jersey	75.6%	76.4%	76.8%	78.1%	78%	79.1%		
Puerto Rico	66.8%	72.1%	73.6%	72.6%	74.9%	77.6%		
U.S. Virgin Islands	72.6%	73.8%	69.3%	70.3%	74.4%	79.9%		
Network	**73.5%**	**75.3%**	**75.8%**	**76.6%**	**77.3%**	**78.8%**	**79%**	**82%**

Source HIP/CPM

Albumin Management in Network 3

The final clinical indicator concerns nutrition. Nutritional status, measured by albumin levels, of hemodialysis patients was assessed. There are 2 commonly used methods of albumin measurement, bromcresol green (BCG) and bromcresol purple (BCP), which have slightly different results.

The goal states that 35% of prevalent patients will have an albumin of 4.0 gm/dl if the lab uses BCG method or 3.7 if the lab uses BCP method. The previously reported local HIP data did not separate the green from purple method results. The network CPM results show an albumin measure of 33%, which is unchanged from the previous year.

The pattern observed in the local HIP project of higher albumin rates in Puerto Rico patients has been consistently observed and is related to diet. The United States had 39% of patients with those albumin levels. The CPM data only represents overall network data and cannot be extrapolated to specific regions within the network or individual facilities.

Percent of HD Patients with Albumin Values > 4.0 Gm/dL for Available Periods in 2002, 2003, 2004

Goal: 35% of prevalent patients will have an albumin of 4.0Gm/dl (BCG) or 3.7 Gm/dl (BCP) lab method

Area	1st Qtr 02	2nd Qtr 02	3rd Qtr 02	4th Qtr 02	1st Qtr 03	2nd Qtr 03	2003 CPM	2004 CPM
New Jersey	35.4%	36.6%	32.6%	34.2%	33.3%	32.7%		
Puerto Rico	45.2%	44.8%	42.1%	45.9%	45.1%	42.1%		
US Virgin Islands	16.6%	39.7%	19.7%	31.1%	40.3%	44.3%		
Network	**37.6%**	**38.6%**	**34.8%**	**37.1%**	**36.3%**	**35.1%**	**33%**	**33%**

Source: HIP/CPM

Vascular Access Reporting in Network 3

Dialysis Outcomes Quality Initiative (DOQI) states that at least 50% of all new (incident) hemodialysis patients should have a primary arteriovenous fistula (AVF) as the primary access. It further states that 40% of all prevalent hemodialysis patients should have an AVF in use. The NVAII project supports this goal.

There are two specific goals related to vascular access. The first vascular access goal is for network 3 facilities to have a vascular access program to support the *Fistula First* project. As part of the *Fistula First* project, monthly vascular access data is obtained where the types of accesses are documented and the percentages calculated. Quarterly feedback is provided to facilities to review their facility-specific goals for fistula placement. The main goal of the *Fistula First* project is to increase AVFs which parallels the network goal of promoting AVF.

According to the 2004 CPM report, the percentage of incident and prevalent patients with AVF was 35% and 35% nationally; network 3 had 38% and 35% respectively. Seventy-three percent of prevalent patients had their grafts monitored for stenosis. By increasing AVFs, the desired secondary gain is reduction of catheter use.

The second goal related to vascular access is to decrease catheter usage. TARC is working to achieve that goal. DOQI recommends no more than 10% of hemodialysis patients should have a catheter. The Medical Review Board and Board of Trustees recognize that a group of patients exist in which a catheter is the only option and directed TARC to develop a goal of 25% of prevalent patients within the network to use a catheter for hemodialysis.

The catheter rate as of December 2005 was 34.52%. The 2004 CPM data reported that 27% of prevalent patients in the United State had a catheter; network 3 had 37%. TARC will continue to encourage facilities to decrease catheter use, provide education and resources to assist in this process and monitor the progress of each facility.

The data supplied in the graphs below was obtained from two sources. The first source was the *Fistula First* data collection tool. This tool required all facilities within the network to provide summary totals monthly to the network that reflect access information on every patient for the month. The second source of data was derived from the CPM data collection. This is a random sampling of 5% of patients derived by CMS from facilities within the network. This information is supplied to explain the discrepancies noted within the data sets presented below.

Percent of prevalent HD Patients with an AVF for hemodialysis for Available Periods in 2002, 2003, 2004

Goal: 38.4% or more of prevalent hemodialysis patients will have a fistula for access (DOQI goal 40% prevalent)

Area	2nd Qtr 02	4th Qtr 02	2nd Qtr 03	4th Qtr 03	2nd Qtr 04	4th Qtr 04	2003 CPM	2004 CPM
New Jersey	33	34	34	34	35	37		
Puerto Rico	40	36	39	38	37	37		
US Virgin Islands	32	29	31	30	29	24		
Network	**35**	**34**	**35**	**35**	**36**	**37**	**36**	**35**

Source: HIP/CPM/Fistula First Data Collection Tool

Percent of prevalent HD Patients with a catheter for hemodialysis for Available Periods in 2002, 2003, 2004

Goal: 25% or less of prevalent hemodialysis patients will have a catheter for access (DOQI goal 10% prevalent)

Area	2nd Qtr 02	4th Qtr 02	2nd Qtr 03	4th Qtr 03	2nd Qtr 04	4th Qtr 04	2003 CPM	2004 CPM
New Jersey	31	31	33	36	35	35		
Puerto Rico	27	33	28	31	33	35		
US Virgin Islands	27	21	21	16	18	16		
Network	**30**	**32**	**32**	**35**	**34**	**35**	**32**	**37**

Source: HIP/CPM/Fistula First Data Collection Tool

National CPM results of Peritoneal Dialysis Adequacy

The peritoneal dialysis CPM indicators are designed to assist providers in improving the care they deliver by highlighting opportunities for positive change. The patient sample resulted in national estimates only (not regional or facility-specific).

Clinical information for the 2003 last quarter and first quarter 2004 was reported to network 3, including hemoglobin levels, serum albumin, blood pressure and dose of delivered dialysis for the peritoneal dialysis patients. Data were abstracted from 52 peritoneal dialysis patients medical records in network 3 facilities; nationwide, records for 1,453 adult peritoneal patients over the age of eighteen years were examined.

In anemia management, 39% of the sampled peritoneal patients had mean hemoglobin values of ≥11gm/dL in the 2004 study period, which was the same as the previous year. Sixty-three percent of peritoneal patients had a mean serum albumin level of 3.5 gm/dL with the BCG method or 3.2 gm/dL with the BCP method. Twenty percent of the sample had a mean serum albumin value of at least 4.0 gm/dL (BCG) or 3.7 (BCP).

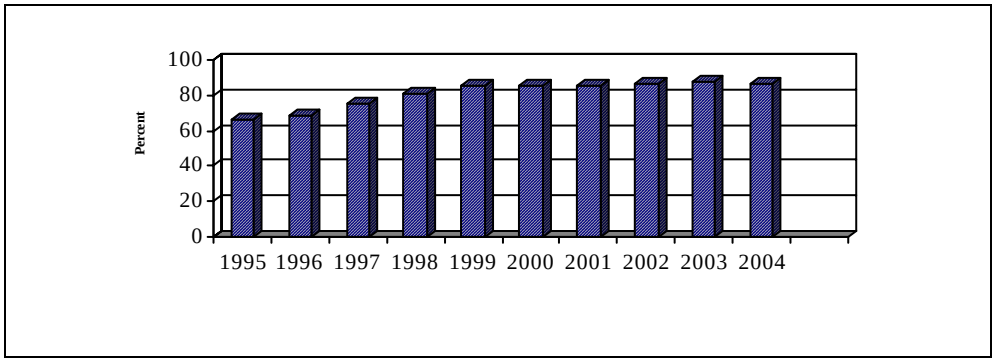
Year	%of CAPD patients with Kt/V of 2.0	% of CCPD patients with Kt/V of 2.1
2004	70%	65%
2003	71%	66%
2002	68%	70%
2001	68%	62%
2000	65%	60%
1999	56%	52%

CPM data showed that dialysis adequacy measurements (weekly Kt/V urea or weekly creatinine clearance) were assessed at least once for approximately 86% of the sampled peritoneal patients. This compared to 88%, 86%, 85%, 85%, 85%, and 81% during the previous six years. It must be noted that this finding did not demonstrate that adequacy was achieved in 86% of peritoneal patients, only that some measurement was taken to quantify the dose delivered.

The findings were 70% of CAPD patients had a mean Kt/V of ≥ 2.0 and 65% of cycler patients with a daytime dwell had a mean weekly Kt/V of 2.1 while 62% of cycler patients without a daytime dwell had a mean weekly Kt/V of 2.2. Based on the DOQI guidelines, 70% of CAPD and 65% of CCPD patients had mean adequacy values that met the guidelines. This is a slight decrease from the previous year when 71% of CAPD and 66% patients met the goal. (Network-specific peritoneal adequacy data are not available.)

The Medical Review Board discussed the report and reviewed selected information with facilities at the annual Council meeting.

Percent Of Adult Peritoneal Dialysis Patients Who Had Treatment Adequacy Measured, US, 1995-2004



Source: HIP/CPM

The DOQI guidelines for PD adequacy include:
Kt/V urea ≥2.0; creatinine clearance ≥ 60L/week/1.73m² for CAPD patients
Kt/V urea ≥2.1; creatinine clearance ≥ 63L/week/1.73m² for CCPD with day dwell patients
Kt/V urea ≥2.2; creatinine clearance ≥ 66L/week/1.73m² for CCPD patients

National CPM results of Pediatric Populations

All pediatric patients < 18 years who were identified as receiving in-center hemodialysis on December 31, 2003, were included in this survey. The total number of pediatric patients included in the data collection was 809, with 27 pediatric patients from network 3.

The findings for the entire sample were as follows: 86% of the pediatric in-center patients had a mean delivered calculated, single session Kt/V ≥ 1.2 using the Daugirdas II formula; 27% of patients were dialyzed using an AV fistula, 47% of patients were dialyzed with a chronic catheter continuously for 90 days or longer; 52% of patients with an AVF or a graft were routinely monitored for the presence of stenosis; 48% of patients with an AVF. In anemia management, 67% of patients had a mean hemoglobin of ≥ 11 gm/dL. Nutritionally, 48% of the pediatric patients had a mean serum albumin ≥ 4.0/3.7 gm/dL (BCG/BCP) during the three-month study.

PROVISION OF TECHNICAL ASSISTANCE, EDUCATIONAL MATERIAL AND PROBLEM RESOLUTION

Summary Of Technical Assistance Provided To Facilities And Consumers

TARC provided technical assistance, guidance and appropriate referrals for facilities and consumers. The network office identified available providers for consumers seeking ESRD services, especially transient treatment facility. Additional aspects of technical assistance include the network's role in investigating and resolving patient issues and concerns before they became complaints or grievances.

The network assisted newly approved Medicare ESRD facilities in the development of disaster plans. The plans included provisions for weather-related or other emergencies that would affect the unit's ability to provide renal replacement therapy.

Bulletins and updated medical material for professional staff from the Centers for Disease Control and Prevention were faxed and e-mailed to all New Jersey facilities including copies of the booklet, *Recommendations for Preventing Transmission of Infections Among Chronic Hemodialysis Patients.* TARC also assisted a number of clinical inquiries in 2005; these included:

- A facility request for information on how to cannulate a new fistula
- A facility administrator request for information on program details of *Fistula First* and on DOQI guidelines for anemia and URR
- Provided information requested relevant to a study on EPO use
- Assisted a newer facility providing information on in-series dialysis
- Reviewed with several facilities the, "buttonhole" technique
- Sent new patient education material to all access coordinators, *Caring For & Developing Your New Fistula: What You Should Know*
- Reviewed infection control practices with a facility
- Provided technical assistance to a facility with a large patient population and reviewed information with local surgeons and nephrologists on their patient statistics
- Sent copies of local licensure regulations
- Provided educational Web sites for staff and patients
- Provided resources for dialysis of patients in long-term care facilities
- Provided resources for behavioral problems
- Sent articles on various topics including vascular access, Medicare part D, influenza, pandemic flu, disaster preparedness
- Collaborated with ANNA national office to facilitate a larger audience for the conference on cannulation

Clinical Performance Assistance Provided

TARC recognized that different centers might identify different root causes for a lack of success as well as identifying pathways to achieving successful outcomes. TARC implemented several strategies to improve the network's fistula rate.

In 2004, there had been small successes throughout the Network. TARC continued to look at this initiative and develop new strategies to continue to have the message not only heard, but embraced. TARC identified 3 groupings of facilities where the outcomes needed additional interventions. A plan to support and provide individualized attention to these three groups of facilities was implemented.

The first group (A) involved four facilities that dealt primarily with a limited number of surgical groups. The medical directors and nurse managers of these facilities were included as well as the surgeons who expressed a desire to be involved. TARC met with this group where each unit's specific data was presented to the group for the team members to review.

The surgeons were all interested in technically developing new methods for fistula creation. The discussion included use of change concepts and a tool kit was provided which included data collection tools. A healthy dialogue ensued which assisted the surgeons, interventional radiologists and nephrologists all to develop a team approach. Group A's decided to meet on a regular basis and develop access plans for patients.

This group evolved into the process successfully and all four of the facilities showed increases in AVF rates and decreased catheter rates. TARC believes this unit will continue to be successful and is focusing on strategies in other areas.

Group (B) involved three facilities that all use the same hospital for access surgery. TARC met with the group which consisted of the chief of surgery, vascular surgeons, medical directors and nurse managers. The outcomes from this group were fair but not steadily improving. TARC again met with this group and presented each unit's specific data.

The surgeons in this group were initially enthusiastic about increasing fistula rates, but had seen poor outcomes requiring several repeat surgical events. Root causes for failure identified by this group included lack of communication between all parties (nephrologists, surgeons, interventional radiologists and nursing). Interventional radiology volunteered to work with the surgical groups to perform vein mapping on all patients prior to access surgery.

This group informed TARC that all three facilities are now utilizing vein mapping techniques prior to AVF insertion. A physician leads the QI meetings at all three facilities evaluating fistula data on a monthly basis. The data from these three facilities also reveals upward trends. Although some improvements have been noted, the catheter rates and slow improvement in fistula rates indicate further assistance was needed.

The third group (C) consisted of one hospital and two outpatient facilities. TARC met with the administrator, the nurse supervisor and the access manager in early 2005 when current data was reviewed. They developed a plan to improve their fistula rates and hired a nurse to assist in improving the fistula rate and decreasing the catheter rate.

A second meeting with the group of medical directors was held. The meeting consisted of the administrator, the access manager and the medical directors from each of the facilities involved. Current data from this facility again was reviewed with them. The access manager made strides in decreasing catheters within the facilities but had minimal improvement with the surgical teams. TARC requested that at least one surgeon from this group attend the surgical presentation in Short Hills, New Jersey. No one from this group attended.

TARC revisited this center at the request of the medical director in December 2005 and presented to the chief of surgery, chief of medicine and surgeons the outcomes of their facilities related to the overall *Fistula First* project. TARC will continue to monitor outcomes and provide feedback or assistance.

Technical and Collaborative Assistance Provided

TARC provided technical assistance, guidance and appropriate referrals for facilities and consumers. One of the key elements of change identified by the NVAII committee was cannulation training for AV fistulae. Over the last two decades the dialysis community has seen

profound changes in the use of fistulae. Dialysis staff need to be trained in cannulation techniques including the differences of cannulating a graft and a fistula. Facilities identified cannulation of fistulae as an issue with staff members.

TARC worked in collaboration with ANNA national office to increase the number of nurses listening to the winter audio conference on fistulae. Rather than limit attendance to several host sites, TARC proposed to use its local conference call service to gather local nurses wherever located and then tie its service into the single ANNA trunk line.

TARC reviewed with several facilities the "buttonhole" technique. The technique is developing a following in some facilities. Videos were obtained and will be copied and distributed to those facilities that have inquired as to the technique.

TARC sent new patient education material to all access coordinators, *Caring For & Developing Your New Fistula: What You Should Know*. A facility requested information on how to cannulate a new fistula; information was provided by telephone and articles documenting appropriate procedure were sent.

How Educational And Technical Assistance Affected The ESRD Population

Effects of clinical performance assistance

Morbidity and mortality data demonstrate that patients with a fistula as an access improves the quality of life, reduces infections and hospitalizations. TARC provided three groups of facilities noted for poor performance and outcomes with the background, structure, tools and knowledge necessary to improve the level of care delivered to the patients.

A collaborative effort between TARC and the interdisciplinary teams at the facilities proved successful. All three groups continue to be monitored by TARC; the effort has improved access rates at the facility level.

Technical and Collaborative Assistance

Preservation of the vascular access is imperative to the survival of all patients receiving hemodialysis. Vascular access survival is influenced by a multiplicity of factors including the cannulation skills of the dialysis staff. TARC recognized and continues to develop programs to increase the knowledge and skills of the dialysis staff.

The buttonhole technique has been in use for decades but needs to be introduced to a new generation of dialysis staff. Through the distribution of the buttonhole DVD and collaborative efforts with ANNA, TARC will attempt to ensure the provision of safe dialysis.

All of these efforts are directed toward the ultimate goal of providing an environment of care that is not only safe but will produce optimum outcomes for all ESRD beneficiaries.

Summary of educational and other materials provided to facilities and/or consumers

Whenever possible, TARC provided informational material, technical assistance and guidance or made referrals to appropriate resources to assist facilities and consumers improve the quality of care and life for consumers. The network strives to be sensitive to local renal community needs and familiarizes others with its role which includes coordinating activities and participating with the larger renal community. The Network received requests by letters, faxes, phone calls, the Web site and emails.

TARC staff received numerous telephone calls from both ESRD and non-ESRD consumers with questions about Medicare coverage rules. Some information was provided directly, other consumers were referred to their nephrology social workers and still others were referred to CMS.

Materials were distributed by mailings or e-mail to facility medical directors, head nurses, administrators, quality improvement coordinators and several were also given as handouts at network-sponsored meetings such as the annual meeting. In addition to mailings, the network staff responded to individual requests for data and information throughout the year. The following materials were distributed to the dialysis facilities and in turn to the dialysis patients and consumers.

Complaints/grievances
- *Patient Grievance Procedures*
- *Consumer Rights and Responsibilities*
- TARC sent copies of *Patients Rights and Responsibilities*, and *Consumer Grievance Procedure*, in both English and Spanish to each new network facility for distribution to all in-center and home patients. The facilities were notified that it is permissible to copy these.

Dialysis Access
- *Understanding Your Hemodialysis Access Options* (English)
- *Vascular Access is a Hemodialysis Patient's Lifeline* (English)
- *Fistula First* (English)

Dialysis Treatment
- Dialysis: *Know Your Number* (English and Spanish)
- Treatment options and new ESRD technologies available for consumers

Health Care related
- The public information Web site received numerous questions in English and Spanish. There were queries from family members, patients and unidentified sources. TARC staff posted responses to questions received on the Web site and by e-mail.
- Medical review board physicians responded to clinical questions posted on the Web site and by e-mail.
- Flu and pneumonia immunization information
- CDC hurricane preparation Web site

Medicare Information
- *Medicare and You 2005* (English and Spanish)
- *Medicare Basics* (English)
- *Your Medicare Rights and Protections* (English and Spanish)
- *Your Medicare Benefits* (English)
- *Medicare Coverage of Kidney Dialysis and Kidney Transplant Services* (English and Spanish)
- *Medicare Coverage of Diabetes Supplies and Services* (English and Spanish)
- *Medicare and other Health Benefits: Your Guide to Who Pays First* (English and Spanish)
- Where to get Your Medicare Questions Answered (English)
- *The Facts about Upcoming New Benefits in Medicare* (English)
- *Paying for Outpatient Services: A Guide for People with Medicare* (English)
- *Pay it Right: Protecting Medicare from Fraud* (English and Spanish)
- *Choosing a Medicare Health Plan* (English)
- *Choosing a Medigap Policy* (English and Spanish)
- *Does your doctor or supplier accept "assignment*" (English)

- *Information on Medicare Approved Drug Discount Cards* (English)
- *Medicare.gov*-pamphlet (English and Spanish)
- *Dialysis Facility Compare*- pamphlet (English)

TARC annually distributes the following information to each facility in an effort to apprise the renal community of activities within the network area.

- ESRD program goals and the network activities to achieve the goals
- Network 3 Goals 2003 – 2006
- The network's annual report
- Results of quality improvement projects
- Articles and pertinent research information that renal providers may use in their quality improvement programs
- State and regional vocational rehabilitation programs available in the network area
- CMS ESRD network requirements
- Alternative Sanctions
- Annual Notice of Disclosure
- CMS Requirements for ESRD Forms Compliance
- Consumer Grievance Procedure
- Consumer Grievance Procedure-Facility Version
- Consumer Rights and Responsibilities Statement
- Division of Vocational Rehabilitation Services, New Jersey, Puerto Rico/US Virgin Islands

Articles sent to dialysis facilities

- *Staying Warm in the Winter can be a Matter of Life and Death for Older People*
- *Spectrum of Bone Disorder in CKD 2005,* Kidney & Urology Foundation of America
- *Caring for and Developing your fistula: What you should know and Fistula Complications: Stenosis & Thrombosis*
- DVD entitled, *Dialysis Patients Speak: A Conversation About the Importance of AV Fistulas*
- *Permanganate as a Cause of Apparent Chloramine Breakthrough in Dialysis Water*
- Press release about Medicare Part D
- *In Health Care, a Degrading Shift From Person to Patient*
- Stroke awareness video for Hispanics by National Institute of Neurological Disorders and Stroke
- *Medication-Related Problems in Ambulatory Hemodialysis Patients: A Pooled Analysis*
- *Changes in Medicare Reimbursement and Patient-Nephrologist Visits, Quality of Care, and Health-Related Quality of Life*

Designee Programs: Home Dialysis and Transplant

- TARC participated in the organizational preparation for the multi-facility Transplant Designee meeting
- TARC held the Home Dialysis Designee planning meeting

Dialysis Facility Information

- TARC provided all newly approved ESRD facilities with the reference/resource collection of materials that contain the important aspects of the ESRD program and CMS/network requirements and quality improvement resources
- New dialysis facilities receive new facility binders with network information, data requirements, patient safety information, and resource material
- Sent a memo to all facility administrators informing them the TARC Web site public/consumer elements were updated and open for use at www.tarcweb.org

- Sent memo to quality improvement coordinators inviting the submission of abstracts for the poster session of the annual meeting
- TARC e-mailed the dialysis administrators and medical directors the first draft of *Developing Dialysis Facility-Specific Kidney Transplant Referral Measures*
- E-mailed and sent a letter to the dialysis administrators the information about the new 2728 forms
- Sent the facility-specific reports to the administrators and medical directors of the dialysis facilities
- Sent the 2004 Annual Report to all network facility administrators and interested others
- Sent the NW 3 Goals, goal charts and attachment to the ESRD facility CEO's, medical directors, administrators and quality improvement contacts

Dialysis Treatment Information

- E-mailed the dialysis administrators and medical directors the ESRD conditions for coverage and the proposed OPO requirements for transplantation
- E-mailed the new proposed state of New Jersey ESRD ambulatory regulations to facilities
- E-mailed the dialysis administrators and medical directors the first draft of *Developing Dialysis Facility-Specific Kidney Transplant Referral Measures*

Patient Health and Safety Information

- Sent the ESRD Patient Safety Toolbox to the dialysis administrators of the dialysis facilities that were unable to attend the patient safety meetings
- E-mailed the latest article on infection control measures for the prevention and control of influenza in healthcare facilities
- Mailed patient education information (posters, fliers) and staff education materials to all facilities (dialysis and transplantation) re: flu and pneumonia immunization
- E-mailed the clinical managers an article promoting patient safety *Staying Warm in the Winter can be a Matter of Life and Death for Older People*
- E-mailed facility social workers and administrators Web site information for Medicare part D.
- Sent dialysis facilities the *Decreasing Dialysis Provider Conflict* poster
- E-mailed dialysis administrators information from the CDC about preparing for hurricanes
- E-mailed to dialysis administrators article titled, *Permanganate as a Cause of Apparent Chloramine Breakthrough in Dialysis Water*

Vascular Access/ Fistula First

- Invited nephrologists, surgeons and interventional radiologists to a separate meeting the evening prior to the Puerto Rico Annual meeting to review NVAII project with medical experts
- Distributed "button hole" video to facilities upon request
- Held medical directors meeting in Puerto Rico for the fistula first initiative
- Held an educational and fistula first meeting for administrators and nurses in Puerto Rico
- *Dialysis Patients Speak: A Conversation About the Importance of AV Fistula* to MRB members to review. DVD also sent to facilities with low fistula rates to review with patients
- Distributed facility-specific vascular access reports and network and local area comparative data. Those with catheter rates above 30% were requested to develop improvement plans.
- Mailed the FistulaGram newsletter, posters and pens to the dialysis facilities.
- Mailed the FistulaGram newsletter to all the medical directors
- Mailed the FistulaGram newsletter to all the county medical societies; chiefs of medicine at all acute care hospitals; and the chiefs of surgery at all the acute care hospitals

Vocational Rehab

- An updated copy of the vocational rehabilitation offices in New Jersey, Puerto Rico and the US Virgin Islands is included in all of the new facility binders.

- Provided individual patients information on exercise and diet.

How provision of educational materials affected the ESRD population

Patients who participate in their healthcare decisions have many positive benefits. TARC knows an ESRD consumer should be afforded the opportunity to become educated in their disease and treatment options so they may become participatory in their healthcare decisions. A degree of control and empowerment results in a greater sense of well being and positive outcomes. A consumer educated in their rights and responsibilities takes greater ownership in their care.

A consumer educated in the grievance procedure knows they are not helpless when their care poses a troublesome situation. A consumer educated in quality indicators is able to track their treatments and know why certain modalities are performed. All of these facets help to make a patient feel they are truly part of a healthcare team striving to achieve the optimum level of health for each patient. The continuum of care for ESRD consumers spans a broad spectrum of providers. TARC, through the provision of educational materials, hopes to clarify some of the confusing elements found in renal replacement therapy.

The local coalition's community education task force developed a fistula first patient education evaluation tool to review the effects of education on the evaluation.

ESRD consumers benefited from their providers becoming informed about and responding to network-specific goals which strive for quality renal replacement services. Existing or potential providers used network data to plan expansion programs and/or new facilities, assisted consumers by making treatment available in more locations or on additional shifts. Since the ultimate purpose of both the network and the Medicare-certified ESRD facilities is to serve renal consumers, all renal-related educational materials enhance patient care delivery.

Effectiveness
Morbidity and mortality data show that patients with improved anemia management, adequate treatments and a fistula as an access improve the probability of success for a client diagnosed with ESRD.

TARC provided informational material, technical assistance and guidance or made referrals to appropriate resources to assist facilities and consumers improve the quality of care and life for consumers.

Consumer Impact
Consumers should be afforded the opportunity to become educated in their disease and treatment options so they may become participatory in their healthcare decision processes.

Appropriate clinical management provides consumers with a better quality of life, reduced hospitalizations and less morbidity. TARC continues to contribute toward these outcomes.

IV. Encourage individualized patient care planning that addresses the attainment of the highest quality of life possible with emphasis on vocational rehabilitation, whenever appropriate.

A. Assure that facilities periodically evaluate their treatment scheduling practices or other facility policies which may act as disincentives to vocational rehabilitation.
B. Each dialysis facility will compile the number of dialysis patients, ages 18-54, that were referred to the Vocational Rehabilitation Program, and the number of dialysis patients, ages 18-54, employed (full or part time) and attending school (full or part time).
C. The network will encourage the use of the SF-36 assessment form.

Supportive Activities

Even though kidney failure is not a curable disease, individuals can live very long and productive lives. Rehabilitating the patient with end-stage renal disease is admittedly difficult in certain situations. Improving outcomes of kidney disease usually requires that patients learn to manage their illness, report their symptoms accurately and advocate on their own behalf. TARC will continue to encourage patients to become more informed partners in their own care.

Renal rehabilitation involves more than working to improve the clinical and functional status of dialysis patients. It is a comprehensive approach to care with the goal of helping patients resume productive activities and independent living. The TARC consumer Web site provides links to the Life Options Web site.

The Life Options Rehabilitation Program contains a research-based education program that was developed to help people live long and live well with kidney disease by identifying and addressing the challenges faced by people with kidney disease, with the goal of improving longevity and quality of life. TARC promotes the utilization of this Web site. Resources were developed by Life Options to focus unit planning, effort and attention on rehabilitation and training materials are available for dialysis providers to use for facility in-service programs and program development.

The list of vocational rehabilitation offices in New Jersey, Puerto Rico and the US Virgin Islands were sent to each facility and are available on the Web site.

As can be seen through the efforts of the network and each facility, many dialysis facilities maintain activities with an active team approach to promote the vocational rehabilitation program by:

- Using a centrally-located bulletin board that features stories or topics regarding rehabilitation;
- Assessing consumers' physical status, mental health and general well-being on a regular basis
- Assessment of patient, family and staff attitudes toward rehabilitation
- Informal screening for employment status or potential
- Determination of ESRD consumers' job skills and suitability for vocational rehabilitation
- Providing information about end-stage renal disease to employers as requested
- Making information available about the benefits of working
- Informing consumers annually about treatment modalities to accommodate work and life interests
- Utilizing the redesigned Life Options Web site (www.lifeoptions.org), which offers all Life Options print materials via the Web site allowed users to immediately obtain materials in unlimited quantities
- Non-print materials from Life Options can now be ordered via the Web at no cost to facilities. This includes videos, audios, posters and exercise binders

Consumers can be motivated to learn more about kidney disease and its treatment so that they will become more involved in self-advocacy, self-management and self-care. Helping consumers to set goals, share success stories and support independence are examples of encouragement activities that can ultimately improve quality of life on dialysis. Consumers need to participate in decisions about their own care. In order to do this, they must first understand their disease and its treatment.

Educating consumers is the key to this understanding. To achieve positive outcomes educational goals must be geared to the needs and readiness of the consumer. Learning style and any barriers to learning, e.g., vision, hearing or language problems must be addressed. Learning about kidney disease and all the treatment options can help consumers maintain a sense of control despite the challenges. It is critical to involve family members in educational efforts.

Increased personal control, often gained through patient and family education, has been linked to improved adherence to treatment regimens and better quality of life.

Patient teaching, communication about medication administration and diet, exercise, improved compliance with treatment schedules, maintaining or restarting employment or school attendance were all favored as means to enhance vocational and other rehabilitation scores. TARC encouraged patient care planning that would address attainment of the highest quality of life possible for each patient. By means of goal statements and correspondence, emphasis was placed on vocational rehabilitation whenever appropriate.

The dialysis facilities in New Jersey reported 2,942 dialysis patients between the ages of 18 to 54. Sixty-eight patients received services from a vocational rehabilitation program. There were 914 who were employed (full or part time), and 118 patients who attended school (full or part time).

In Puerto Rico there were 1,216 reported patients between the ages of 18 to 54 years; 57 patients received services from a vocational rehabilitation program; 195 patients who were employed (full or part time), and 37 patients attended school (full or part time).

Of the 30 reported dialysis patients of the 18 to 54 age range in the U.S. Virgin Islands, two patients received services from a vocational rehabilitation program; 5 patients were employed (full or part time), and 1 patient attended school (full or part time).

In Network 3, there were a total of 4,188 patients in the 18-54 age group; 127 patients received services from a vocational rehabilitation program; 1,114 patients were employed (full or part time), and 156 patients attended school (full or part time).

In Network 3, 30% of the dialysis patients, age 18-54, received services from a vocational rehabilitation program, were employed (full or part time), and/or attended school (full or part time)

Effectiveness
The Network continues to encourage rehabilitation and individualized care planning. Vocational rehabilitation is an ongoing process that continually needs encouragement to continue its development. Material was distributed to facilities for use with consumers and other resources were made available both through mailings and on the Web site.

Consumer Impact
Lifestyle changes are inevitable for consumers but, to the extent possible, these should be minimized. Material was distributed to facilities for use with consumers and other resources were made available both through mailings and on the Web site.

V. Enable an efficient patient-specific database with quality improvement modules that is consistent with CMS's electronic transmission initiatives.

A. Each newly approved and existing facility will assure a system is established/maintained that assures knowledgeable facility data reporting personnel.
B. Each facility will ensure timely and accurate submission of 90% of forms generated.
C. Each facility will utilize the federal VISION software to input local patient data.

Supportive Activities

To accomplish accurate and timely data reporting, all facilities notified TARC of all patient status changes on a monthly basis. Any changes in the dialysis caseload were noted, including:

- Newly-diagnosed ESRD consumers who started a regular course of dialysis;
- Changes in modality during the month (e.g., hemodialysis to CAPD);
- Changes in setting during the month (e.g., CAPD patient who went home);
- Transfers into or out of the facility during the month;
- Returns to dialysis after renal transplant grafts failed;
- Restarts to dialysis after temporarily regaining kidney function;
- Patient deaths;
- Discontinuation of dialysis treatment;
- Patients who became lost to follow-up; and
- Patients who regained native kidney function to the extent that dialysis was stopped.

The Chronic Renal Disease Medical Evidence Report form (CMS-2728) was the initial reporting form for all persons with end stage renal failure who began a regular course of dialysis or had a renal transplant as a first form of therapy. The form was completed and submitted to the TARC office by ESRD Medicare-certified facilities and Veterans Administration Medical Centers according to federal regulations. Submission is expected within forty-five days of the start of renal replacement therapy, whether or not the patient applied at that time for financial coverage under the federal Medicare program. The ESRD Death Notification form is due within thirty days of an ESRD patient's expiration.

TARC staff entered data from the CMS-2728 forms into computer software supported by the federal government. If data required on the form were missing or incompatible with software assumptions, the form was rejected by the software and returned to the facility for correction.

Input forms employed to maintain the network patient-specific data system included:

- Monthly Caseload Changes/Census form
- Chronic Renal Disease Medical Evidence Report (CMS-2728)
- ESRD Death Notification form (CMS-2746)

Forms used to check and reconcile data that were submitted as required, included:

- ESRD Facility Survey (CMS-2744)
- Accretions lists from CMS
- Notifications from CMS
- Federal REMIS Web site

Network staff validated and monitored the accuracy and timeliness of facility data submissions from all dialysis and transplant programs in New Jersey, Puerto Rico and the United States Virgin Islands. Facility compliance was monitored for each of the federal medical information system forms mentioned. Semiannually, the data file was run through customized programming. Two aspects of facility feedback were generated for each of the required forms:

- Compliance rate summary report
- Detail of each form submitted

The compliance rate summary report presented calculations of the total number of forms transmitted, the number of forms submitted that were within the thirty or forty-five day goal, the number of forms with errors, and the percent compliance by each Medicare-certified dialysis facility. The detail report specified the individual patient information on each form.

Data submission compliance reports were distributed to facility administrators with the expectation that they would positively recognize those employees who achieved the data reporting goal of submitting forms within thirty or forty-five days of events being reported. On the other hand, if the compliance reports reflected forms that were overdue and outstanding,

administrators were expected to follow-up with their employees to correct factors contributing to data reporting non-compliance.

To assist VISION facilities in ensuring that all entered data had been received and processed at the network office, monthly feedback reports were distributed. These reports showed the facility's current caseload as well as all events received year-to-date. Facilities reviewed these reports and identified any data that had not been submitted, then entered that data into VISION and submitted it electronically.

A forms meeting was held in January in Puerto Rico to address issues with new versions of the CMS-2728 and CMS-2746 forms. The meeting addressed implementation of VISION software in Puerto Rico and the United States Virgin Islands. Forms timeliness and accuracy was stressed throughout the meeting.

Chronic Renal Disease Medical Evidence Report (CMS-2728)

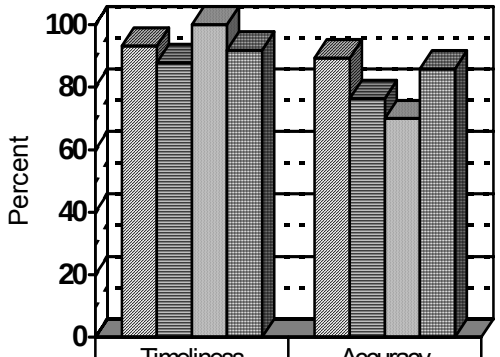
Network 3 dialysis facilities submitted 4,887 CMS-2728 forms during the year. Of these, 4,491 (91.9%) were on time, and 4,199 (85.9%) were accurate.

There were 3,594 CMS-2728 forms submitted from New Jersey dialysis programs. Of these, 3,214 (89.4%) were completed accurately. Chronic Renal Disease Medical Evidence Report forms were to have been submitted to the network office within forty-five days of the initiation of a regular course of dialysis. Of the forms submitted, 3,348 (93.2%) met CMS's timeliness criterion.

Facilities in Puerto Rico submitted 1,243 forms of which 1,093 (87.9%) were on time and 950 (76.4%) were completed accurately. Fifty Medical Evidence Report forms were received in the network office from the US Virgin Islands, 50 (100%) were on time and 35 (70%) were accurate.

Percent of CMS-2728 Forms Received by Timeliness and Accuracy

CMS's Goal: 90% Compliance



	Timeliness	Accuracy
NJ	93.2	89.4
PR	87.9	76.4
USVI	100	70
Network	91.9	85.9

Source: 2005 SIMS Database

ESRD Death Notification form (CMS-2746)

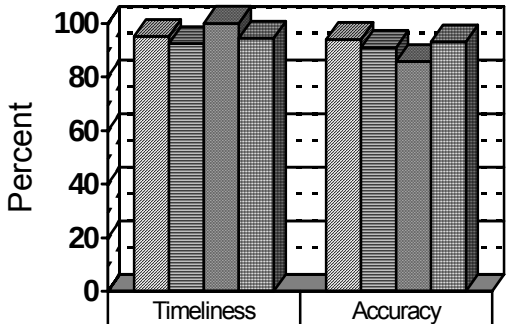
Network 3 dialysis units sent 3,670 death notification forms during the year, of which 3,469 (94.5%) were on time and 3,417 (93.1%) were accurate.

New Jersey dialysis units sent 2,659 death notification forms during the year, of which 2,532 (95.2%) were on time and 2,499 (94%) were accurate. New Jersey exceeded both the accuracy and timeliness requirements.

Puerto Rico's dialysis programs submitted 976 death forms of which 902 (92.4%) were on time, and 888 forms (91%) were accurately completed. Puerto Rico exceeded the goal for accuracy and timeliness.

The three Virgin Island facilities sent 35 death forms; 35 (100%) were received on time and 30 forms (85.7%) were accurately completed. Virgin Islands facilities exceeded the timeliness requirement but fell short on the accuracy requirement.

Percent of CMS-2746 Forms Received by Timeliness and Accuracy
CMS's Goal: 90% Compliance



	Timeliness	Accuracy
NJ	95.2	94
PR	92.4	91
USVI	100	85.7
Network	94.5	93.1

Source: 2005 SIMS Database

In addition to receiving, processing, and transmitting data reported on the federal medical information system forms the network maintained a patient tracking system (SIMS) that followed end-stage renal disease consumers through changes in treatment modality and setting. Changes in provider were also tracked. These activities were necessary to support federal quality projects and special studies. Monitoring patient events was also necessary for the reconciliation of the federal ESRD Facility Survey, preparation of facility profiles for goal achievement for home dialysis use and referral, and local quality of care improvement efforts.

Effectiveness
TARC supported the training, installation and integration of VISION software in eligible facilities. Data reporting personnel were supported through all software updates and form modifications.

Consumer Impact
An accurate database is essential for the analysis of clinical indicators. Performance efforts utilize current and reliable data to monitor the clinical patient outcomes for the benefit of consumers. Accurate and timely reporting of patient data is central to patient Medicare eligibility.

B. Support the Marketing, Deployment and Maintenance of CMS-Approved Software (CROWN)

Consolidated Renal Operations in a Web-enabled Network (CROWN) is made up of 3 software systems:

- VISION (Vital Information System to Improve Outcomes in Nephrology) used by facility staff, and
- SIMS (Standard Information Management System) used by network staff,
- REMIS (Renal Management Information System), a Web based application where data from many different sources, such as the Social Security Administration, UNOS, and CMS can be viewed.

Together, these three components enable electronic exchange and validation of data, facilitating the transformation of data into usable information.

VISION

Network beta testers, including Network 3, participated in testing the June and November releases of the VISION system. The June version introduced the new CMS-2728 format for facilities to begin using and needed to be carefully tested.

Network 3 trained 3 Virgin Islands facilities and 11 Puerto Rico facilities in January 2005. Connectivity issues prevented some facilities from transmitting VISION data via QnetExchange, but 3 Puerto Rico facilities and one Virgin Islands facility did begin transmitting VISION data. TARC maintained and supported 53 VISION facilities in New Jersey (out of 56 eligible - 95%), four in Puerto Rico (out of 12 eligible - 33%), and one in the Virgin Islands (out of 3 eligible – 33%).

SIMS

Network beta testers, including Network 3, participated in testing the June and November releases of the SIMS system. As with the VISION system, the June release of the SIMS system introduced the new CMS-2728 format, which needed to be carefully tested.

SIMS is an integrated system that provides communication and data exchange links among the Networks, facilities, and CMS. Each network has a local database where patient, facility, and facility personnel data is entered and maintained. That data is replicated to a central database repository on a nightly basis.

SIMS has the capability to produce various reports that are used by facilities to ensure accuracy of facility reporting. In particular, the CMS-2744 form is completed annually, and is used to validate patient activity throughout the year. The validated data is patient-specific and provides elements such as age, race, sex, ethnicity, diagnosis and modality/setting of care, as well as patients' county and state of residence. This information is used to reconcile the network database.

SIMS is also used for receiving and processing Notifications from CMS. Notifications are records in which particular elements, such as patient date of birth, date of death, first name, HIC number, most recent transplant date, most recent transplant failure date, sex, social security number, or surname are found to be different than that which is on file with the Social Security Administration. The network sent these records to the respective facility once per month, whereupon the facility verified the data with the patient and sent the correct information back to the network office.

REMIS

An important component of the CROWN system is the REMIS system. Data entered into SIMS by network staff can be viewed here, as can data sent from sources such as CMS, Social Security Administration, and UNOS. This aggregate data can be used to resolve data discrepancies and complete patient event histories.

In September 2004, an additional component called Alerts was added to REMIS. This component "alerts" network staff to data discrepancies in a manner similar to the notifications processed in SIMS, but allows for additional cleanup of duplicate patient records, invalid claim numbers, and dates being outside an acceptable range. With this utility, network staff is able to maintain a cleaner and more accurate dataset with less processing time than was previously possible.

C. Improving Data Reliability, Validity and Reporting among ESRD Facilities/Providers Networks and CMS (or other appropriate agency).

The TARC goal of improving information management standardization within TARC consists of several measures.

SIMS

Through an automated data transfer application, the SIMS database is replicated to the central repository on a nightly basis. Replication is checked daily to assure that the process has occurred successfully. The replication process is monitored and has performed reliably on a daily basis and is documented on a quarterly basis within the network logs.

All data discrepancies are reviewed for validity and accuracy of data through notifications and discrepancies are resolved within the SIMS database. This process is run on a monthly basis. Data clean-up activities are also run on a monthly basis and utility logs show resolved queries and which need to be addressed.

Data Reconciliation

Forms used to check and reconcile data that were submitted as required, included:

- ESRD Facility Survey (CMS-2744)
- Accretions lists from CMS
- Notifications from CMS
- Federal REMIS Web site

Network staff validated and monitored the accuracy and timeliness of facility data submissions from all dialysis and transplant programs in New Jersey, Puerto Rico and the United States Virgin Islands. During 2005, facility compliance was monitored for each of the federal medical information system forms mentioned. Semiannually, the data file was run through customized programming. Two aspects of facility feedback were generated for each of the required forms:

- Compliance rate summary report
- Detail of each form submitted

The compliance rate summary report presented calculations of the total number of forms transmitted, the number of forms submitted that were within the thirty or forty-five day goal, the number of forms with errors and the percent compliance by each Medicare-certified dialysis facility. The detail report generated specified the patient-specific information on each form.

Data submission compliance reports were distributed to facility administrators with the request that they positively recognize those employees who achieved the data reporting goal of submitting forms within thirty or forty-five days of events being reported. Alternately, if the compliance reports reflected forms that were overdue and outstanding, administrators were expected to follow-up with their employees to correct factors contributing to data reporting non-compliance.

CMS Notifications

CMS notifications are requests for patient database validity information. CMS notifications are sent to all facilities within the network on a monthly basis. Facilities then review the element in question and either report the value as correct or provide the corrected data element in question to TARC. This information is then entered in the SIMS database. If there is a discrepancy in data collection (report value from CMS and report value from facility differ), a validation of the element in question is requested from the facility. This ensures valid data is reported to the central database and REMIS.

2728 and 2746 Forms

In 2005, 20 facilities were found to have blended (timeliness and accuracy) compliance rates of less than 80%. The network is currently working with these facilities to improve compliance rates and has requested and accepted improvement plans.

The data accuracy and timeliness of forms is also reviewed and documented. Both the 2728 and the 2746 are reviewed against compliance rates biannually. Analysis can be found on pages 51 and 52 of this document. For VISION facilities, a random 3% sample of completed 2728 forms is requested from facilities and signatures of beneficiaries are verified. This is completed on a yearly basis.

Clinical Performance Measures

The 2005 ESRD Clinical Performance Measures project was the twelfth year of this data collection in more than 2,000 dialysis programs nationwide. CMS characterized the project as a 'snap-shot' description of peritoneal and in-center hemodialysis patients. The effort focused on the dose of delivered dialysis, anemia management, serum albumin values and vascular access. The samples included: hemodialysis patients, peritoneal dialysis patients, and pediatric patients. The Veteran's Administration hospitals provided data on 100% of their population while all other facilities were subject to a 5% scientifically selected sample number of study patients.

The Veterans Administration (VA) dialysis facilities received and completed forms on their entire patient population consisted of 81 hemodialysis and 14 peritoneal dialysis patients for a total of 95 forms. The VA forms are not counted as part of the 5% study sample

A total of 601 CPM forms were submitted for the CPM 5% sample study for 2004 not including the VA or the reliability forms. Of the 601 forms, data from 22 forms were re-abstracted as part of the reliability testing of this project.

UNOS

Renal transplant registrations and follow-ups are resolved through updates and verifications within the SIMS and UNOS databases. Data is received monthly from UNOS and entered into the SIMS database. Discrepancies that occur are reviewed with the transplant facilities and accurate reconciliation of patients is obtained through the outstanding report summary.

VISION

To assist VISION facilities ensure that all entered data had been received and processed at the network office, monthly feedback reports were distributed. These reports showed the facility's current caseload as well as all events received year-to-date. Facilities reviewed these reports and identified any data that had not been submitted, then entered that data into VISION and submitted it electronically.

CMS requires that patient and physician signatures on 3% of all CMS-2728 (Medical Evidence Reports) forms submitted through VISION be verified annually. In 2005, TARC received 2,080 CMS-2728 forms through VISION and thus were required to verify 62 forms. 92 forms were randomly requested from 42 facilities. 71 forms were received from facilities, all of which were signed by the physician. Patient signatures were verified on 54 forms, and after investigation found that the remaining 17 were for patients who had expired.

D. Establish and Improve Partnerships and Cooperative Activities

These activities may include ESRD Networks, QIO's, state survey agencies, and ESRD facilities/providers, Medicare + Choice organizations, ESRD facility owners, professional groups and patient organizations.

Partnerships

CMS regional offices

- Participated in conference call of CMS/Forum annual meeting planning committee
- Attended the Delaware conference on Emergency Preparedness & Response for Individuals with Disabilities & Special Needs in Dover, Delaware
- Attended the 2005 CMS/Forum of ESRD Networks annual meeting in Baltimore.
- Participated in quarterly conference calls with CMS RO Boston
- Participated in executive directors/CMS conference calls
- Participated in CMS/ED/QID/PSC conference calls
- Participated in *Cognos* reports JAD session, Owings Mills
- Participated in coalition development/maintenance conference calls
- Participated in Forum/CMS 2006 annual meeting planning committee calls
- Volunteered for Program Operations Task Force of national FFBI Coalition
- Participated in Pay for Performance (P4P) conference calls
- Participated in the DPC Toolbox Web Ex session meeting
- Attended Lean Program in Boston
- Participated in the conference call - How It's Changing To Help More People: Helping Patients Choose a Medicare Part D Plan
- Participated in FFBI coalition's liaison conference callswith CMS

Data Committee

- TARC participated in the Data Systems Implementation Committee Meeting
- TARC attended Quality Net conference in Hunt Valley, MD
- TARC generated the WebTrends Custom Report 2005, which gives an overview of the number of visitors the Network 3 Web site has had

Measure	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
Visitors	17,672	17,494	17,193	18,193	70,552
Visits	25,144	24,986	25,219	27,464	102,813
Pages Viewed	141,563	140,201	141,944	147,625	571,333

Dialysis Related Organizations

- Submitted ANNA Monograph (NVAII)
- Attended the ER Preparedness and Response for Individuals with Disabilities and Special Needs Statewide Conference in Dover, Delaware
- Participated in the FFBI Program Operations Task Force conference calls
- Displayed *Fistula First* data at the 11th Annual Renal Symposium sponsored by Newark Beth Israel Medical Center
- Attended New Jersey Renal Administrators meetings.
- Sponsored the ANNA Winter Audio Conference on cannulation
- Sponsored the regional administrators meeting

ESRD Networks

- The executive director, quality improvement staff and the patient care service staff participated in on-going conference calls. The data staff attended summits/meetings with the data staff from other networks.
- Collaborated with Networks 2 and 4 to host a Fistula First surgeon course
- Participated in executive directors/staff/CMS conference call for coalition activities.
- Participated in coalition planning group conference calls
- Participated in monthly CROWN technical conference calls
- Participated in CPM conference calls with QI staff of networks

Quality Improvement Organizations

- Attended the AHRQ-sponsored Web conference, "Mass Casualty Care: Overlooked Community Resources"
- TARC attended the ESF #8 Partners meeting, Philadelphia, PA to learn more about existing efforts in emergency/disaster planning and foster inclusion of ESRD partners
- TARC collaborated with the Society of Pediatric Nephrology regarding an expert in pediatric nephrology involved with the network
- TARC sent the Network 3 goals, goal charts, and attachment to the ESRD facility CEO's, medical directors, administrators and quality improvement contacts
- Sent the 2004 Annual Report to all network facility administrators, and other interested parties

State Agencies

- Partnered with local departments of health with quarterly conference calls to discuss issues related to dialysis facilities
- Met on November 30 with representatives from the federal regional office in New York, the Office of the Governor and members of the Department of Health for Emergency Preparedness and Response, the Deputy Chief of Management and Operations, the Medical Director for Health Emergency Preparedness and Response and the Chief of the Department of Health Emergency Management and the Department of Health Senior Officer for Dialysis Services
- Participate in a state-wide conference call on December 2 when each county Department of Health had representatives on the call. TARC provided an introduction to dialysis services within the state and provided all participants with a list of dialysis facilities in each county. TARC was invited to participate in a Spring 2006 meeting on emergency preparedness within the state.
- Participated in conference call with Puerto Rico Department of Health
- Participated in an update on avian influenza CDC conference call
- Joined an Influenza work group with the State Department of Health for New Jersey, Epidemiology division

Cooperative Activities

Fistula First

- Partnered with the New Jersey Department of Health and Senior Services, the New Jersey quality improvement organization, ANNA, insurance carriers, facility managers, dieticians and social workers as members of the New Jersey Renal Coalition
- Participated in the NVAII IWG conference calls
- Held the Tri-state *Fistula First* surgeon course
- Participated in the Clinical Practices Fistula First Breakthrough Meeting
- Distributed button hole video tape to dialysis facilities upon request
- Distributed quarterly facility-specific vascular access reports and network and local area comparative data
- Mailed the *FistulaGram* newsletter, posters, and pens to the New Jersey dialysis facilities, medical directors and all the county medical societies; chief of medicine at acute care hospitals; and the chief of surgery at acute care hospitals.

Transplantation

- TARC was requested to remain on the planning board for the transplant designee conferences held throughout the State of New Jersey. The effort has since evolved into a collaborative one with all transplant facilities in the State requesting participation.
- Sent large mailing to the administrators of the dialysis and transplant facilities. Documents included: 16 consumer oriented Medicare publications, patient rights and responsibilities, patient grievances, dialysis facility compare (DFC) pamphlet, Know Your Numbers, 2 prevention articles for the families of the ESRD patients, and 2 vascular access documents.
- Network 3 staff shared the TARC annual report with organ procurement organizations (OPOs) serving the various geographical sections of New Jersey, Puerto Rico and the US Virgin Islands.

Water Treatment

- TARC continued to review the plan of correction submitted to TARC at the end of 2004 for one facility. TARC encouraged the facility to hire a biomed person and train all four biomed personnel in water treatment. TARC monitored the repair of the second reverse osmosis (RO) system; the second RO was repaired the last quarter of 2005.

CMS encourages the networks to establish and enhance partnerships with other health agencies and groups. TARC collaborated with the CMS regional offices (ROs), state survey agencies (SAs), New Jersey and Puerto Rico Department of Health, other sections of government, quality improvement organizations (QIOs), the New Jersey Renal Administrators, ANNA, insurance carriers vendors and interested agencies to improve the quality of care provided to consumers within network 3.

These activities included sharing information to assist SAs and ROs in conducting their legislative responsibilities. Quality issues were referred as needed. Members of ANNA, insurance carriers and the QIO actively participated in the collation task force to improve the placement of fistulas.

Health and safety problems and complaints were referred to the appropriate state agency for investigation and resolution. When state investigations were completed, the findings were shared with the network. The network held telephone conferences regarding ongoing concerns within the dialysis facilities with state agency personnel both in New Jersey and on the islands. TARC sent the state agencies copies of the network's annual report and pattern analysis reports.

More specific information concerning facility interaction can be found in a prior section titled, *Provision of Technical Assistance, Educational Material and Problem Resolution*.

The network met its responsibility in 2005 to partner with other governmental agencies and contractors to enhance the safe and therapeutic delivery of dialysis and renal transplantation.

E. Evaluate And Resolve Patient Grievances As Categorized In The Standard Information Management System (SIMS)

TARC may receive a written or oral complaint or grievance from an ESRD consumer, consumer representative, family member, friend or others concerning either dialysis or transplant providers.

Referrals of ESRD consumer complaints or other concerns may be received from professional review organizations, state agencies, Medicare hotline numbers and Medicare intermediaries. When an oral grievance is received, the person taking the complaint will usually be asked to document it in writing. During complaint investigations consumers may designate representatives to act on their behalf. Immediate investigation is started for a potentially life-threatening issue.

Consumers are encouraged to use facility internal processes prior to referring a grievance to the network. When a patient does not wish to use the facility process (it is not mandatory that consumers use the facility grievance process) they may contact the network for assistance.

The network's responsibility for complaints/grievances is to review issues raised and determine the required action, i.e., investigation or referral. The network role in resolving grievances varies depending on the situation. Attempts are made to resolve grievances by acting as an investigator, facilitator, referral agent or coordinator between a patient and the provider.

2005 ESRD Patient Grievance

There was one formal grievances filed.

While there were seventeen complaints, network staff addressed many concerns, and issues. An aggregate summary of interactions follows:

Reporting period: 2005	Formal Grievance	Complaints	Beneficiary Inquiries	Facility Concerns	Facility Inquiries	Other Inquiry	Data Processing	SIMS/ Vision Issues	Totals
Physical Environment			1	3					4
Staff Related		4				2	2		8
Treatment Related/Quality of Care	1	8	3	2	1				15
Information			24	9	90		86		209
Disruptive				2	1	119			122
Patient Transfer/Discharge		2	3	5	17		19		46
Professional Ethics		1				8			9
Dialysis Compare Web site				18	7				25
QI Projects				3	125		42		170
Reimbursement/ Financial			12	1	5	3			21

Request for Educational Information			1	1	5	5	1		13
Request for Technical Assistance			1	2	2	6	3	3	17
Transient			1	1	1	1	2		6
Abusive		1		5	3				9
Non-compliant					3				3
Other		1		4	4	1	8	1	19
Request For Forms					7	16	9		32
SIM/VISION					7	4	82		93
Data Request			3	1	9		19		32
Pre-ESRD Inquiry						3	1		4
Total	1	17	49	57	287	168	274	4	857

Grievances are requests for a formal investigation of a serious complaint involving a facility, physician or other provider (quality of care issues). **Beneficiary complaints** are requests for assistance on behalf of an ESRD patient regarding concerns about ESRD issues including, but not limited to, care or treatment. **Beneficiary Inquiry** is a request for information, advice, referral, or educational material that does not require problem resolution. **Facility concerns** are requests (from staff) for guidance or advice/assistance in handling difficult issues that are patient related (clinical or behavioral). **Facility inquiry** is a request (from staff) for information, advice, referral, or educational material that doesn't require problem resolution.

A total of 857contacts were entered in the SIMS database. Of those, 8% were from beneficiaries. Almost 37% of the beneficiary calls received were informational inquiries and educational materials were discussed and distributed to these beneficiaries. The beneficiary complaints reviewed included lack of staff, lack of appropriate equipment within the unit and a lack of professionalism of staff members. One formal grievance was filed. Informational contacts, either facility or beneficiary initiated, accounted for 47.5% of all contacts to TARC.

Beneficiary concerns and inquiries were managed by TARC more than 96% of the time. Referrals for beneficiary concerns were made, when indicated, to the department of health (health and safety issues) or quality improvement organization (inpatient care).

An example of each contact type categorized through SIMS includes the following:

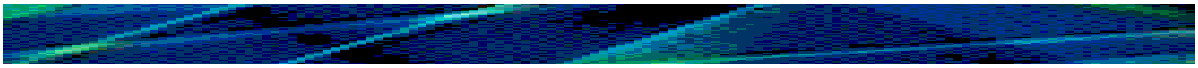
- Physical Environment- TARC received call from facility manager indicating the facility was under water and without electricity.
- Staff related – Beneficiary complained that new needles were causing problems with fistula.
- Treatment Related/Quality of Care - TARC received call from a beneficiary's wife indicating that her husband had been referred to a urologist who did not consult with the nephrologist before prescribing the wrong dose of a medication for her husband.
- Information – TARC received a request from a beneficiary's family for a list of transplant facilities to enable her to register her mother for a transplant.
- Disruptive/Abusive patient - TARC received a call from the administrator of a facility. A patient threatened to bring in a bomb and blow up the facility

- Patient transfer/discharge - TARC received phone call from the family of a beneficiary who could not afford 20% co-pay.
- Reimbursement/Financial – TARC received call from beneficiary requesting assistance with payment for medications.
- Professional Ethics – No contacts that included this criteria.
- Other - TARC received a phone call from a beneficiary's family indicating that her mother, who is on dialysis, received a packet of information that she could not read because it was in English.

In addition to the above, TARC received one formal grievance. Beneficiary's son was trying to obtain copies of his recently deceased mother's medical record from a hospital.

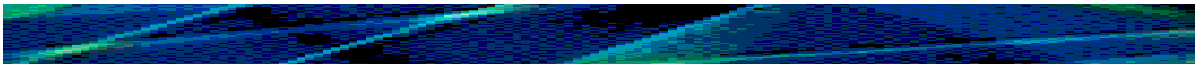
TARC annually distributes copies of its network grievance procedure to all Medicare-certified facilities within New Jersey, Puerto Rico, and the Virgin Islands. Facilities, in turn, make these available to their consumers via patient bulletin boards, handouts in dialysis waiting rooms and in orientation packets to all new consumers. During the year, TARC developed and distributed a brochure entitled I *Am A Dialysis Patient What Can I Do If I Have A Complaint?*

Facilities in network 3 met their obligation for distributing the network grievance procedures and for handling and addressing issues of patient concern at the facility level.



4. Sanction Recommendations

No facility sanction was recommended to CMS.



5. Recommendations For Additional Facilities

In all three geographic areas of Network 3, access to dialysis therapies is within reasonable travel distances from ESRD consumers' homes. At the end of 2005, no new dialysis facilities were recommended for New Jersey, Puerto Rico, or the Virgin Islands.