

ESRD NETWORK 2017 ANNUAL REPORT

Description of the patient and facility population in the ESRD (End Stage Renal Disease) Network program and the outcomes of the quality improvement activities performed by this Network compared to the Network program performance

ESRD Network 9

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ESRD DEMOGRAPHIC

DATA

The IPRO End-Stage Renal Disease (ESRD) Network of the Ohio River Valley (Network 9) is funded by the federal government to promote the provision of healthcare that is safe, effective, efficient, patient-centered, timely, and equitable for all ESRD patients in Indiana, Kentucky and Ohio. To achieve this goal, Network staff members work with providers, patients, and other stakeholders toward improving care, engaging and empowering patients as consumers, and conducting activities consistent with the National Quality Strategy's three broad aims and the Centers for Medicare & Medicaid Services' (CMS) priorities for the ESRD Network Program:

- Better care for the individual through beneficiary and family centered care;
- Better health for the ESRD population; and
- Reduced costs of ESRD care by improving care.

Network 9's service area comprises the states of Indiana, Kentucky and Ohio. The largest population of patients in our Network service area resides in Ohio, which has approximately three times the population of our smallest state, Kentucky. In 2017, 23 new Medicare-certified dialysis facilities opened in our Network service area, raising the net number of facilities from 599 to 611. Network 9 has 33,556 prevalent ESRD patients as of December 31, 2017, of which 29,281 dialyze in an in-center facility creating an average patient census size of 48 patients per facility. Network 9 is the fourth largest Network in the nation in patient census but has the third largest number of ESRD facilities due to overall number of in-center facilities.

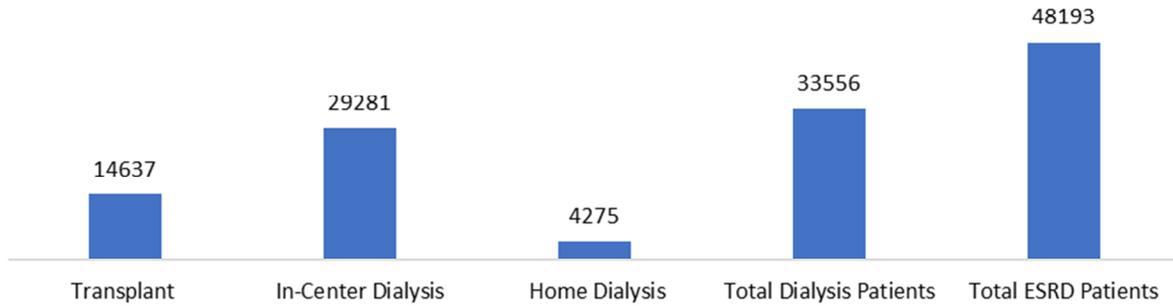
Facilities serving the region's ESRD patients include 12 Veterans Affairs (VA) hospitals and 14 transplant centers. In addition, more than 1,287 patients in the Network's service area received a kidney transplant in 2017.

Eighty percent of the dialysis facilities in Network 9 are managed by a Large Dialysis Organization, with the remaining twenty percent split between middle and small dialysis organizations and independents.

Since the Network 9 service area has more facilities with a lower patient census than most other ESRD Networks the patients in the region have more options for selecting a facility, dialysis provider, treatment modality and schedule, and medical care. Conversely, having a larger number of facilities may present opportunities for clinical care staff to move between facilities or dialysis organizations, which can lead to staff shortages, leadership transition issues, and frequent retraining. Interrupting the continuity of care can also affect outcomes over time and make it harder to engage patients in their own care, which can create barriers to optimal treatment.

The Network continually refines its operations to support the changing needs of patients and stakeholders, using Web-based systems, electronic reporting, and standardized workflow processes to facilitate seamless transitions and quick assimilation of providers and staff into the Network's programs.

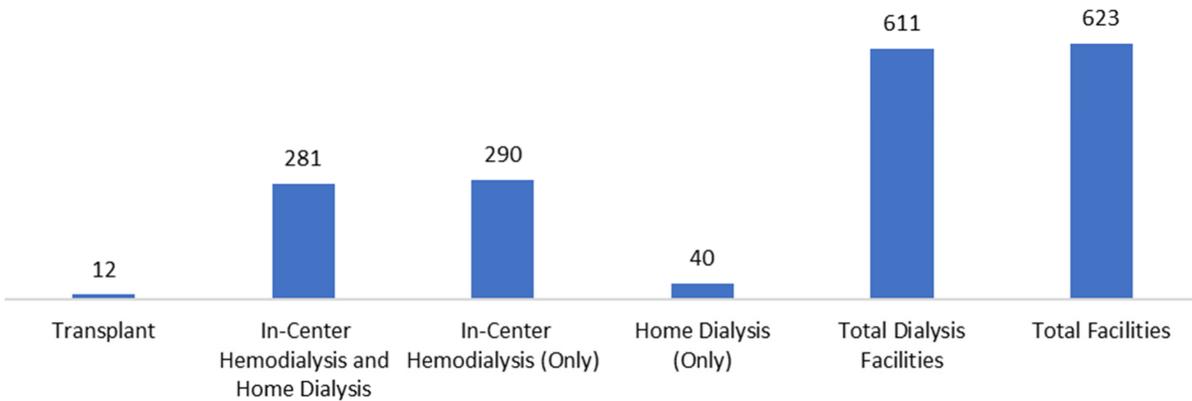
**Network 9: Prevalent ESRD Patients by Treatment Modality
As of December 31, 2017**



Total Dialysis Patients = In-Center Dialysis + Home Dialysis
 Total ESRD Patients = Transplant + Total Dialysis Patients

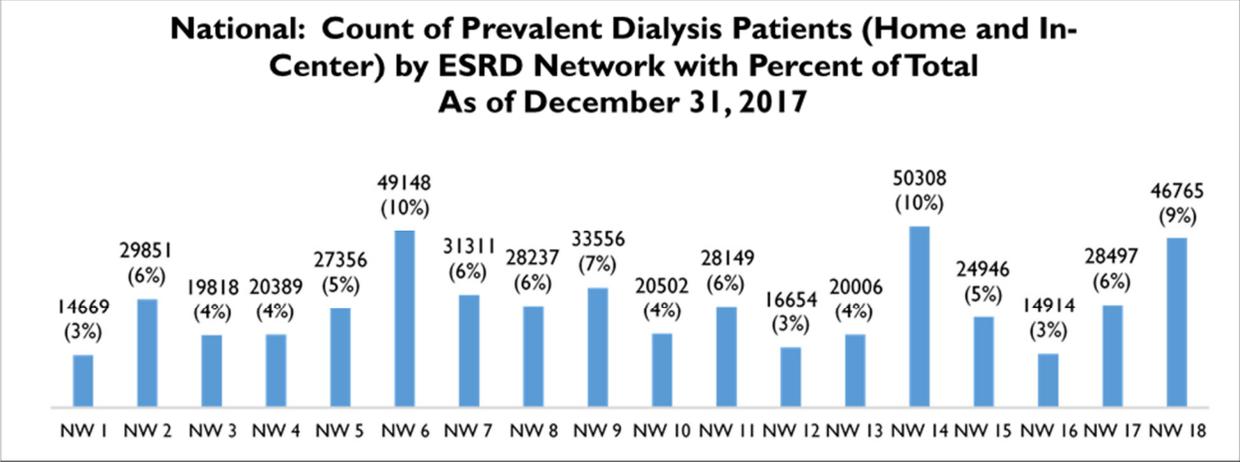
Source of data: CROWNWeb

**Network 9: Number of ESRD Medicare-Certified Facilities by Modality
Type Offered
As of December 31, 2017**

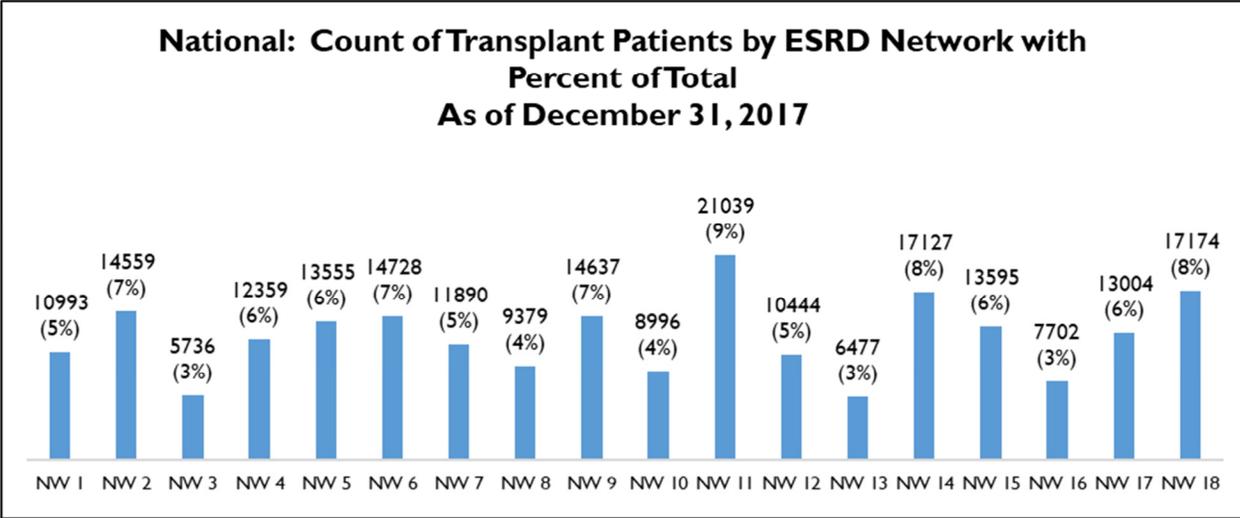


Total Dialysis Facilities = In-Center Hemodialysis and Home Dialysis + In-Center Hemodialysis (Only) + Home Dialysis (Only)
 Total Facilities = Transplant + Total Dialysis Facilities

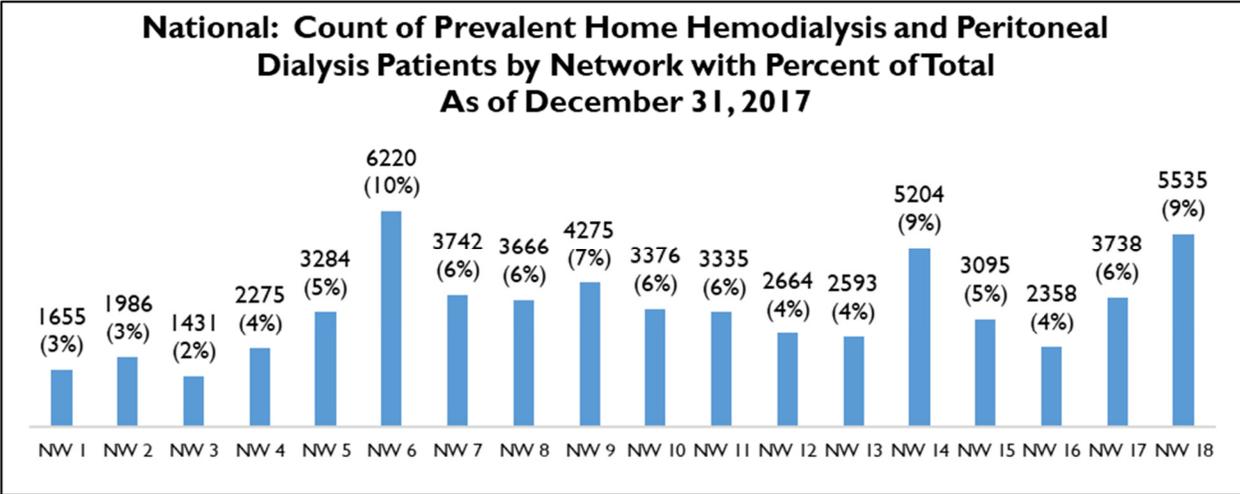
Source of data: CROWNWeb



Source of data: CROWNWeb

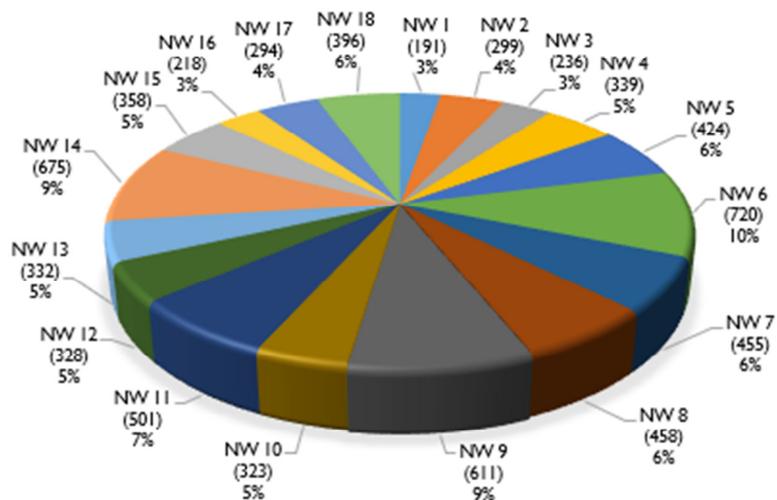


Source of data: CROWNWeb



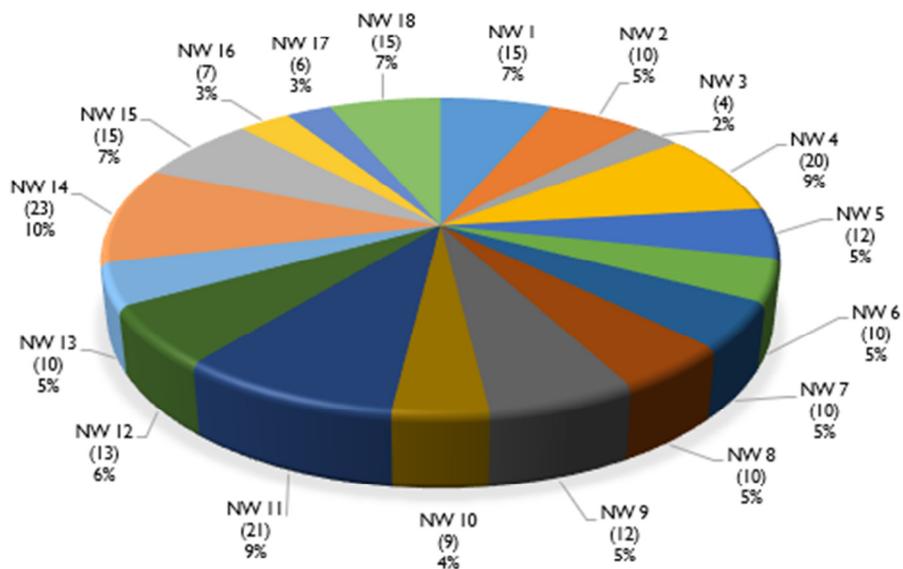
Source of data: CROWNWeb

National: Count of ESRD Medicare-Certified Dialysis Facilities by ESRD Network with Percent of Total As of December 31, 2017



Source of data: CROWNWeb

National: Count of ESRD Medicare-Certified Kidney Transplant Facilities by ESRD Network with Percent of Total As of December 31, 2017



Source of data: CROWNWeb

ESRD NETWORK

GRIEVANCE AND ACCESS

TO CARE DATA

During 2017 there were a total of eighty-six grievances reported to the Network by patients and/or patient representatives. The most reported areas of concern were related to the patient's treatment and quality of care (scheduling and transportation issues, physician's orders, policy and procedures), staff and interpersonal related conflicts (professionalism, clinical competency, staff/patient ratio), and physical plant environment (temperature, building repairs, sanitary conditions, noise). All grievances were reviewed by the Network with a patient centered approach in mind. Interventions and efforts to resolve the grievances included Network mediation, initiating and participating in interdisciplinary conference calls, review of patient medical records, and collaborating with the Network's Medical Review Board.

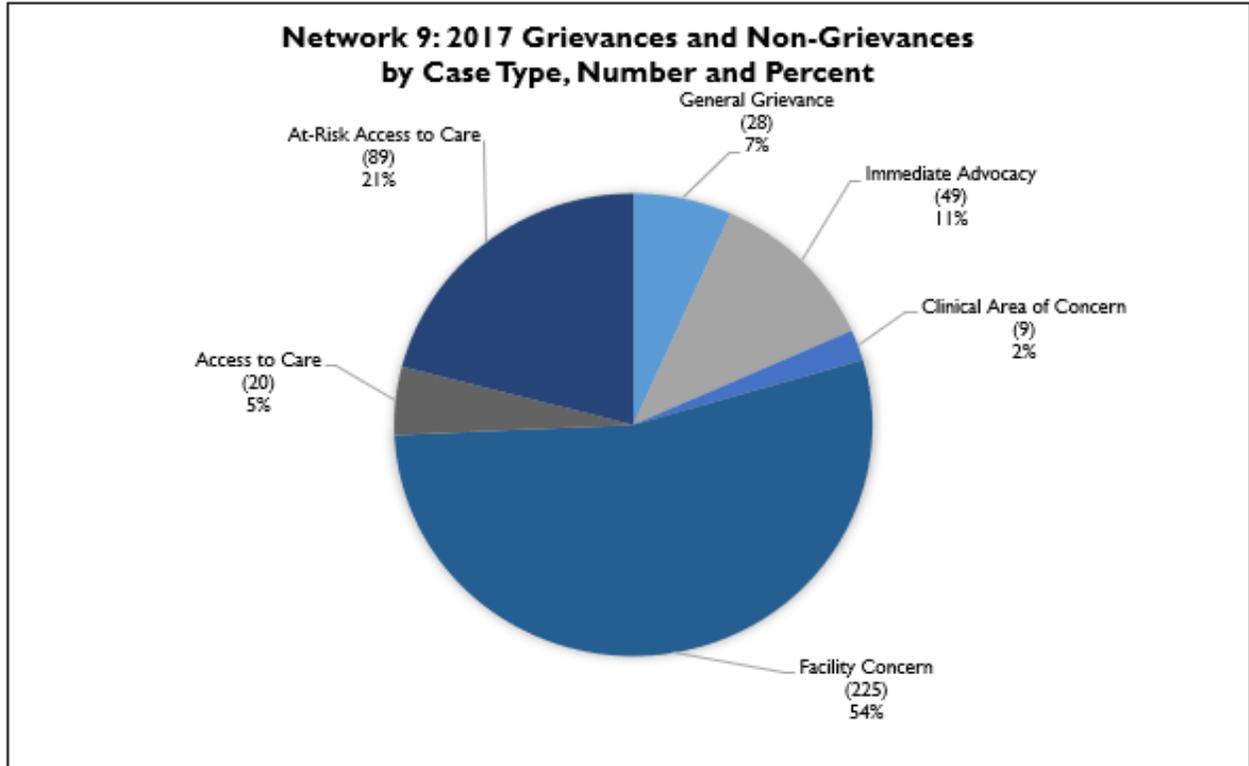
A very prevalent trend in 2017 was the increase of non-adherent patients and patients at-risk for access to care concerns. Several facilities contacted the Network seeking guidance, technical assistance and resources to assist with the difficult patient population. The Network observed this as a potential educational opportunity for facilities to cultivate best practices within their facility. The Network created several resources forming a toolkit which could guide facilities to make appropriate decisions in regards to each case. Resources provided included the *Preventing the Involuntary Discharge of Dialysis Patients Facility Guide and Checklist*, *Voluntary Discharge Procedure* promoted by the Network and CMS, the *Decreasing Patient Conflict: Pathway to Resolution* algorithm, and the case comparison chart which differentiates the procedures for a lost to follow up, voluntary discharge or discontinue, and an involuntary discharge.

The Network works one on one with all patients who call in with potential concerns or access to care issues often acting as mediators between the facility and patient. We have also educated and promoted the Patient Grievance Toolkit released by ESRD Forum's Patient Advisory Committee as an educational tool to assist patients with expressing and managing concerns with their care.

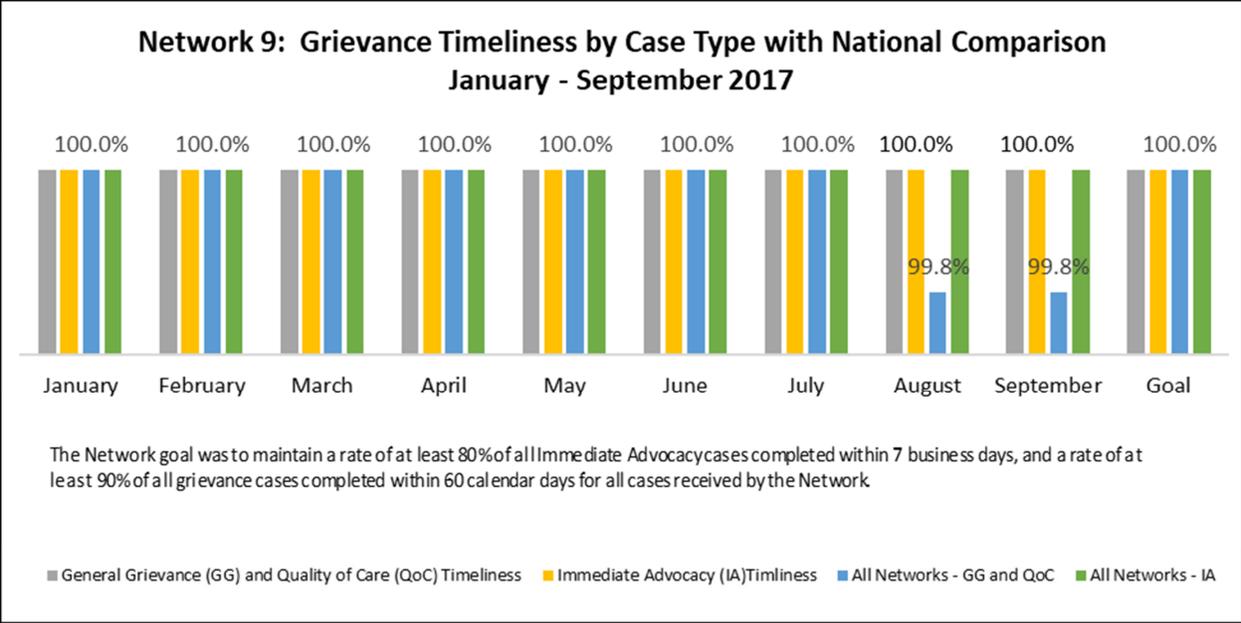
The Network is assembling all of these materials on our website as a form of a toolkit to reference patients and providers to utilize. A review of these tools and their location on the website is completed at each of our access to care education events and updated in our newsletter as necessary. The Network's goal is to lower the number of potential and actual access to care issues through technical assistance combined with education and support for the patient and provider community.

Network 9: Grievance Data for Calendar Year 2017

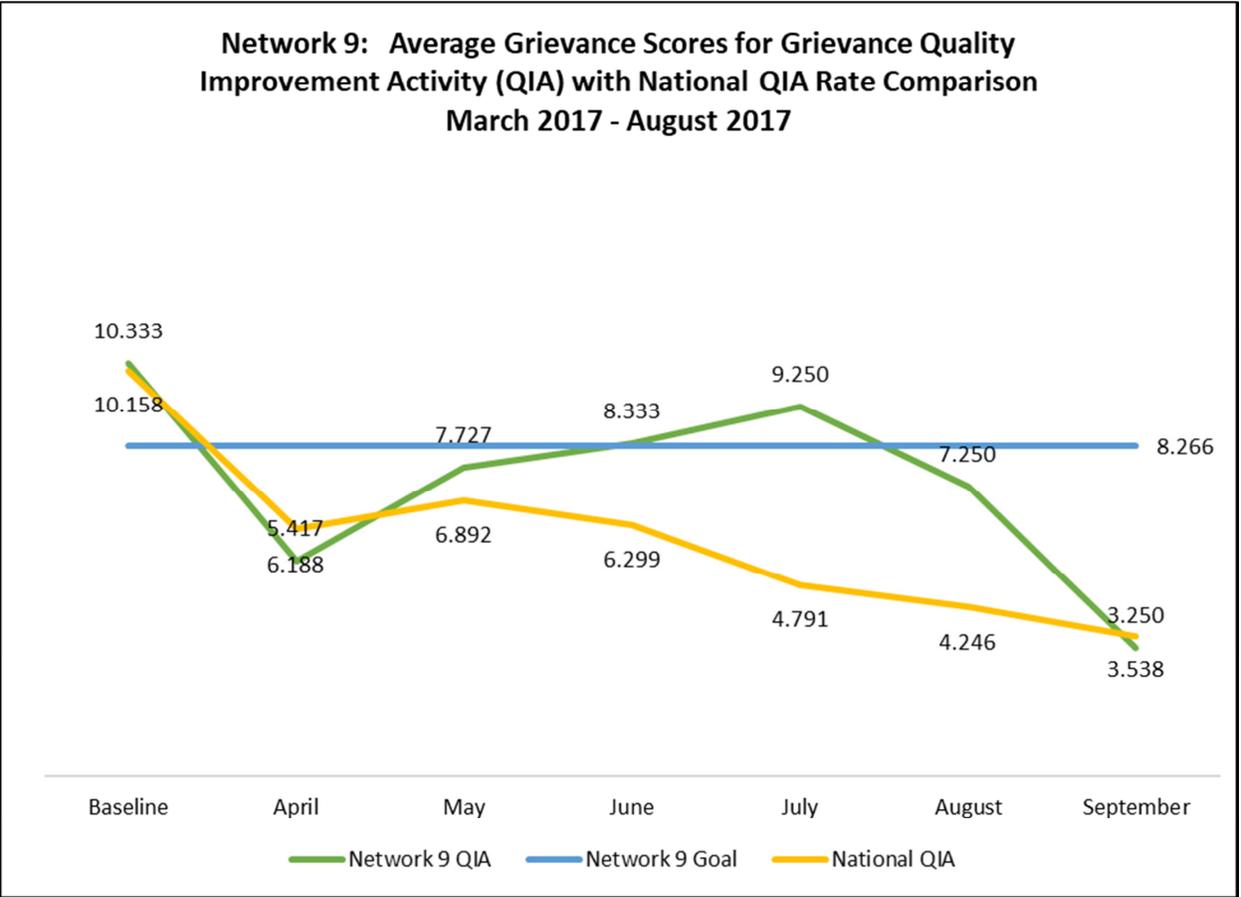
| Category | Cases |
|---|------------|
| Grievance Cases | 86 |
| General Grievance | 28 |
| Immediate Advocacy | 49 |
| Clinical Area of Concern | 9 |
| Non-Grievance Cases | 334 |
| Facility Concern | 225 |
| Access to Care: Confirmed Involuntary Transfer/Discharge (IVT/IVD) <small>*Note: Two Facility Concerns have the patient as Discharged and are recorded here.</small> | 20 |
| At-Risk Access to Care | 89 |
| Additional Case Information | |
| Averted IVT/IVD | 0 |
| Failure to Place | 3 |
| Total Cases 2017 Note: Revised cases were placed in those revised categories. 4 Cases were excluded as it did not have a grievance category. | 420 |



Source of data: Patient Contact Utility (PCU)



Source of data: October 2017 ESRD Network Dashboard



Source of data: October 2017 ESRD Network Dashboard

Aim 1: Better Care for the ESRD Individual

Evaluating and Resolving Grievances

Background

As defined by CMS, a grievance is a written, verbal, or electronic request for assistance initiated by or on behalf of an ESRD patient(s) regarding concern(s) about ESRD issues including, but not limited to care, treatment, or providers. Grievances can be filed by ESRD patients, their representatives, other family members/caregivers, facility employees, physicians and other practitioners, federal or state agencies, Quality Improvement Organizations (QIOs), State Survey Agencies (SAs), and other agencies and organizations. All grievances are private, confidential, and protected under Health Insurance Portability and Accountability Act of 1996 (HIPAA) guidelines. Patient identity is confidential and cannot be released without the express permission of the patient.

A comprehensive analysis of grievances and access to care issues occurring in the Network's service area during the first and third quarters of 2016 revealed that the most prevalent grievance issues were staff professionalism and communication between patients and providers. The emphasis of this QIA was to educate staff and empower patients on ways to improve and eliminate minor grievances.

Targeted Facilities

The Network worked with 12 facilities in its service area that had the most grievances and access to care issues based on grievance data extracted from the Patient Contact Utility for the months of April through October 2016. Each of these facilities participating in the QIA had two or more grievances (immediate advocacy, general, or quality of care) and one or more access to care issues reported to the Network.

Goals and Outcomes

The primary goal of the 2017 grievance QIA was to achieve a 20% relative reduction in participating facilities' average grievance scores from baseline (March 2017) to re-measurement (September 2017), based on weighted scoring. Improvement was defined by a decrease from baseline to re-measurement in the level of grievances, using the CMS defined five-point scale:

1. Major Quality of Care (QoC) or Access to Care issues (e.g., major bleeds, wrong dialyzer, prescription changes without physician order, involuntary discharges (IVD) either at risk or actual)
2. Minor QoC issues (e.g., simple bleeding after dialysis, minor infection control issues)
3. Operational Issues (e.g., inadequate staffing, other issues related to the operation of the facility)
4. Interpersonal Issues (e.g., conflicts between patients, conflicts between staff and patients)
5. Environmental issues (e.g., facility too cold, basic maintenance issues such as chair, lobby)

As such, the emphasis of this QIA was to educate participating facility staff members to be more proactive in supporting patients in resolving lower-weighted grievances (those that involve interpersonal or environmental issues). In addition, the Network focused on helping to empower patients in effectively addressing their concerns about these issues. The Network worked to foster enhanced patient/staff relationships to improve patient self-efficacy in handling concerns within the facility.

For the 12 participating facilities the baseline score (total coded scores of grievances from grievance logs) for monthly weighted averages was 10.33. The project goal was a 20% reduction (5.36). The Network was successful in reducing the grievances, thereby improving performance by 56.72%, resulting in a final grievance score of 3.25.

Interventions

According to the National Research Corporation article, “Eight Dimensions of Patient-Centered Care” (PCC) (2016), patients have different needs, so a “one-size-fits-all” approach is likely to fail. Years of research compiled by the Picker Institute and Harvard Medical School revealed what matters to patients the most. These needs have been collated into eight categories or “dimensions.” This approach was the basis for the Network’s interventions aimed at strengthening relationships and increasing communication between patients and staff, with an understanding that achievement of these goals is a prerequisite to creating a culture of quality improvement.

With this in mind, the Network developed a resource guide for providers outlining the eight dimensions. Using examples relating to individuals living with kidney disease, examples of conversations focusing on areas identified in the “Eight Dimensions of Patient-Centered Care” were provided.

The Network worked with facility staff to establish formal grievance processes and improve patients’ experience of care using the PCC approach. Key to the success of the project was implementation of interventions focused on the theme “ACT Now” at each participating facility. Patient Subject Matter Experts (SMEs) helped to guide the development of the QIA’s educational tools and resources, which included:

- Educational posters for patients about environmental concerns (i.e., being cold during dialysis);
- Patient poster promoting active communication about grievances;
- Provider posters promoting positive interaction between patients and staff;
- A personal checklist for staff members to complete (*ACT Now to Resolve* pocket-size cards);
- A personal checklist for patients to review (*ACT Now to Resolve: Patient Edition* pocket-size cards).

Facility staff members were given *ACT Now* resources and guidance in these interventions to monitor patients’ environmental, interpersonal, and operational concerns before they escalated into grievances. Through facility staff/patient meetings and using a PCC approach, facility staff members asked questions to encourage proactive communication, with the goal of addressing patient concerns at the time they were occurring.

Educational resources were also created for patients to increase their knowledge and comfort level with the grievance process, patient rights and responsibilities, and ways to become active participants in their care.

ESRD NETWORK QUALITY

IMPROVEMENT ACTIVITY

DATA

Network Goals

The Network worked closely with ESRD patients, patients' family members and caregivers, nephrologists, dialysis facilities, ESRD advocacy organizations, and other ESRD stakeholders to improve care for ESRD patients in the Region. In 2017 the Network conducted quality improvement activities focused on:

- Improving care for ESRD patients, through initiatives that targeted:
 - Promoting patient- and family-centered care;
 - Responding to grievances about ESRD-related services filed by, or on behalf of, ESRD patients;
 - Supporting improvement in patients' experience of care;
 - Working with dialysis facilities to ensure that all dialysis patients have access to appropriate care;
 - Improving transplantation coordination;
 - Increasing vaccination rates;
 - Promoting best practices in vascular access management; and
 - Helping dialysis facilities reduce the incidence of healthcare-associated infections.

Incorporating the Patient's Voice

Throughout 2017 the Network effectively promoted integration of National Quality Strategy priorities in supporting improvements in care for patients living with ESRD. All Network programs and activities integrate the patient voice and the concept of patient-centered care through the inclusion of a patient representative as a team member and, in some cases, as a project lead or Patient Ambassador. This initiative was introduced into all Quality Improvement Activities (QIAs) in 2017. The Network asked each facility participating in a QIA to select a patient to serve in this role.

Within our QIAs, we had 24 active Patient Ambassadors. Some of their tasks included assisting the facility with distributing project materials, acting in the role of a peer mentor for other patients, participating in the facility quality assurance and performance improvement (QAPI) meetings to report progress within the QIA, or participating in a lobby day or other promotional activity.

The ESRD Network of the Ohio River Valley's Patient Advisory Committee (PAC) is a group of active dialysis patients, transplant recipients, care partners, and family members who are committed to improving the quality of life for ESRD patients across the Network's service area. PAC Representatives

are volunteers who have been selected by their facility social workers to promote communication among patients and staff; inform patients about the ESRD Network and its programs and resources; and serve as a link between patients and the ESRD Network. PAC members' efforts focus on engaging their peers and sharing educational materials.

The Network is continuously working to expand membership in the PAC. In 2017, the Network recruited and engaged a record number of PAC Representatives—98 patient volunteers at 83 unique facilities—resulting in active patient representation in 14% of the dialysis facilities in the Network's service area. In addition to PAC members, in 2017 the Network recruited six new Patient Subject Matter Experts (SMEs) who provide the patient voice in all Network quality improvement activities, serve as Network representatives on national initiatives with the Forum of ESRD Networks and the ESRD National Coordinating Center (NCC) and Kidney Community Emergency Response (KCER) program.

Aim 1: Better Care for the ESRD Individual

Improving Patients' Scores on the In-Center Hemodialysis Survey – Consumer Assessment of Healthcare Providers and Systems (ICH CAHPS®)

Background

Chronic outpatient dialysis facilities that treat more than 30 eligible patients during the prior calendar year are required to participate in the In-Center Hemodialysis Consumer Assessment of Healthcare Providers and Systems (ICH CAHPS) survey (Agency for Healthcare Research and Quality, 2015), as required in regulations established by CMS. The 62-question survey is designed to measure the experiences of people receiving in-center dialysis and focuses on questions that make up four key components: *Kidney Doctors*, *Dialysis Facility Staff*, *The Dialysis Facility* and *Dialysis Treatment*. All ICH CAHPS activities are carried out by third party vendors who administer the survey in spring and fall.

Targeted Facilities

The Network reviewed the results of the spring ICH CAHPS survey and selected the 31 facilities in its service area that performed poorest on questions 10-18 in the "Quality of Dialysis Center Care and Operations" composite measure for participation in this QIA. Also taken into consideration was the requirement that participating facilities serve a combined patient census of at least 5% of the total ESRD patient population in the Network's service area. Facilities with fewer than 10 completed surveys and those with a patient census of less than 40 were excluded from the QIA. Based on the above criteria, 31 facilities with a total census of approximately 1,829 patients (representing greater than 5% of the total ESRD patient population in the Network's service area) were selected to participate in the QIA.

Goals and Outcomes

The goals of this QIA were to achieve a five percentage point increase in the number of patients within the selected facilities who establish and work toward a personal goal from the baseline period (March 1 – 31, 2017) to the re-measurement period (September 1 – 30, 2017).

The Network succeeded in achieving the goals of the QIA. The baseline was set at 0% (no patients achieving their goal). At re-measurement, 20.4% (373 patients) had successfully achieved their personal goals. In addition, the Network's goal was achieved prior to project completion.

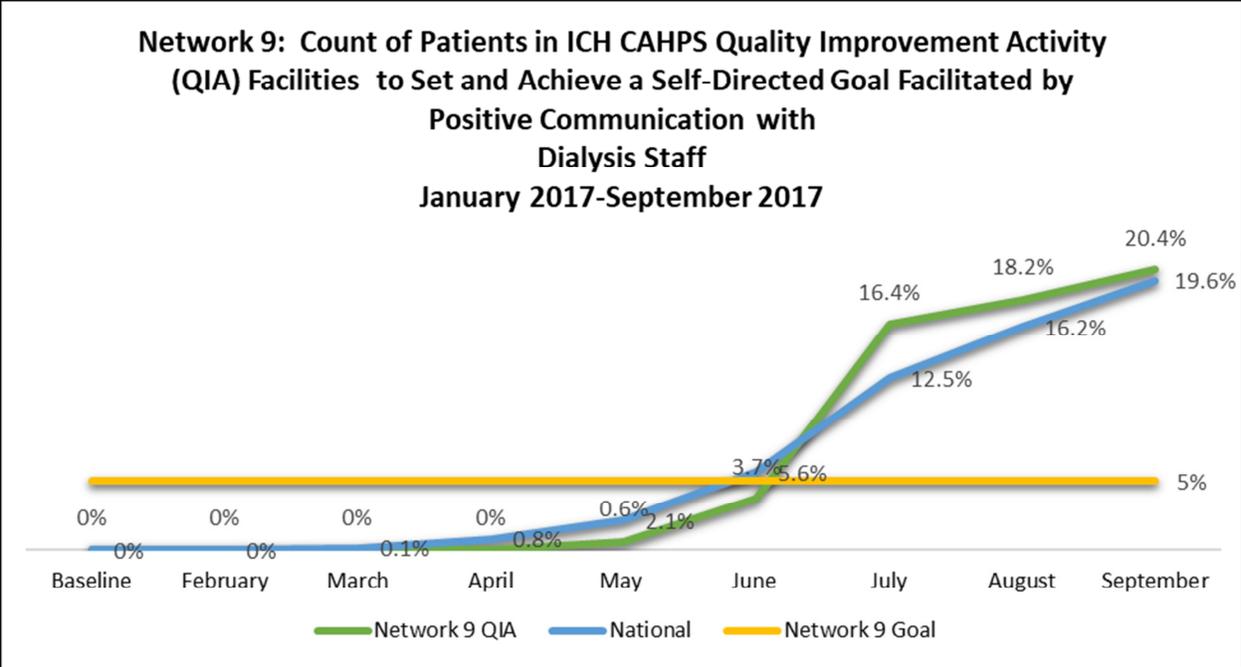
Interventions

Patients with chronic disease often experience a number of changes in their lives that impact their psychological well-being (McCarley, 2009). These patients face changes to their daily routine and deal with distress about their condition, all while attempting to maintain a meaningful life. In the face of these changes, many it is important to ensure that patients remain engaged in their care. According to McWilliam (2009), patients are more likely to follow a care plan to which they were able to contribute. These concepts guided the Network's interventions for this QIA.

By creating a program in which dialysis facility staff members worked with patients to set goals and then incorporating those goals in the plan of care, Network staff helped to create an environment that strengthened patient-staff relationships, improved communication, actively engaged patients in their care, and improved patients' perception of care related to their overall quality of life.

The Network implemented the **Your Life, Take Charge!** campaign to promote adoption of patient self-management and goal-setting processes at the facility level. These educational tools and resources were provided to facility staff to promote the importance of involving patients in their care and to encourage them to help their patients establish and work toward achieving personal goals, thereby improving their dialysis experience. Each targeted facility received a toolkit with educational materials including resources for motivational interviewing, Specific, Measurable, Attainable, Relevant and Timely (SMART) goals, the generalist intervention model, the stages of change, patient progress tracking tools, and patient participation tracking logs for staff. The Network supported facility staff in administering educational tools and resources to help patients identify and achieve specific, measurable, achievable, realistic and time-bound SMART goals. The development of **Your Life, Take Charge!** resources for both facility staff and patients were guided by Patient SMEs. Materials included:

- A staff-facing **poster promoting** opening of lines of communication between staff and patients;
- **SMART Goal** resources for patients;
- **Motivational Interviewing** tools and techniques to educate staff on eliciting/evoking change, exploring importance and confidence, reflective listening, and supporting self-efficacy;
- A **board game** designed to help patients understand how to set SMART goals and strengthen communication with facility staff; and
- A **patient participation-tracking tool** to assist staff with tracking patients' success.



Source of data: October 2017 ESRD Network Dashboard. Option 2 in in the draft annual report for Network 1, 4, and 9.

*In-Center Hemodialysis Consumer Assessment of Healthcare Providers and Systems (ICH CAHPS)

Aim 1: Better Care for the ESRD Individual

Vascular Access: Reducing Long-Term Catheter (LTC) Use

Background

The use of indwelling Long-Term Catheters (LTCs) has doubled in the last two decades (Wilcox, 2009). Patients with LTCs are defined as those with catheters in use (for dialysis treatments) for 90 days or longer.

A significant number of ESRD patients initiate dialysis emergently with 80% of the incident population starting with a catheter (Centers for Disease Control and Prevention, 2013). Research shows that patient morbidity and mortality rates are related to the type of vascular access used for dialysis, with a higher infection rate associated with use of LTC compared to fistula use among eligible adult (≥ 18 years of age) in-center hemodialysis patients (Foley & Lok, 2013).

Targeted Facilities

The Network worked with 158 facilities and 9,000 patients in its service area; targeted facilities had an LTC rate in their prevalent patient population greater than 10%, as reported in the September 2016 Fistula First Catheter Last (FFCL) data provided by the ESRD National Coordinating Center (NCC).

Goals and Outcomes

The project baseline (15.61%) was derived from September 2016 ESRD NCC FFCL data. An intervention period of seven months (January-July 2017) was established, and re-measurement was done during the month of September 2017.

The first goal of this project was to work with targeted facilities to reduce the rate of LTCs by 2%. A second goal was to achieve a 95% CrownWEB reporting rate for these facilities.

The Network attained a .61% reduction in LTC use, to 15.01%, but did not meet the QIA goal of 13.61% or less LTC use. Data issues that affected Network 9's reporting for this QIA were identified. CMS confirmed a change in May batch submitting logic at Fresenius Kidney Care (FKC). Network 9 tracked LTC data trends for FKC clinics in June 2017 that appeared aberrant and were not supported historically. Network 9 observed an LTCR rise of 1.2% from April to June 2017 within these clinics.

Random audits of the three Batch Submitting Organization (BSO) clinics confirmed data issues within FKC facilities. Network 9 submitted a full report to CMS to review LTC outcome metrics. CMS ruled that sufficient Networks showed a decrease in LTC rate to deem that LTC data integrity was restored in July. Twelve of 18 Networks made at least a 1% change in LTC use, with two of those 12 obtaining the desired 2% reduction.

Interventions

Interventions included, but were not limited to:

- Identifying and engaging a **lead facility contact and a Patient Ambassador** in each targeted facility to assist in creating opportunities for education, communication, and interventions to facilitate improvements at the facility level;
- Sharing **educational materials** and resources from access management specialists within the Network community and from national resources;
- Sharing **best practices** identified through the Plan-Do-Study-Act (PDSA) process;
- Creating a **knowledge portal** of compiled resources;
- Developing a **template for root cause analysis (RCA) of LTC usage** at the facility level. The RCA tool will assist providers in identifying and implementing interventions to decrease catheter usage.
- Implementing a **monthly progress report** that facilities could use to communicate the following to the Network:
 - Calculation of LTC rate in prevalent patients;
 - A list of interventions undertaken within the facility to reduce catheter rates;
 - A facility-based patient level action list to achieve catheter removal; and
 - Any key observations the facility discussed during QAPI meetings as barriers to achieving the facility goal of less than a 10% catheter rate.
- **Communicating with regional operations managers** and quality improvement personnel in each facility in the targeted group to increase participation and movement towards goals;

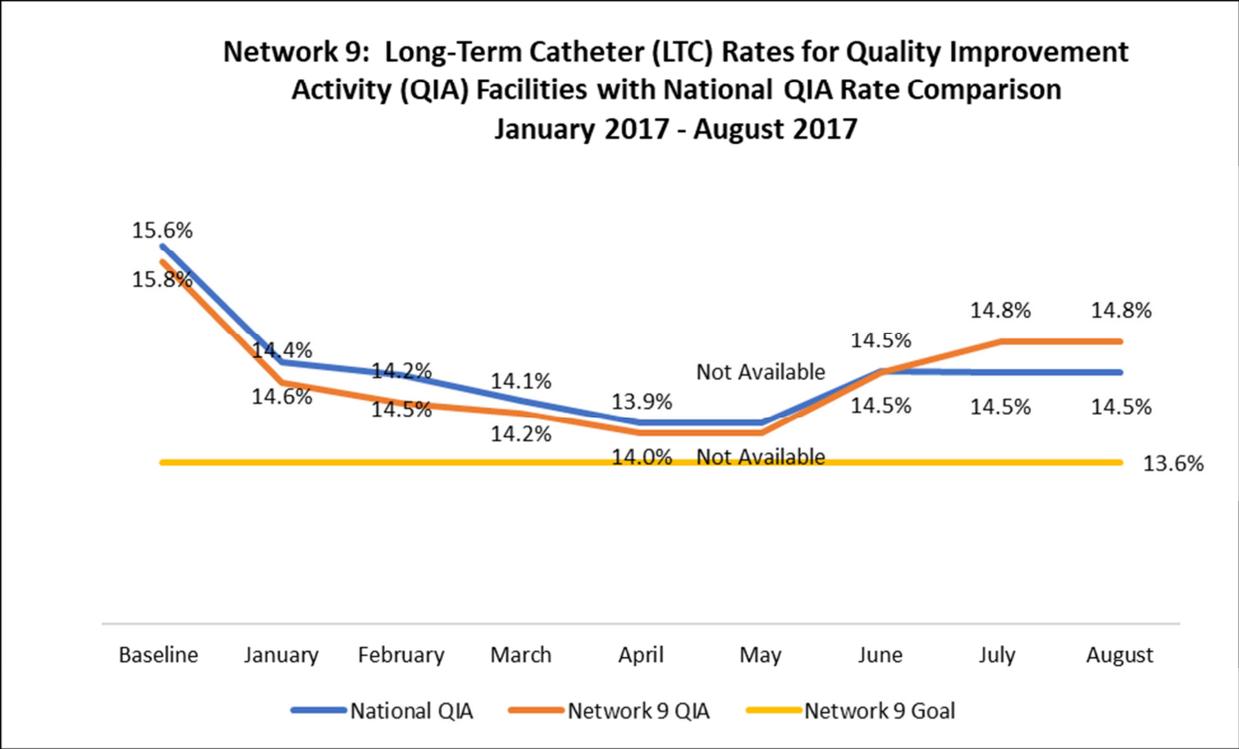
- Launch of a **regionally focused intervention** model:
 - The Network identified four metropolitan locations that account for more than 40% of the Network LTC burden. These include Cleveland, OH; Columbus, OH; Cincinnati, OH; and Indianapolis, IN.
 - The Network worked with regional managers, medical directors and facility leadership in these areas to develop individualized focused interventions for each region to assist in catheter reduction and in removing barriers that are specific to that area of practice.
 - The goal of this focus was to create sustained changes in areas that contribute the most to the LTC count in Network 9.
- Developing a secondary focused approach plan for facilities that are part of the Long-Term Catheter Reduction QIA project as well as the Healthcare-Associated Infection-Bloodstream Infection (HAI-BSI) project:
 - Twelve clinics were in both the 2017 LTC Reduction QIA and HAI-BSI project.
 - There is a known correlation between increased LTC use and an increased incidence of BSIs. Reducing these clinics' LTC rates should result in a corresponding improvement in their BSI rates.
- Providing ongoing data surveillance and communication regarding progress toward accomplishing this goal through the end of September 2017.

Best practices spread to achieve goals

Best practices included the development of an individual plan of care for each patient with an LTC to move toward permanent access placement. Education was geared to patients to assist in the planning of their vascular access placement. Clinics were also encouraged to seek out new surgeon relationships.

Barriers to achieving goals

- Medical directors were often reluctant to obtain vascular access consults outside of their practice groups despite poor service and increased wait times for permanent access.
- Facilities not having a specified vascular access manager found it difficult to follow the planning of permanent access placement.



Source of data: CROWNWeb

Aim 1: Better Care for the ESRD Individual

Reduce Rates of Dialysis Events: Healthcare-Associated Infections; Bloodstream Infections/Sepsis

Background

Dialysis patients are at higher risk than the general population for acquiring healthcare-associated infections – specifically, bloodstream infections -- due to the regular and frequent use of catheters and other forms of access to their bloodstream while dialyzing. The physical and emotional cost of these infections for patients and their care partners/families is immeasurable.

In addition, the financial cost associated with HAIs is staggering. Published reports have estimated that these infections are responsible for more than \$28 billion in yearly national healthcare expenditures. According to the Dialysis Facility Report for Fiscal Year (FY) 2017, 12.36% of dialysis patients in the Network’s service area were hospitalized due to BSIs compared to the national average of 10.9%. In the same report the mortality rate due to infections was 8.25% in the Ohio River Valley states, compared to the national average of 11.7%.

Target Facilities

The Network worked with 20% of facilities in its service area that had high BSI rates reported in the National Health Safety Network (NHSN). After comprehensive analysis of NHSN BSI data from the first and second quarters of 2016, the Network selected 129 facilities with infection rates ranging from .92 to 6.38 per 100 patient months and with between two and 19 BSIs in the first and second quarters of 2016.

Goals and Outcomes

The goal of this QIA was to increase awareness and reporting of BSIs in at least 20% of the facilities in the Network's service area, while decreasing rates of dialysis events, specifically BSIs. Baseline metrics were taken from NHSN BSI data for the first and second quarters of 2016. The QIA incorporated a six-month intervention period (January -June 2017), and a re-measurement period to include the first and second quarters of 2017. The goal of this project was to achieve a 5% relative reduction in the pooled mean BSI rate (calculated by adding the mean, multiplied by the sample size for each sample, and dividing the number by the sum of the sample sizes) for the targeted facilities' re-measurement period of January – June 2017.

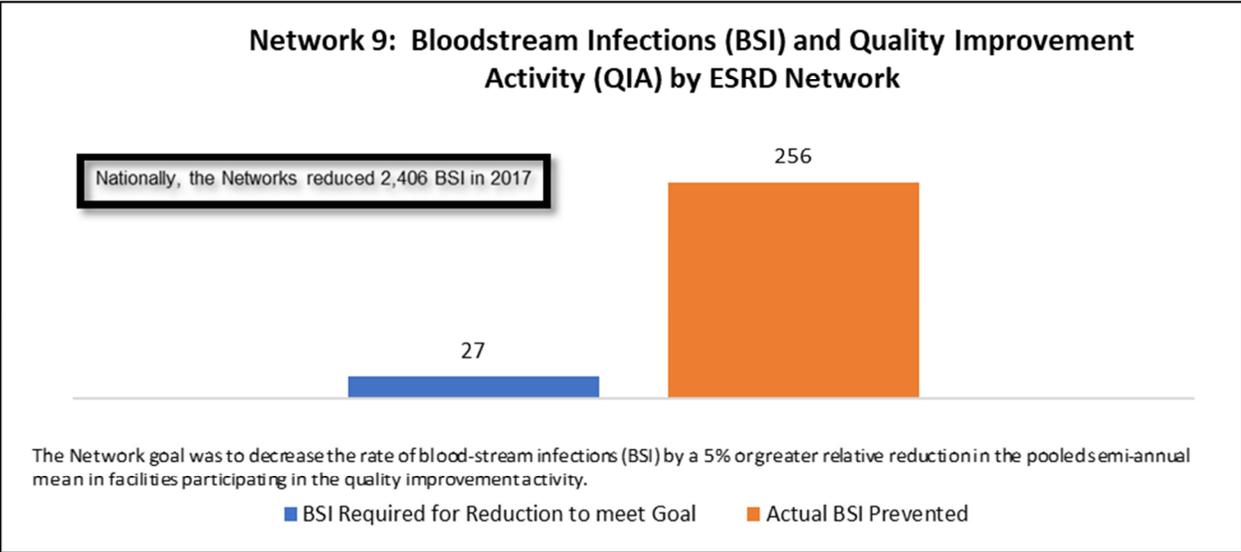
The Network's interventions succeeded in decreasing the pooled mean BSI rate from 1.01% at baseline to .793% at re-measurement, yielding a 21.7% relative reduction in BSIs and surpassing the Network target of .963 average BSIs or less.

Interventions

Prior to designing QIA interventions, the Network worked with targeted facilities to complete a root cause analysis "autopsy" (using the *5-Whys RCA Tool*) for each infection identified during the baseline period. The information gained through these analyses determined the focus of interventions based on cause categories, and guided the selection of appropriate CDC Core Interventions. The Network promoted the exchange of knowledge, CDC educational resources, and best practices through the HAI Learning and Action Network (LAN). To assist in identifying facility-specific opportunities for education, the Network worked with each facility to establish and engage lead facility contacts. Patient Ambassadors were identified at facilities, to work with facility leadership and the Network on auditing tools and educational programming to promote patient involvement.

The Network worked with target facilities to implement CDC interventions and implement a facility summary report that documented three successes, three challenges, and any key observations discussed during monthly QAPI meetings related to infections. These reports were submitted to the Network on a monthly basis. In addition, QAPI and corporate leadership teams of 12 facilities participating in both the LTC Reduction QIA and the HAI-BSI QIA to concentrate efforts with their QAPI teams and regional Large Dialysis Organization leadership to promote success.

The Network also provided a template for evaluating the root cause of BSIs at the facility level to assist providers in identifying and implementing CDC tools to improve BSI rates.



Source of data: June 2017 NHSN (National Healthcare Safety Network)

Aim 1: Better Care for the ESRD Individual

Increase Hepatitis B and Pneumococcal Pneumonia Vaccination Rates

Background

Hepatitis B and pneumonia can lead to serious complications and death in the dialysis population. Dialysis patients are at greater risk for complications related to pneumococcal pneumonia and hepatitis B; however, despite the length of time that these vaccinations have been available in the U.S. and the high risk to this population, a low percentage of patients are receiving them.

Data from the ESRD NCC revealed that rates for pneumococcal and hepatitis B vaccination in the Network’s service area at baseline (January 2017) were 45.5% and 45%, respectively.

Targeted Facilities

Network 9 worked with 25 underperforming facilities to increase the numbers of ESRD patients who received both vaccines.

Goals and Outcomes

The goals of the Vaccination QIA were to increase both pneumococcal pneumonia and hepatitis B vaccination rates by 3% overall in targeted facilities. The Network’s interventions succeeded in increasing hepatitis B vaccination rates in target facilities from 45% at baseline to 53.5% at re-measurement. Network interventions succeeded in increasing pneumococcal vaccination rates in targeted facilities from 45.5% at baseline to 58.7% at re-measurement.

Interventions

To identify and address the underlying reasons for these disparities related to vaccination rates, the Network conducted a community-based root cause analysis (RCA), working closely with Patient SMEs and PAC members to identify obstacles in obtaining or recording vaccination rates. The results of this

RCA, as well as RCAs conducted at each of the 25 target facilities, helped the Network develop interventions to address the barriers to patients receiving vaccinations and unique issues within the target facilities.

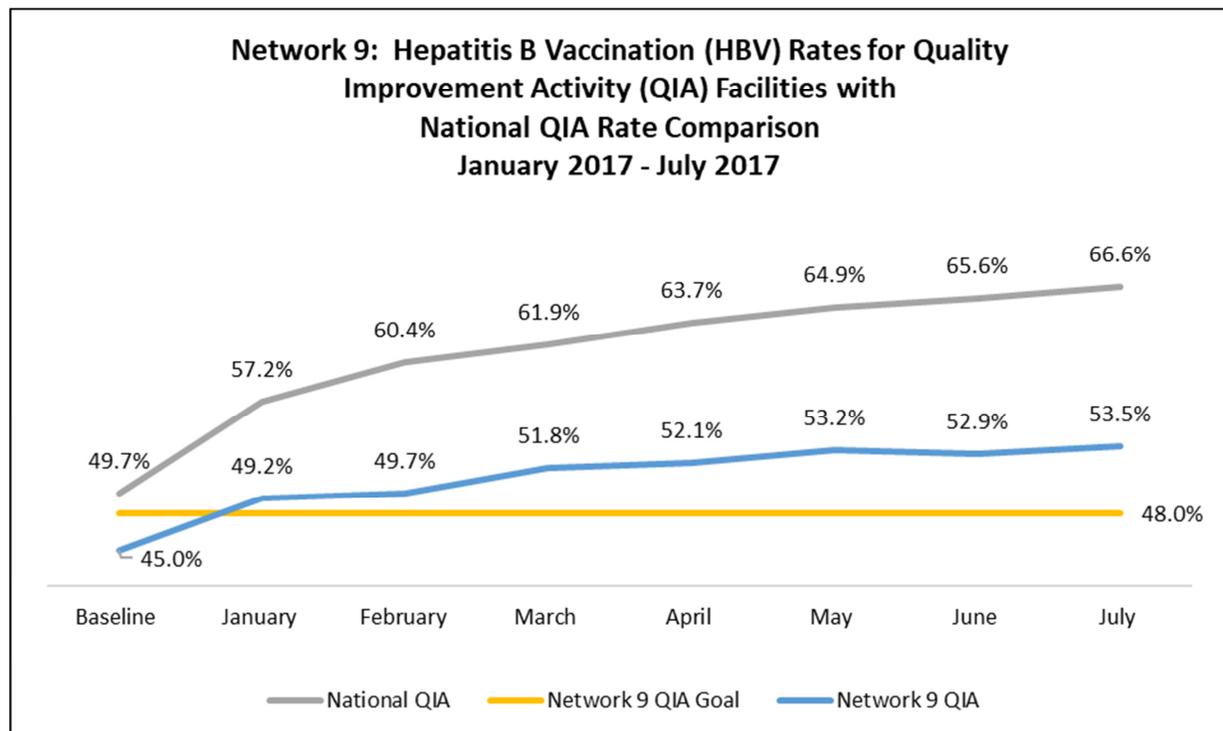
One of the main categories of barriers to patients receiving the needed vaccinations was patient refusal/lack of understanding/cultural mistrust. To address these barriers, the Network developed educational materials based on patients’ reasons for refusal and included information on vaccinations in the peer mentorship program, in which patients of similar cultures shared experiences with peers.

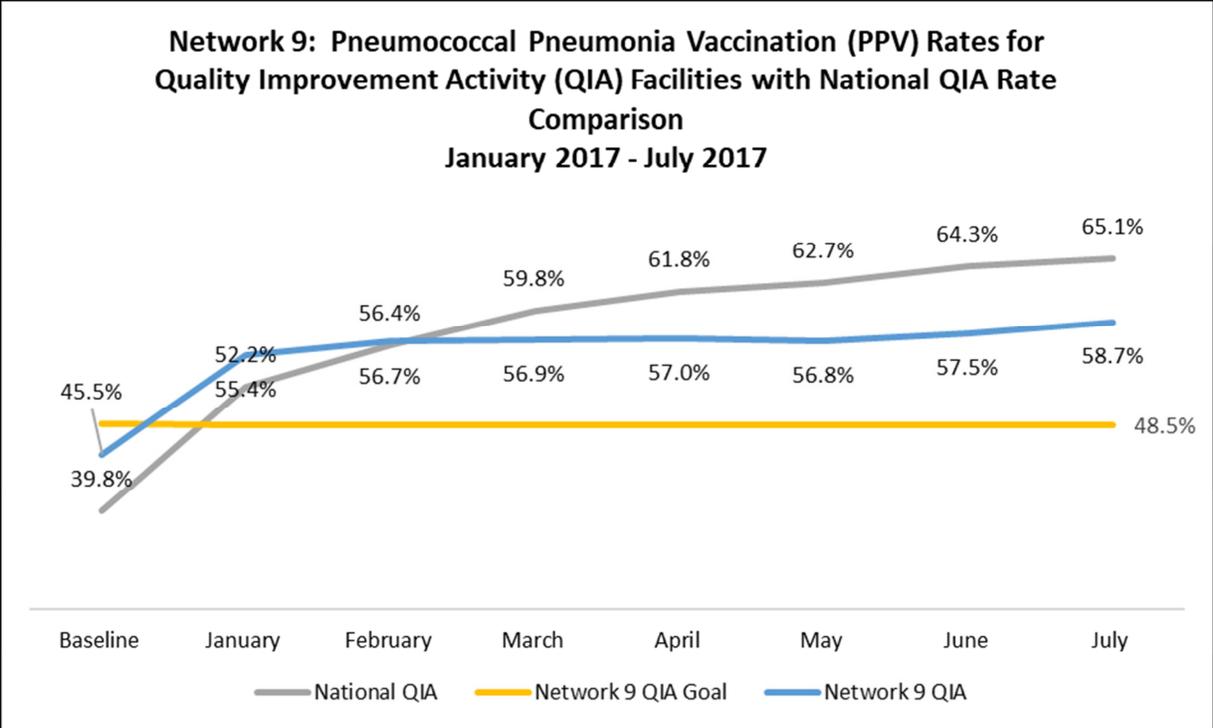
Another barrier was the difficulty for target facilities in tracking and recording immunizations given at locations other than the current treatment facility.

Network 9 developed an educational campaign that included informational brochures aimed at dispelling cultural/religious reasons for refusal of the hepatitis B and pneumococcal vaccines. Other materials included a pocket guide the patient could have completed by their private physicians or other healthcare facilities that outlined all adult vaccines, and personal vaccination schedules that could be brought back to the facility to allow for accurate documentation. Buttons were given out to patients either completing the injections and/or returning their vaccination pocket guide to the target facility in order to create visual awareness of and stimulate interest in the program.

Facilities were kept aware of their progress toward goal via bi-monthly email reports. As part of rapid cycle improvement (RCI), individual calls were held with facilities not showing improvement in order to identify barriers, brainstorm potential solutions/interventions, and update their RCAs. The educational program combined with the one-on-one facility focus resulted in 14 facilities “graduating” out of the project by obtaining a vaccination percentage of >60% for both the hepatitis and pneumococcal vaccine.

- Facilities were kept aware of their progress toward goal via bi-monthly emails.
- As part of RCI, individual calls were held with facilities not showing improvement in order to identify barriers, brainstorm potential solutions/interventions, and update their RCAs.





Source of data: CROWNWeb

Aim 2: Better Care for the ESRD Population

Population Health Focused Pilot Project (PHFPP): Improve Transplant Coordination

Background

Patients with ESRD have several options for renal replacement therapy including: in-center or home hemodialysis, peritoneal dialysis, and transplantation. While options such as dialysis offer life-sustaining treatment, transplantation offers the opportunity for better clinical outcomes, including reduced mortality and morbidity, improved patient quality of life, lower costs and improved survival (Meier-Kriesche, Ojo, Port, Arndorfer, Cibrik, D. M., & Kaplan, 2010; Wolfe, et al., 1999).

The first step in receiving a transplant is obtaining a referral to a transplant center. A transplant referral is considered to be “any first-time transplant referral of a patient (i.e., the patient has not already been referred to, or placed on, a transplant waiting list), and for which either a dialysis facility or transplant center provides an indication that the patient has been referred.”

According to the CMS Conditions for Coverage for End Stage Renal Disease Facilities (2008), dialysis providers are responsible for educating their patients about treatment modalities, including transplant. Despite this requirement, several reports indicate that gaps in transplant referral exist. Eligibility for transplant varies depending on the transplant center, patient health status, physician perception of a patient’s eligibility for transplant, and the patient’s financial status. Although these factors influence all patients, a noticeably lower number of women are being referred for transplant in the Network community, indicating a disparity in this area.

For its Population Health Focused Pilot Project (PHFPP), Network 9 selected Improving Transplant Coordination. The focus of the project was increasing transplant referrals and identifying and decreasing gender disparity.

Targeted Facilities

The Network's evaluation of transplant waitlist data in Dialysis Facility Reports (DFRs) revealed that of the 33,773 patients in the Network's service area, only 4,358 patients, or 13% of the patient population, are on the transplant waiting list. The Network selected those facilities with a rate of less than 30% to complete a baseline data collection tool. Selection of facilities was based on two criteria:

- A transplant referral rate of <25%
- A disparity in transplant referrals >5%

Twenty-four facilities were identified for inclusion in the project, with a total combined census of 1,560 patients. The facilities were placed into three targeted intervention groups, each containing eight clinics. A facility's group placement determined when materials were distributed, and when site visits and informational calls were scheduled to educate the facilities. This staggered approach helped the Network identify RCI opportunities that can be shared with the next group of clinics to aid in achieving the desired outcomes.

The three-group approach also helps enable the Network to identify barriers or areas for improvement that cannot be managed through an RCI process and require a full RCA and PDSA review, before being reinitiated into the next group of clinics' project work. In addition, by staggering the project rollout Network 9 was able to fully analyze the effect of the targeted interventions as well as follow the clinics' progress to goal attainment.

Goals and Outcomes

The Network was successful in achieving the goals of the QIA:

Goals:

- Work with 5% of the Network population.
- Increase transplant referrals by 5% in target clinics.
- Decrease the identified disparity by 1%.
- Graduate all clinics with >75% of eligible participants.

Baseline:

- 8.8% referral rate
- 5.4% disparity rate

Outcomes:

- 27% referral rate
- Reversed disparity rate

The project involved approximately 1,600 patients from 22 clinics.

Interventions and Tools

The Network structured interventions to ensure that providers understood the United Network for Organ Sharing (UNOS) allocation system criteria, as well as efficient techniques for speaking with patients about transplant as an option.

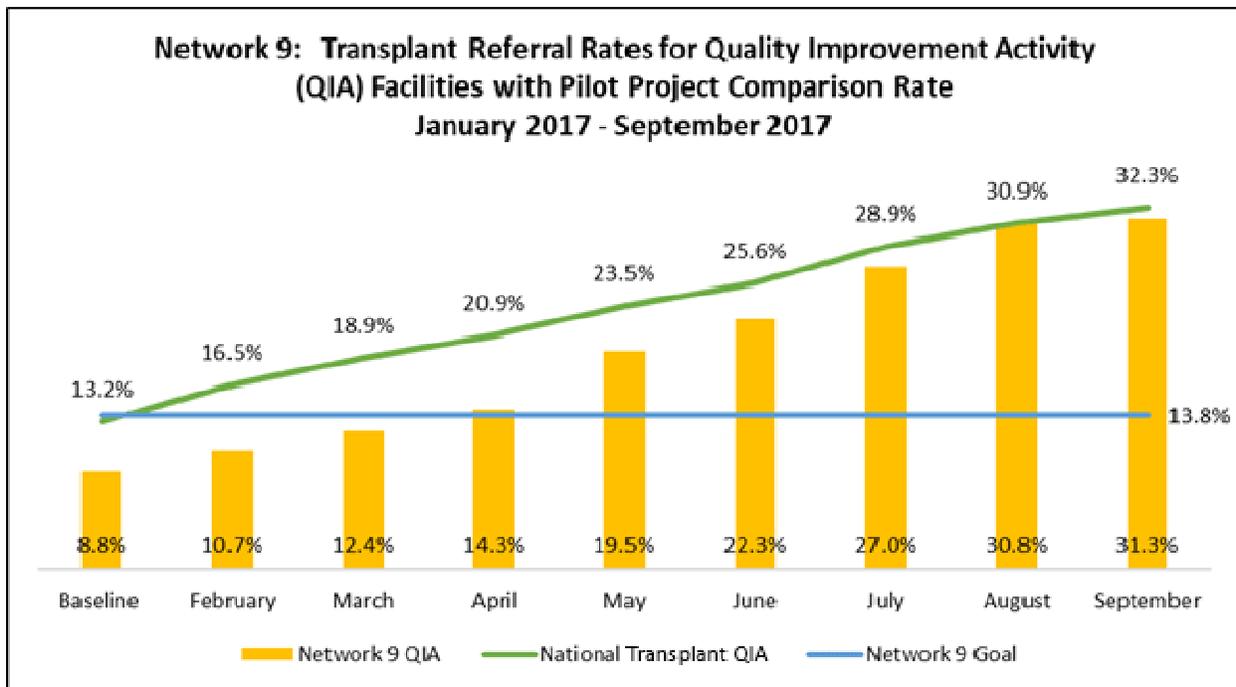
Interventions and tools aimed at facility staff included:

- Staff education – site visits, brochures and educational materials;
- Technical assistance;
- Transplant Selection Criteria comparison grid;
- Advisory Committee;
- Transplant education tools from known sources;
- Tracking referral form;
- Identification of barriers; and
- Establishing Patient Ambassadors in each target facility.

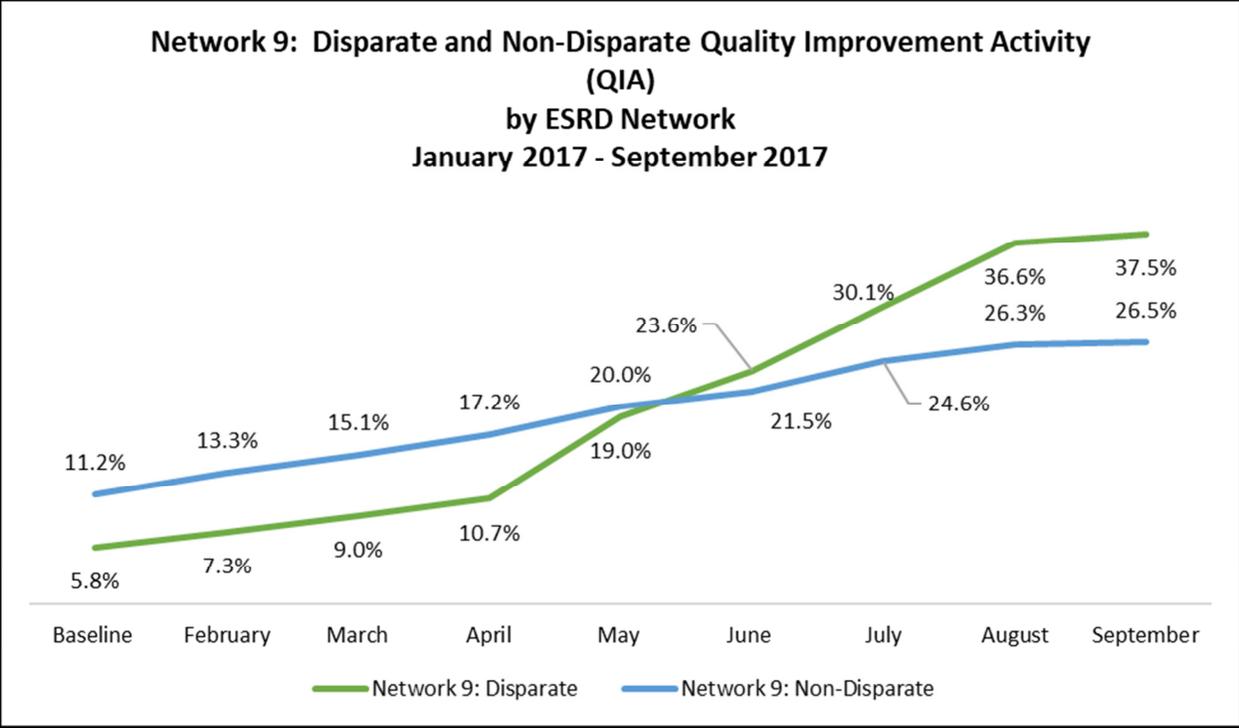
Patient-facing interventions and tools featured:

- Patient education – site visits, brochures and educational materials;
- Advisory Committee;
- Transplant education tools from known sources;
- Identification of barriers; and
- Establishing Patient Ambassadors in each target facility.

Patient SMEs participated in creation of the patient education toolkit materials.



Source of data: October 2017 ESRD Network Dashboard



Source of data: October 2017 ESRD Network Dashboard

*Disparate population is female and non-disparate population is male.

Aim 3: Smarter Spending for ESRD Care – NW9

ESRD Quality Incentive Program (QIP) Quality Improvement Activity (QIA) Kt/V Dialysis Adequacy and Hypercalcemia

Background

The ESRD Quality Incentive Program (QIP) is a value-based-purchasing program developed to promote high-quality services for the ESRD community. This program is designed to alter payment based on the quality of care received at outpatient dialysis facilities. Facilities that do not meet or exceed certain performance standards can receive up to a 2% payment reduction for all services provided during the applicable payment year (CMS.gov, 2015).

CMS publicly reports facility ESRD QIP scores on the Dialysis Facility Compare Website and requires that each facility display its scores, using the Performance Score Certificate (PSC), in a prominent patient area. This certificate enumerates the facility’s performance on each ESRD quality measure identified for that year.

One clinical quality indicator is the measure of Kt/V Dialysis Adequacy, which indicates the effectiveness of the dialysis prescription, for both hemodialysis and peritoneal dialysis. The recommended Kt/V is at least 1.2 for all hemodialysis patients; 1.8 for pediatric peritoneal dialysis patients (those 18 years of age or younger); and 1.7 for adult peritoneal dialysis patients.

In 1981 the National Cooperative Dialysis Study (Lowrie, et al, 1981) established that a higher dose of dialysis results in decreased morbidity and mortality for ESRD patients. Dr. John T. Daugirdas developed a method for measuring adequacy of dosage, which was adopted by most clinics. Despite the finding of improved patient outcomes, some clinics today still perform lower than the standard.

The most widely accepted and utilized method to determine adequacy is Kt/V. In this equation,

“K” is defined as “clearance of blood urea nitrogen (BUN)”;

“t” is defined as “time required in minutes to provide for an adequate drop in pre- and post-BUN”; and

“V” is defined as “the total body water of the patient to be processed.”

The Network determined that for the 2017 project period, facilities participating in the 2016 QIP measure focusing on hypercalcemia would continue. As facilities “graduated out” of the project the Network enrolled new facilities in the Kt/V project.

Targeted Facilities

Facilities participating in this QIA were outpatient ESRD facilities in the Network’s service area with Kt/V scores in the lowest quintile in QIP performance year 2015 (payment year 2017) that have lost five points or more on the Performance Score Card.

The Network identified 10 eligible facilities (2.67%) that lost five points or more for Kt/V under the ESRD QIP. These facilities included outpatient ESRD facilities in the Network’s service area that are ESRD QIP eligible and had a reduction in QIP points during the 2017 payment year, as well as those showing a continued trend of low Kt/V at the facility level during the baseline period. These low-performing facilities replaced clinics that had graduated out of the hypercalcemia QIP measure project carried over from Option Year (OY) 1. Hypercalcemia is an abnormally high level of calcium in the blood, which adversely affects most of the body’s organ systems and is a common comorbidity of ESRD.

Goals and Outcomes

The Kt/V project is based on a baseline period of twelve months (November 2014–October 2015) and an intervention period that concludes at the end of OY2 on November 30, 2018. Project goals include a 25% relative improvement from baseline in rates of Kt/V, or the QIP threshold being exceeded for three consecutive months or more, and a minimum of 80% completing the PDSA cycle by November 30, 2018.

Network 9 established a baseline period of twelve months (November 2015–October 2016) and an intervention period that concluded in October 2017 for this QIA. The Network was required to maintain a minimum of 10 participating facilities through the project period. Network goals included 25% relative improvement from baseline to re-measurement in the rate of hypercalcemia in participating facilities, or the QIP threshold being exceeded for three consecutive months or more, and a minimum of eight facilities completing the PDSA cycle by October 2017. Ten of the participating facilities successfully met the requirements of the QIA by October 2017, thereby “graduating.” Hypercalcemia clinics who graduated were replaced with clinics with low Kt/V participants to finish the project.

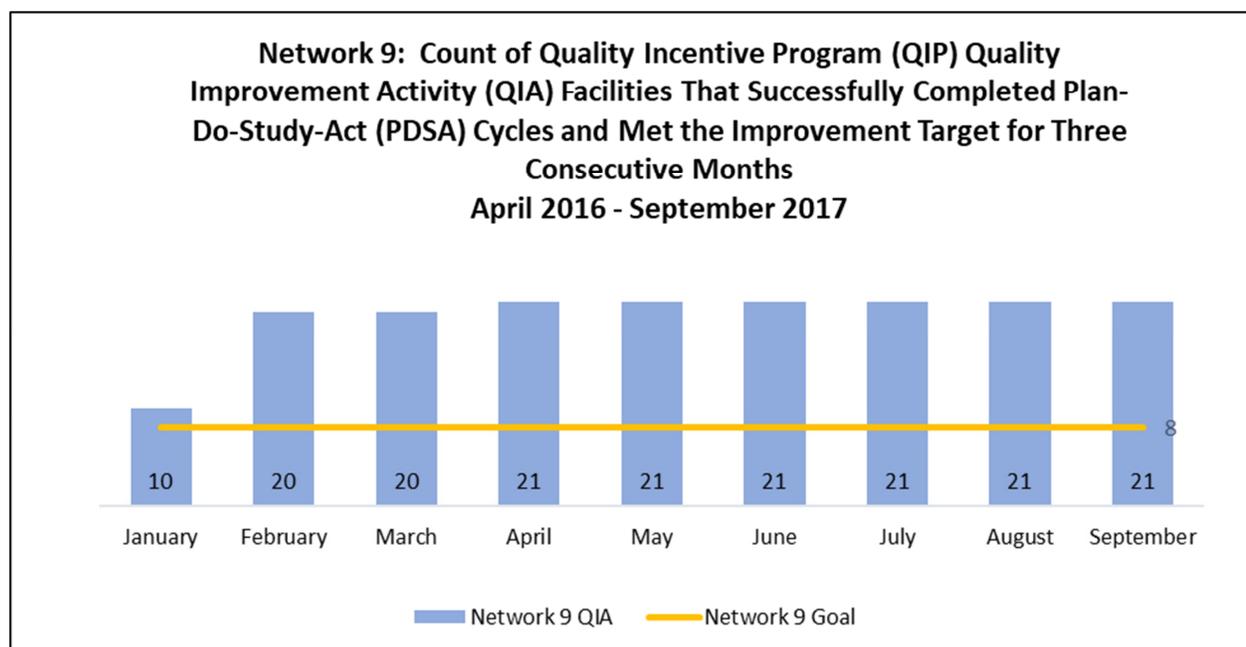
Interventions

At the start of the Kt/V project, participating facilities received a project inclusion letter that outlined the project and asked each facility to identify a lead person and backup lead person. Network 9 held an

initial informational session for these facilities, highlighting the project’s goals and interventions. The Network reviewed the RCA/PDSA process, and provided examples. The Network also maintained ongoing contact with each facility’s lead in order to identify key barriers to dialysis adequacy.

Network 9 encouraged collaboration among the participating facilities, in order to facilitate information exchange, identification of best practices and discussion of benchmarks to achieve goals. The Network also identified tools to help facilities implement rapid cycle improvement and new interventions to overcome barriers. The State Survey Agencies were also notified by the Network of the facilities participating in this project. This enabled SA staff members, when onsite at participating facilities, to reinforce and support the Network’s goal of improving dialysis adequacy.

Using NCC data reports the Network assessed facilities’ progress toward project goals. The Network provided feedback reports to facilities on their progress and conducted coaching sessions for individual facilities as needed.



Source of data: October 2017 ESRD Network Dashboard

Aim 3: Smarter Spending for ESRD Care

Improving NHSN Data Quality

Background

The Network conducted this QIA in response to the CDC’s identification of a substantial gap in BSI reporting by dialysis facilities and hospitals. Staff members at dialysis facilities are frequently unaware of patient BSI, because the infections are diagnosed after patients are admitted to the hospital. One of the most significant challenges identified for many dialysis units has been insufficient information transfer from hospitals to outpatient dialysis facilities. This results in underreporting of BSI and negatively impacts patient care. Underreporting also affects facility QIP scores and is a common cause of payment reductions for many dialysis facilities.

BSIs can lead to serious complications and death in the dialysis population. The lack of accurately reported blood culture results can increase the severity of BSIs and prolong treatment requirements for each patient. The most common source of BSI in outpatient dialysis patients is central venous catheters: approximately 37,000 incidents per year. The CDC estimates the cost to be \$23,000 per incident. In the absence of a smooth transitional plan of care from hospital to outpatient facility, services may be duplicated or missed entirely, further increasing costs and complicating patient care and outcomes.

Targeted Facilities

The Network selected 20 dialysis facilities in its service area for Cohort 1 of this QIA based on identification of facilities that had a low number of reported positive blood cultures from the hospital setting and lacked access to hospital electronic medical records or were known to have challenges retrieving hospital medical records information for their patients. The Network also worked with five hospitals to which most of the identified dialysis facilities referred patients.

Goals and Outcomes

The goals of this QIA were to improve communication of key information between hospitals and dialysis facilities, using RCA and the PDSA cycle; to demonstrate that each QIA facility has adopted a strategy to improve communication with hospitals and capture positive blood cultures identified in hospitals; and to improve dialysis facility reporting rates of BSIs that are identified in the hospital and to document the BSIs in the NHSN database.

Success was determined by an increase from the baseline period to the re-measurement period in the number of BSIs reported in NHSN on the day of a dialysis patient's hospital or emergency department admission, or the day after admission. The baseline period was January through June 2016, and the re-measurement period was January through June 2017.

The baseline was 10 hospital-located BSIs out of 68 (14.7%). The Network's target goal was to increase the total of hospital-located infections over the baseline. This goal was not reached due to the combination of decreasing census of participating clinics combined with a decrease in BSIs. At the completion of the project a total of four reported hospital-located infections out of 58 reported BSIs (6.9%) was achieved.

Root Cause Analysis

The Network conducted a root cause analysis of why this goal was not reached. Following is an overview of RCA findings:

Barriers:

- Hospital resistance to participation in the project with the ESRD Network;
- Seven clinics (30%) in the project were also in the HAI-BSI project, and their focus on infection reduction/elimination lowered the overall amount of BSIs reported for the project period.
- Lack of buy-in from dialysis clinics for putting effort into locating hospital reported infections.
- The reporting tool created for the project was too cumbersome and detailed.

Lessons Learned:

- Select facilities (if possible) not concurrently enrolled in the HAI-BSI project.
- Enlist the help of the Network's Medical Review Board to select location and hospital systems where they can maintain project momentum and assure compliance.
- Create tools that are customer focused for both dialysis facilities and hospitals.

Interventions

The project was divided into three cohorts of facilities. For each cohort, the QIA consisted of one year of planning followed by one year of implementation, and up to three years of monitoring results. The Network initiated QIAs with each cohort according to a staggered schedule.

The Network implemented interventions to improve communication among hospitals and dialysis facilities using RCA and the PDSA methods to address the causes of poor communication.

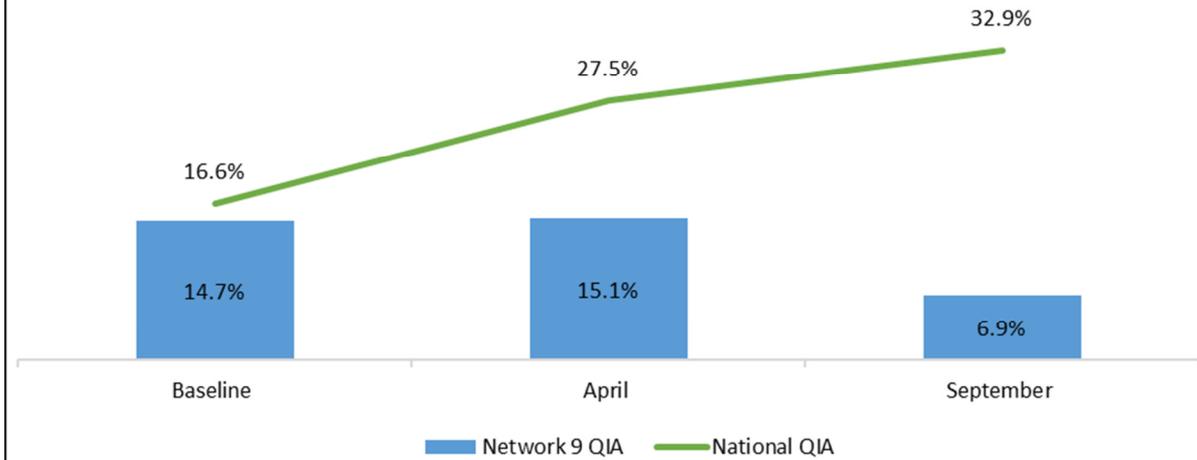
The Network customized interventions to address identified obstacles that prevented facilities from receiving this information and/or entering this information into NHSN. Identified barriers included lack of awareness by hospital staff of the dialysis facility requirement; reluctance by hospital staff to report positive blood culture data to the dialysis facility due to perceived HIPAA violations; lack of consistency by hospitals in providing reports to dialysis facilities; facility staff not requesting the correct data (asking only for discharge summary); and facilities not assigning accountability to specific staff members for following up on hospitalizations.

Network staff met with hospital infection preventionists to share the goals, strategies and interventions of the QIA, and to identify the information they would need from dialysis facilities to improve communications. The Network brokered discussions among the hospitals and the dialysis facilities referring patients to them; ensured that contact information was exchanged; and provided hospital staff with CDC educational materials.

The Network also employed the HAI LAN to identify and discuss barriers and to determine best practices in place across the Network's community.

Interventions for dialysis facility staff included webinars about the proper reporting of dialysis events in NHSN, including the need to identify where the positive blood cultures (PBCs) were drawn; training on how to run reports in NHSN that allowed facilities to monitor their progress toward the goal of the QIA; implementation of a Hospital/Dialysis Facility Communication Form, and ongoing recommendations to enter all dialysis events within ten days of the end of the month.

**Network 9: Bloodstream Infection Reporting Rates for National
Healthcare Safety Network (NHSN) Data Quality Improvement Activity
Facilities with National QIA Rate Comparison
September 2016 - September 2017**



Source of data: September 2017 NHSN (National Healthcare Safety Network)

ESRD NETWORK

RECOMMENDATIONS

Facilities that Consistently Failed to Cooperate with Network Goals

The Network did not identify any facilities in its service area that failed to cooperate with Network goals in 2017.

Recommendations for Sanctions

No recommendations for sanctions were made in the Network service area during 2017.

Recommendations to CMS for Additional Services or Facilities

In 2017, the Network made no recommendations to CMS for additional services or facilities.

ESRD NETWORK

SIGNIFICANT EMERGENCY

PREPAREDNESS

INTERVENTION

For individuals who have been diagnosed with ESRD, missed dialysis treatments can have serious adverse health effects. This makes the ESRD patient population especially vulnerable during emergencies and disasters. The Network relies on longstanding partnerships with state and city health departments, Offices of Emergency Management, and emergency preparedness coalitions to ensure safety and continuity of care for ESRD patients throughout the Network 9 service area.

In 2017, Network 9 reported on four emergency situations within the region: three of which involved winter storm warnings in January, March, and December and one which involved high winds with a potential for tornado activity in November. For each event every facility in the affected area was contacted via the Network's emergency system and any updates regarding changes in facility operation were recorded. There were no facilities that were permanently impacted, every patient was accounted for and all patient treatments were rescheduled as needed.

