



End-Stage Renal Disease
Network of the Ohio River Valley

2022 Annual Report



Lake in the Appalachian Mountains - Kentucky

This report will cover quality improvement efforts led by ESRD Network 9
Task Order Number 75FCMC21F0004 from May 1, 2022- April 30 2023

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ESRD Demographic Data

IPRO ESRD Network of the Ohio River Valley (Network 9) is one of four End Stage Renal Disease (ESRD) Networks managed by IPRO, a non-profit organization that works with government agencies, providers, and consumers to implement innovative programs that improve healthcare. In addition to serving as the ESRD contractor for the Network 9 service area, IPRO manages the ESRD Network of New England (Network 1), ESRD Network of New York (Network 2), and ESRD Network of the South Atlantic (Network 6), collectively known as the IPRO ESRD Network Program. IPRO is fully committed to the goals and vision of the ESRD Network Program and supports the renal community in ensuring safe, effective, patient-centered care for the more than 196,709 ESRD patients in the four Network areas it manages.

The Network serves ESRD patients, dialysis providers, and transplant centers in the states of Kentucky, Indiana, and Ohio. The role of the Network is to improve the quality of care for people who require dialysis and/or kidney transplantation. The Network aligns its mission and activities with the U.S. Department of Health and Human Services (HHS) National Quality Strategy (NQS), the Centers for Medicare & Medicaid Services (CMS) goals addressed in the CMS Quality Strategy, and the CMS Sixteen (16) Strategic Initiatives designed to result in improvements in the care of individuals with ESRD. Our goals, our methodology for attaining them, and our achievements are described throughout this report.

The largest population of ESRD patients in the Network's service area reside in Ohio, which has approximately three times the patient population of Kentucky, the region's smallest state. In 2022, seven dialysis facilities closed, with none newly opening. Also included in the Network's service area are five Veterans Affairs (VA) hospitals and 13 transplant centers. In 2022 the Network service area ranked fifth among all Networks in patient census, yet it had the third largest number of ESRD facilities in the nation. According to the ESRD Quality Reporting System (EQRS) 2022 Annual Facility Survey (2744 Form), as of December 31, 2022, the Network service area included 51,194 ESRD patients; 31,944 received dialysis and 19,250 received a transplant.

An ongoing characteristic of the Network service area has been its large number of facilities, which results in the region having a lower average patient census per facility than most other ESRD Networks. This provided the patients in the region with more options for selecting a dialysis provider, treatment modality, schedule, and medical care to best meet their needs..

Conversely, the Network observed that the large number of facilities can lead to staff shortages, leadership transition issues, and the need for frequent retraining of staff due to continual turnover and recruitment for new facilities. These issues created challenges for Network staff in establishing continuity of care and sustaining practices for optimal outcomes. The Advancing American Kidney Health Initiative, signed into legislation in July 2019, focuses on increasing ESRD patients' access to transplant and home dialysis, based on the scientifically proven improvement in quality of life, mortality, and morbidity for ESRD patients using these modes of renal replacement therapy, as opposed to in-center hemodialysis (ICHD). ESRD

Networks are charged with increasing the number of ESRD patients offered and receiving these renal replacement modalities. The Network observed interesting shifts in data since 2016 that have aligned with the goals of this initiative..

Data from 2022 indicates, for a third consecutive year, a reduction in the number of patients dialyzing in-center from 26,995 in 2021 to 25,961. The growth in prevalent patient census continued to occur exclusively within the treatment modalities of home and transplant. In addition, in 2022, 11.7% of all ESRD patients in the Network dialyzed on a home therapy and 37.6% were transplanted.

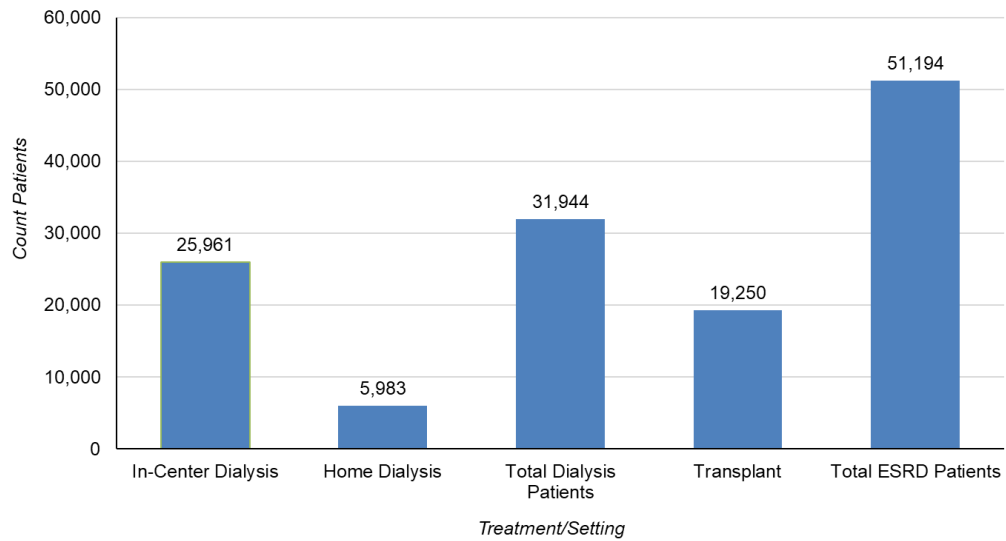
During the performance period, the Network continued its efforts to promote increased use of these modalities as preferred choices in renal replacement therapy and to decrease ICHD as the primary option for care. While the growth in use of home modalities has shown a moderate increase of 2.0% over the past five years, transplant has shown a 6% increase, accounting for a shift in the number of ESRD ICHD patients from 61% of the population in 2018 to 50.7% in 2022. Graphs illustrating the overall demographic data for the Network are found on the following pages.

The Network worked with Community Coalitions, a subgroup of dialysis facilities within its service area that included both high- and low- performing facilities. These facilities completed root cause analyses (RCA) and participated in a Plan-Do-Study-Act (PDSA) cycle of four months. During the PDSA cycle, the Network engaged the community coalition facilities in interventions to drive improvement at the Network and facility level and assisted with mitigating barriers by providing 1:1 technical assistance based on data and facility specific needs. Upon completion of the PDSA cycle, best practices identified within the coalitions were spread to facilities across the Network's service area to form a community of practice.

In 2022, the Network worked in collaboration with its Network Council, Medical Review Board, PFR Alliance, and Advisory Committees to develop quality improvement projects aligned with the CMS-identified goals for the ESRD Network program. The Network worked closely with ESRD patients, patients' family members and care partners, nephrologists, dialysis facilities and other healthcare organizations, ESRD advocacy organizations, and other ESRD stakeholders to improve the care for ESRD patients in the Network service area.

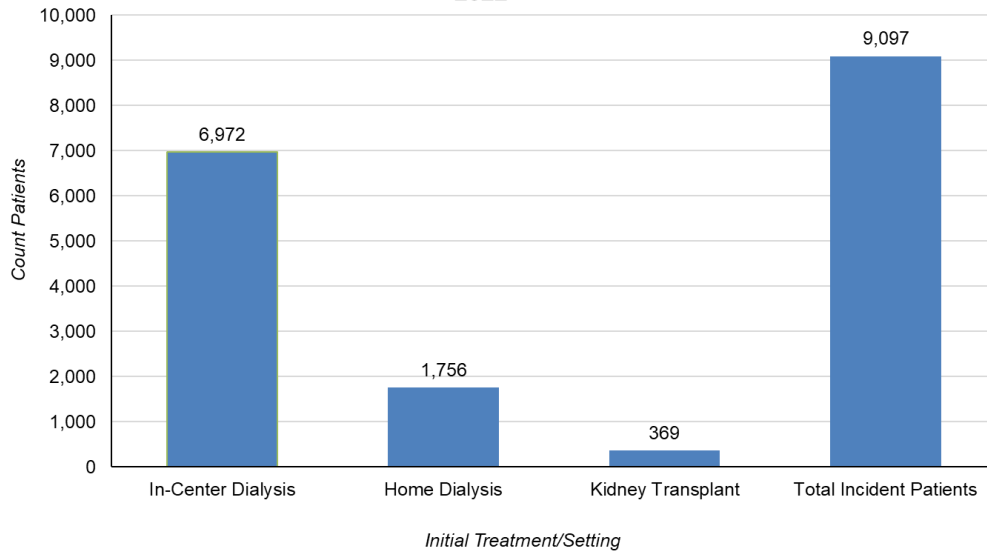
The Network deployed interventions through IPRO Learn, virtual learning management system (LMS), that targeted patients, dialysis and transplant providers, and other stakeholders. These interventions, which focused on engaging patients, reducing disparities, and improving quality of care for ESRD patients are detailed in this report.

Network 9: Count of Prevalent ESRD Patients by Treatment/Setting 2022



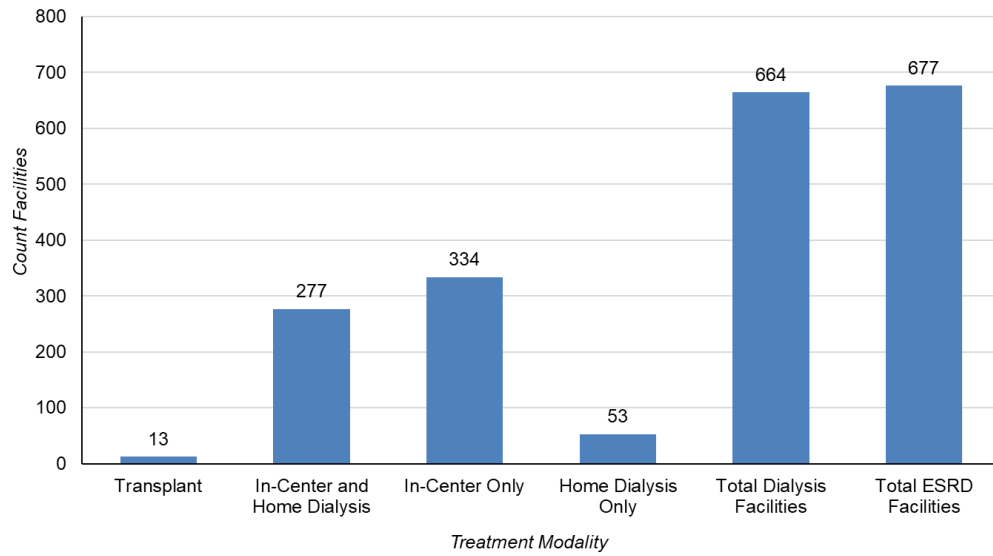
Total Dialysis Patients = In-Center Dialysis + Home Dialysis
 Total ESRD Patients = Transplant + Total Dialysis
 SNF dialysis patients are not shown due to small numbers.
 Source of data: EQRS May 2023

Network 9: Count of Incident ESRD Patients by Initial Treatment/Setting 2022



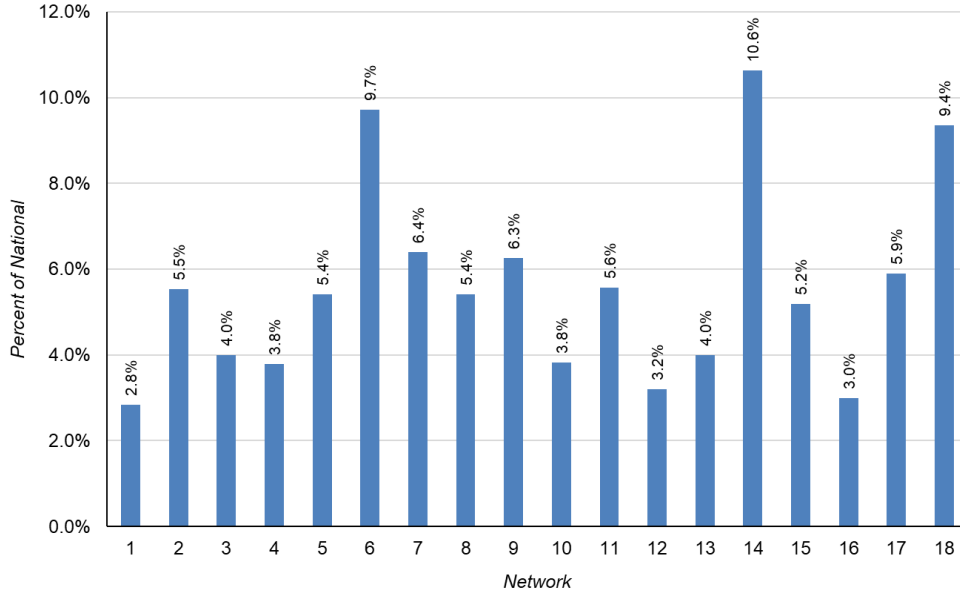
Total Incident Patients = In-Center + Home + Kidney Transplant
 Source of data: EQRS May 2023

**Network 9: Count of Medicare-Certified Facilities
by Treatment/Setting
2022**



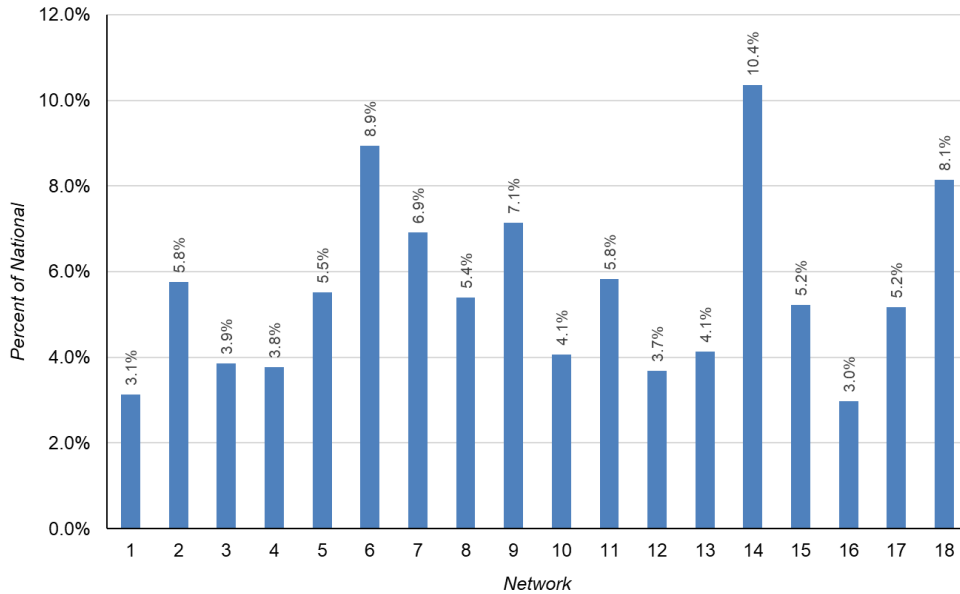
Total Dialysis Facilities = In-Center and Home Dialysis + Home Dialysis Only + In-Center Only
Total ESRD Facilities = Transplant + Total Dialysis Facilities
Source of data: EQRS May 2023

Percent of National Prevalent Dialysis Patients by ESRD Network 2022



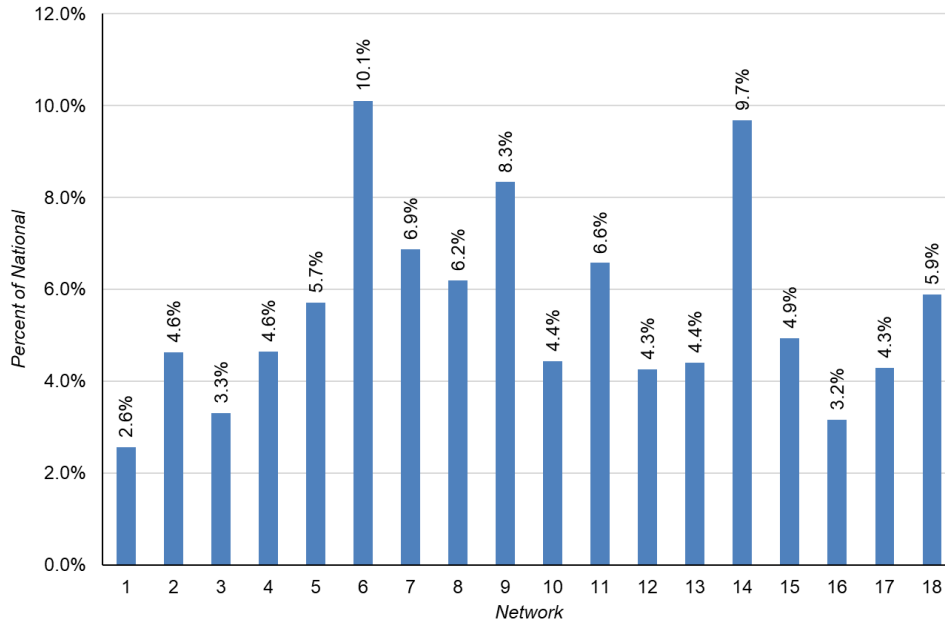
National total dialysis patients: 430,015
Source of data: EQRS May 2023

Percent of National Incident Dialysis Patients by ESRD Network 2022



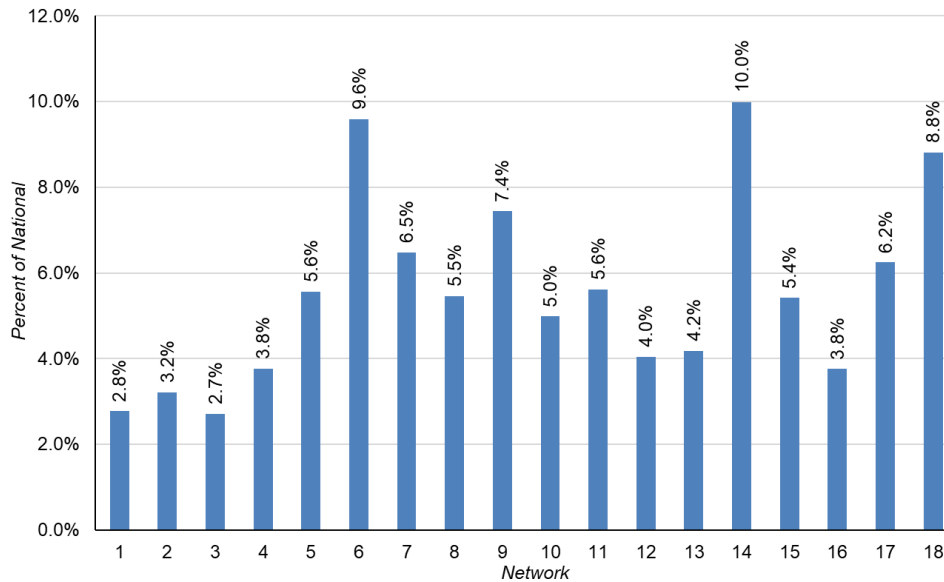
National total incident patients: 127,256
Source of data: EQRS May 2023

**Percent of Medicare-Certified Dialysis Facilities by ESRD Network
2022**



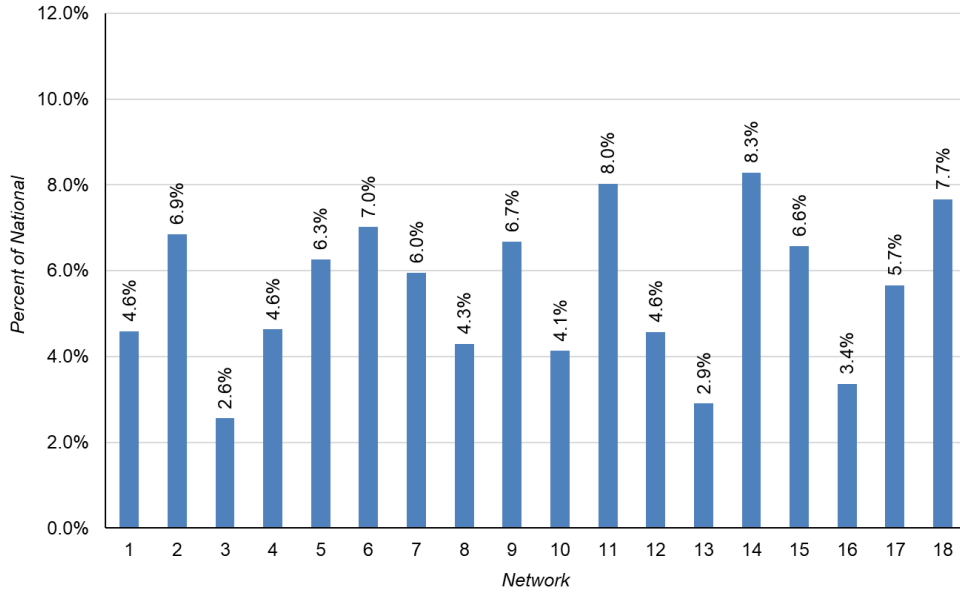
National total ESRD Medicare-certified dialysis facilities: 7,967
Source of data: EQRS May 2023

**Percent of National Home Hemodialysis and Peritoneal Dialysis
Patients by ESRD Network
2022**



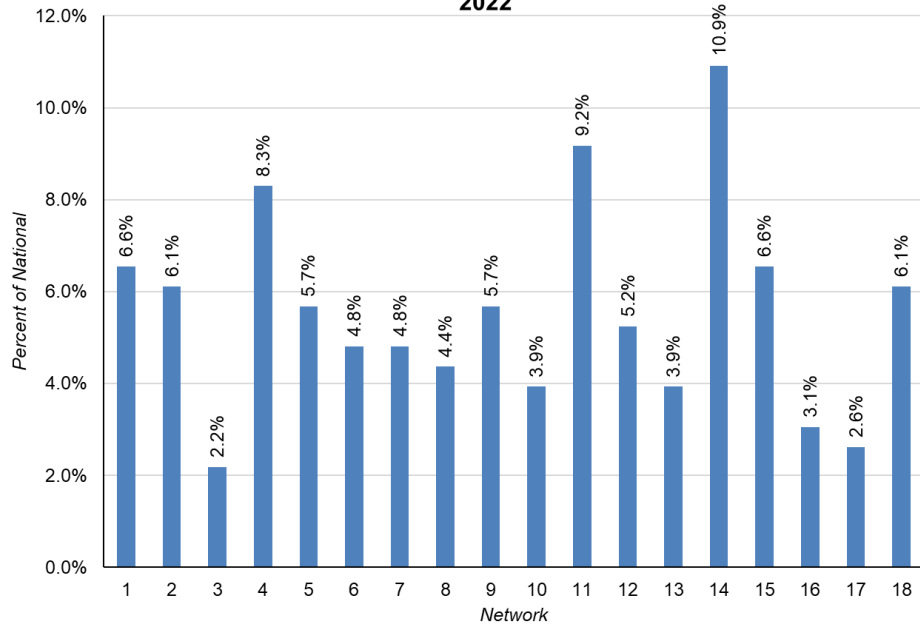
National total home hemodialysis and peritoneal dialysis patients: 80,460
Source of data: EQRS May 2023

**Percent of National Transplant Patients by ESRD Network
2022**



National total transplant patients: 288,023
Source of data: EQRS May 2023

**Percent of Medicare-Certified Kidney Transplant Facilities by
ESRD Network
2022**



National total ESRD Medicare-certified kidney transplant facilities: 229
Source of data: EQRS May 2023

Patient and Family Engagement

Through a concerted effort, the IPRO ESRD Network of New York identified and recruited patient leaders within the ESRD patient population to serve as Patient Facility Representatives (PFRs). During the performance period, the Network's Patient Facility Representatives Alliance (PFR Alliance) expanded to 186 ESRD patients and caregivers. The PFR Alliance was created to serve as a bridge between patients, facility staff, and the Network. The Network used interactive communications strategies including text messaging and social media outreach (Facebook, Twitter, and Instagram) to create a safe and open community to encourage easy check-ins and connectivity. Additionally, through its PFR Alliance, the Network was able to provide monthly educational meetings and foster patient feedback on recently created resources.

The PFR Alliance was instrumental in bringing the patient voice to facility Quality Assurance and Performance Improvement (QAPI) initiatives and increasing the number of facilities incorporating patients in their monthly QAPI meetings. The Network incorporated a variety of interventions to increase the number of facilities integrating patients in QAPI meetings:

- The *Help with HIPAA* resource was developed to respond to facility staff members' misconceptions that HIPAA was an ongoing barrier to patient participation in QAPI meetings.
- *Guidelines for Patient Representatives Who Attend QAPI Meetings* were developed by the Network to provide seasoned PFRs with instructions on effective ways to participate in their facility's QAPI meetings. Additionally, it provided insight into alternative measures to take in the event they cannot attend the meeting in person.
- *Including Patients in Your Facility QAPI Meetings: Format and Guide* was developed by the Network to provide facilities instructions on selecting patients and developing an ongoing process for meaningful engagement of patients in QAPI meetings.
- The Network created a short informational flyer outlining foundational information on how facilities can include patients in their QAPI meetings "*Incorporating the Patient's Voice into Your Facility's QAPI Meetings.*"

Additionally, the Network continued to work to increase the number of facilities supporting a peer mentoring program. At the end of the performance period, 133 facilities were actively supporting a peer mentoring program with a total of 144 peer mentors recruited from active patient facility representatives, previous peer mentors, and active peer mentors. The Network began the year using "IPRO Learn" to provide peer mentor training, however, based on consistent feedback from our patient population about the effectiveness of our online training the Network started to incorporate monthly live peer mentoring sessions via Webex.

Interventions

- Live peer mentoring training was presented in two introductory sessions.
 - Peer Mentorship: Mentoring to Support Choices: This module provided patients with foundational information including "What is Peer Mentoring?" and "How

does Peer Mentoring Work?”. The module also provided tips for success, program guidelines, and different ways to mentor (Lobby Session, Group Session, and One-to-One Session)

- Talking Effectively with Another Patient: This module provides more specific information on how to be an effective peer mentor as well as tips for honing communication skills. Shared decision-making, building relationships through communication, active listening, protecting patient confidentiality, mentoring for diversity, and tips for success were key topics presented in the module.
- Activating/ Re-activating Long-term PFR Alliance Members: Most facilities had at least one patient facility representative or a patient advocate actively supporting patients. Many of these individuals were engaging in different levels of peer mentoring as well as peer-to-peer education without formal certification. The Network worked with facilities to formally identify these individuals and once identified the Network provided everyone with both orientation and formalized training. The Network focused on peer mentoring re-education and the development of conversation retention skills through the IPRO Learn Peer Mentoring Program and live virtual engagement sessions.

Health Equity

According to the World Health Organization (WHO), health inequalities are systemic differences in healthcare outcomes. Equity is the absence of unfair, avoidable, or remediable differences among groups of people, whether those groups are defined socially, economically, demographically, geographically, or by other dimensions of inequality (e.g., sex, ethnicity, or disability). The Network team sought to identify the various types of health inequities within its service area that would inhibit the overall quality of life for ESRD patients. An initial needs assessment was conducted of all dialysis facilities to help identify these ongoing barriers. The assessment yielded the following results:

- Barriers to transitioning to home therapies were identified as health illiteracy, a lack of understanding of what home therapies entail, limited space to host home therapy supplies, and limited or no family/caregiver support.
- Patients with mental health issues were identified as having barriers to health due to the stigma associated with mental health diagnoses, a lack of patient awareness, dissenting cultural beliefs about mental health, and limited access to mental health professionals.
- Telehealth barriers were identified as a lack of smartphone devices or computers, limited knowledge of how to use telehealth applications and smartphones and limited or no access to broadband internet and Wi-Fi.
- Barriers to vaccinations were identified as fear of medical reactions, mistrust of the healthcare system, medical racism, and limited education and understanding of vaccinations.
- Barriers to becoming active and remaining active on the transplant list were identified as health illiteracy, general fear of transplant, lack of social support, limited transportation, and dental infections.

Initial interventions were educational and focused on providing facilities with knowledge of ongoing services that were available to help mitigate their identified barriers. Following the Network's needs assessment survey, in collaboration with the Weitzman Institute. The Moses/Weitzman Institute is a national health system organization focused on transforming healthcare delivery and directing it to vulnerable individuals. the Network conducted extensive data analysis on the quality improvement data. Counties in the Network's service area were divided based on the Social Vulnerability Index created by the Center for Disease Control Prevention (CDC).

Initial Interventions were educational and focused on providing facilities with knowledge of ongoing services that were available to help mitigate their identified barriers. Following the Network's needs assessment survey, in collaboration with the Weitzman Institute the Network conducted extensive data analysis on the QIA data. The Moses/Weitzman Institute is a national health system organization focused on transforming healthcare delivery and directing it to vulnerable individuals. Counties in the Network's service area were divided based on the Social Vulnerability Index. Counties with high social vulnerability were included in the initial analysis.

States	Indiana	Kentucky	Ohio
High Social Vulnerability Counties	Davies County	Barren County	Ashtabula County
		Bell County	
		Christian County	
	Elkhart County	Clay County	Cuyahoga County
		Fulton County	
		Harlan County	
	Marion County	Hart County	Scioto County
		Knox County	
		Pike County	
			Todd County

Once the counties were identified, the data were first stratified into different categories based on the quality improvement areas of focus: COVID-19 hospitalizations, in-patient hospital readmissions, emergency department hospitalizations, influenza vaccinations, transplant, transplant waitlist, home transitions, and home incidence.). The data were further stratified by state and county population, urban and rural settings, race, and ethnicity.

The counties with high social vulnerability were then compared to counties with low social vulnerability (Indiana: Hamilton County and Hendricks County, Kentucky: Campbell County and Scott County, Ohio: Clermont County and Greene County). The data analysis showed inequities throughout each quality improvement area of focus, with the strongest and most prominent vulnerabilities occurring in the categories of COVID-19 hospitalizations, emergency department visits, hospital readmissions, and inpatient hospitalizations.



ESRD Network Grievance and Access to Care Data

The Network responds to grievances filed by or on behalf of ESRD patients in Indiana, Kentucky and Ohio, with a goal to address and mitigate concerns.

Grievances

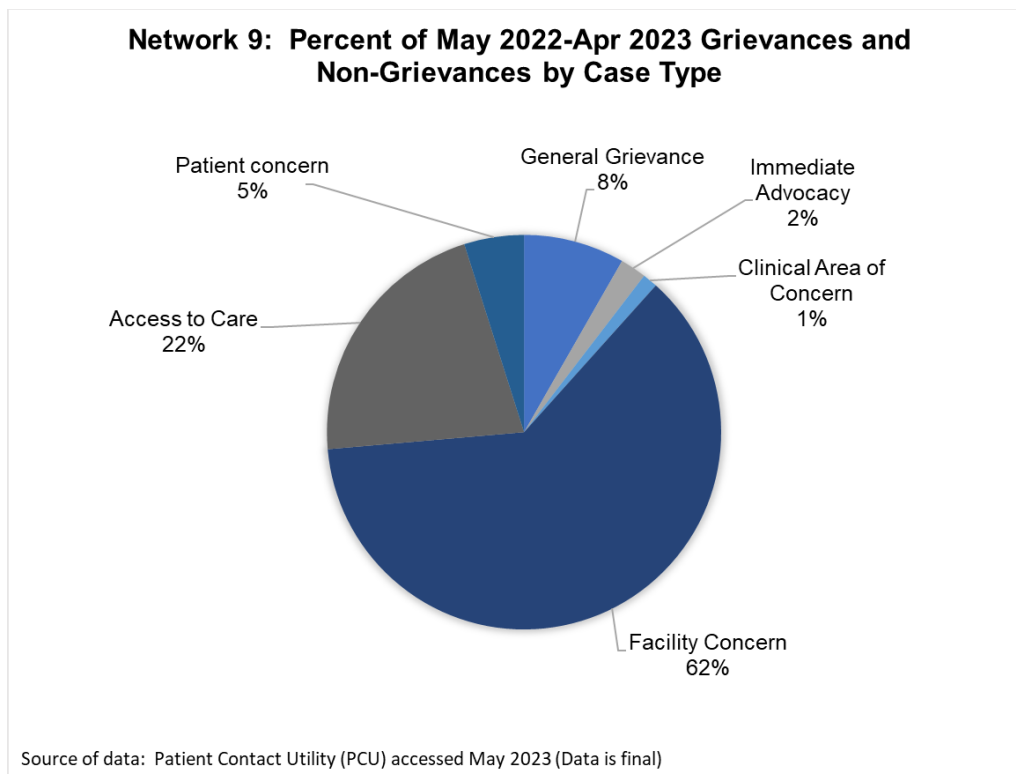
The Network received and mediated 27 general grievance cases and received four clinical quality of care (QoC) cases during the performance period. For all cases that had clinical components, the Network reviewed patient charts and participated in care conferences to effectively communicate findings. Areas of concern included: communication, staffing, clinical competency, professionalism, and treatment environment. For both clinical and general grievance processes, patients expressed concerns related to staffing issues; specifically, lack of communication skills, competency, and empathy on the part of staff. The Network also reviewed a total of seven immediate advocacy cases, which are similar to general grievances but can be resolved in an abbreviated timeline.

Upon initiation of each grievance case, the Network provided patients with information on their rights and responsibilities, the Network's role in resolving the grievance, and how the grievance process is executed.

Network interventions implemented to address these issues included providing staff with in-service training to improve their communication with patients. The Network provided mediation and assistance via meetings held by phone with clinics, sometimes including the grievant, and their care partners (as desired).

In addition, the Network received calls from facilities to address clinic staff concerns about patients' behavior, treatment, rights, mental health, and ability to adjust to and cope with dialysis. The Network provided technical assistance to address more than 202 cases. Special case selection topics included: staff shortages (2), disruptive/abusive behavior (52), nonadherence (93), mental health (31), cognitive concerns (11) and many that were case-specific scenarios that did not fit into a specific category.

Many clinics contacted the Network to report issues with their patients' adherence and requested technical assistance and reminders regarding the Conditions for Coverage Guidelines. The Network also observed that with fewer staff members available to work with patients, staff shortages within dialysis facilities seriously affected patient care, sometimes resulting in grievances or in situations where disruptive and abusive behavior became more easily dismissed. As a related issue, dialysis social workers covering multiple clinics were unable to devote full time to their assigned patients. To help address the potential issues caused by the above, the Network employed strength-based approaches, not only with patients, but also with staff to acknowledge staff burnout and compassion-fatigue at the clinic level.



Access to Care and Involuntary Discharge (IVD) Cases

During the performance period, the Network received 91 cases involving access to care concerns. Access to care may mean a patient is reported as at-risk of losing their outpatient dialysis admission, has already lost admission, or has contacted the Network for assistance with obtaining placement. During the performance period 48 at-risk, 22 involuntary discharges, and 12 failure to place cases were reported.

With each access to care case, the Network provided technical assistance (TA) to help facility staff effectively support and protect their patients' access to treatment. Twenty-two patients were discharged from their respective facilities during the performance period. It was observed that a patient's unresolved grievance could be the gateway to his or her dissatisfaction, leading to frustration, which could lead to patient/staff conflicts. The Network worked to enhance patient education, with a focus on encouraging patients to become more engaged and active in their care as a strategy to improve patient understanding and acceptance. Thirty-one or 65% of all at-risk reported cases were able to be resolved, averting involuntary discharge during the performance period. After Network support, 17 patients or 80% of patients who had previously been labeled "failure to place," were able to obtain placement.

The Network encouraged clinic staff to implement peer-to-peer support using the Network's Peer Mentoring Program for patients who experienced challenges; continued to provide educational resources to both patients and clinic staff on patients' rights and the CMS Conditions for Coverage; and encouraged clinic staff to incorporate patients into QAPI meetings.

In addition, The Second Chance Trial Program provides an opportunity for patients who have been displaced from an outpatient dialysis clinic to regain admission through a voluntary provider and clinic who wish to participate. A Trial Agreement is customized by way of needs assessment. The Program was created in conjunction with the State Survey Agencies many years ago. The Network continued promoting its Second Chance Program to clinics for patients with a history of behavioral and non-adherence issues, with a goal to vastly improve these patients' quality of life and reduce the number of patients using hospital emergency departments for life sustaining treatment. Four of these cases were patients who had open access to care cases, and for various reasons, were able to utilize the Second Chance Program with a customized needs assessment and gain full admission to a clinic. One patient had just begun a trial period at the close of the performance period.

Network Assistance and Quality Improvement

The Network advocated for patients, promoting the rights of patients to participate in their healthcare and emphasized the importance of voicing their perspective about services provided by the facility. The Network mediated cases regarding patients' concerns with the facility. In addition, the Network implemented QIAs included interventions including the *Effective Communication* video presentation designed to provide facility staff guidance on communication techniques that would better support their patients' care.

The Network worked toward accomplishing the following overarching goals during the reporting period:

- Resolve grievances within required time frames: 10 calendar days for Immediate Advocacy cases and 60 calendar days for General Grievance and Clinical Quality of Care cases
- Support dialysis facility staff, who have limited time, skills and training in conflict resolution, with an ultimate goal to enhance staff members' ability to manage and deal with patients who have mental, emotional and/or psychosocial issues.
- Increase patients' awareness of the Network and the educational resources available by sharing information during the monthly Patient Facility Representative (PFR) Alliance Meetings
- Provide educational resources with each grievance resolved
- Increase use of IPRO Learn modules. The Network used IPRO Learn to promote the Network's pre-recorded webinar, *Effective Communication* with the goal for all clinics participating in IPRO Learn activities to complete this activity.

The Network continuously promoted an environment of advocacy for all ESRD patients and ESRD patients' caregivers. The Network provided educational training and resources on patient rights to all staff and patients during the grievance process as a standard practice and, at times, in dealing with facility concerns and access to care cases that may have been labeled "at-risk." The Network also provided mediation to help de-escalate ongoing patient concerns and create an environment of safety and inclusion. Interventions focused on supporting facility staff in exercising de-escalation and effective communication skills, as well as offering guidance in

identifying potential barriers that could negatively affect a patient's ability to remain compliant with their treatment plan. These interventions provided facilities with the necessary guidance to improve their patients' overall quality of care. While each intervention focused on a different topic, all Network-implemented interventions incorporated the basic elements of quality improvement:

- An environmental scan/needs assessment of dialysis clinic staff
- Provision of TA to support clinic staff in using quality improvement tools, including root cause analysis (RCA) and plan-do-study-act cycles (PDSA) and support with effective communication
- Ongoing emphasis of the value of establishing professional boundaries with patients
- Early introduction and ongoing reinforcement of the value of integrating quality improvement methodologies into the culture of the clinic.

The Network provided patients and facilities with the following resources:

- The *Dialysis Patient Grievance Toolkit* created by the Forum of ESRD Networks' Kidney Patient Advisory Council (KPAC)
- Grievance preparation worksheets and a poster to create awareness of the educational resources available to dialysis patients
- A poster and flyers (*What the Network Staff Can and Cannot Do*) that outline for patients clearly defined parameters of the support that the Network is able to provide
- *The Dialysis Patient Provider Conflict Manual* with special attention to the Position Statement dealing with Access to Care concerns
- *The Second Chance Trial Program* brochure and flier to increase program awareness
- Crisis Prevention Institute (CPI's) *Top 10 De-Escalation Tips* resource.

Transplant Waitlist & Transplanted Quality Improvement Activity May 2022-April 2023

Project Overview

Network 9 serves as a support and champion for patients (regardless of age, sex, or ethnicity as well as those with common comorbid conditions, including diabetes and hypertension) through its efforts to fulfill the stated goal of the Executive Order on Advancing American Kidney Health (AAKH) for 80% of new ESRD patients to be either receiving dialysis at home or receiving a transplant by the year 2025. The Network's goals for this performance period were to increase the number of patients on the United Network for Organ Sharing (UNOS) waitlist in the Network service area by 5% and increase the number of transplants in the Network service area by 6%.

The Network collaborated with dialysis facilities, transplant centers and stakeholders across its service area to provide information and resources about the benefits of transplantation as a preferred treatment modality and to increase patient access to this care option. Information was shared with facility staff and patients via the IPRO Learn education platform, as well as work groups and engagement in community coalitions. Using these approaches, the Network integrated principles of health equity and patient and family engagement to provide education and information about treatment options and to increase patient access to transplantation.

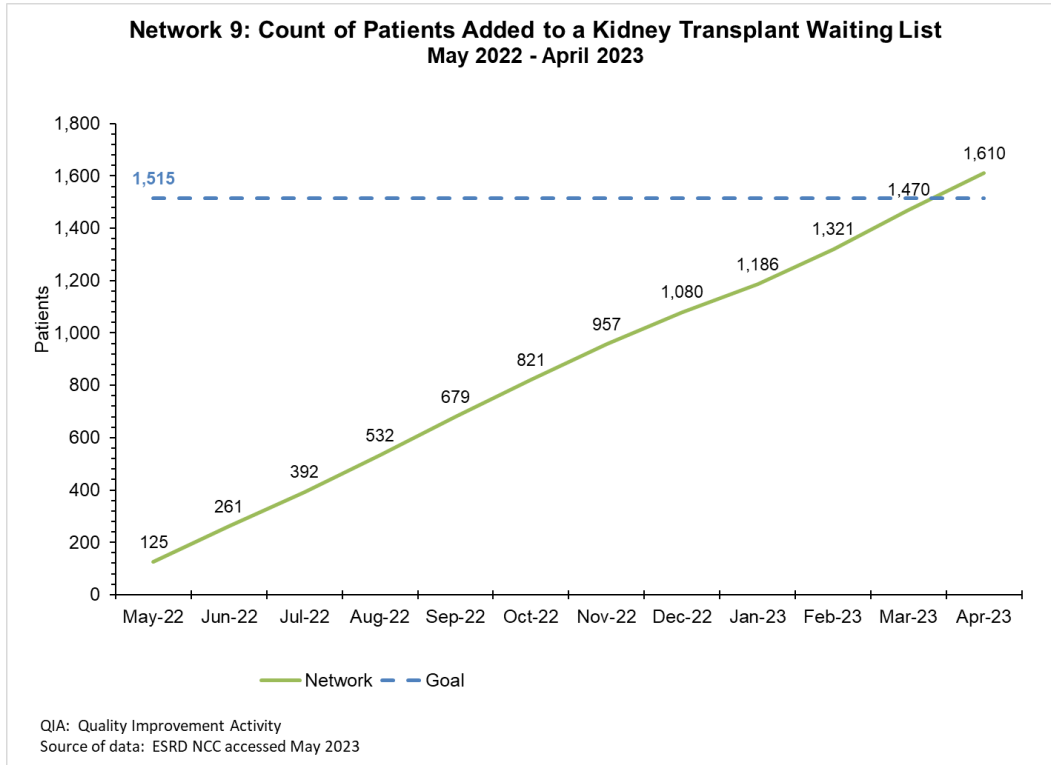
Interventions

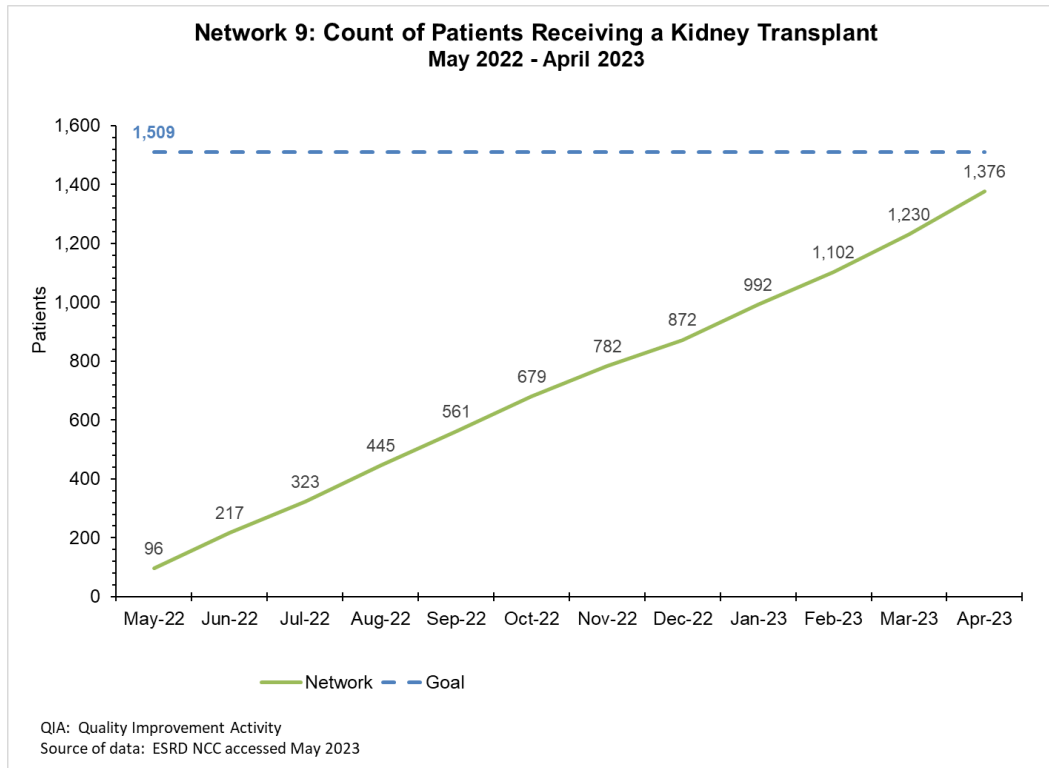
Utilizing IPRO Learn, the Network's comprehensive learning management platform, members of the dialysis provider community were engaged in monthly and bi-monthly quality improvement activities and interventions geared toward addressing and overcoming the region's top-reported barriers to waitlist and transplant. Interventions implemented within facilities were geared toward improving health literacy practices, improving adherence to blood sample processes to maintain patient active status on the waitlist, data transparency in the CMS ESRD Goals, sharing of best practices, living donation encouragement and campaign support, and increased acceptance and use of higher Kidney Donor Profile Index (KDPI) kidneys. The Network managed the Ohio River Valley Transplant (ORVTx) Coalition, which comprises a group of experts from transplant centers and organ procurement organizations, dialysis and transplant providers, and local representation from the National Kidney Registry (NKR). The continuation of this collaboration aided the Network in the retrieval and dissemination of pertinent information and data to promote waitlists and transplants across the Network's service area. In collaboration with the ORVTx Coalition, the Network identified barriers related to transplant organ allocation in the region and developed mitigation approaches and strategies to address the effects of the Kidney Allocation System on the Network's service area. These mitigation strategies included educating our community on strategies to bring organs into the region by reapproaching long-term dialysis patients about kidney transplant, the acceptance and use of higher KDPI kidneys, and encouraging consideration of living donation. The ORVTx Coalition contributed to the development of *Kidney Transplant Compare*, an IPRO- developed

patient-facing mobile application designed to help adult patients and their families learn about kidney transplantation, research transplant centers, and compare the requirements of transplant centers.

Outcomes

The Network's activities resulted in an additional 1,610 patients being added to the transplant waitlist during the performance period (12% increase from baseline period) and 1,376 patients receiving a transplant as of April 30, 2023.





Barriers to Achieving Goals

Baseline measurements for this project were established using calendar year 2020 data. A systemic change in kidney organ allocation occurred on a national level on March 15, 2021. The Kidney Allocation System was put in place to increase equity in transplant access for all candidates. For this to occur, kidneys that were abundant in one area, such as Network 9, would need to be outsourced to other areas in need.

Prior to the new Kidney Allocation System (KAS), there was a published cross-sectional population-based economic evaluation from *JAMA Surgery* that pointed to possible effects of the KAS across the country. This publication specifically mentioned that areas in the northwest and southern part of the U.S., as well as East Ohio and Kentucky (two of the three states in the Network’s service area) would experience a -20% drop in their kidney transplant rates. The impact of the KAS on kidney transplant in the Network’s service area was evident soon after the KAS went into effect in March 2021. The Network conducted a physician roundtable to dissect the root cause of the lower transplant rates at the start of this performance period, and there was an overwhelming concern that the KAS predictions may have been accurate.

In July 2022, The Network analyzed data from the Scientific Registry for Transplant Recipients (SRTR) from calendar year 2020 (Pre-KAS) and calendar year 2021 (post-KAS), as well as Organ Procurement and Transplantation Network (OPTN) data.

Pre-KAS, 78% of the organs procured in the Network’s service area went to local Network 9 transplant centers. The number of procured kidneys in the Network’s service area increased by

82 post-KAS; however, only 56% of the organs procured in Network 9 stayed in Network 9 to be transplanted. This 22-percentage point decrease translated to approximately 340 organs that were collected, but not used in the Network's service area.

Best Practices Spread to Achieve Goals

The Network hosted two Treatment Modality Best Practice webinars where high performing facilities were invited to speak about their best practices for waitlist and transplant. In September 2022, a regional social worker shared best practices in waitlisting and transplant to include robust educational tools, overcoming health equity barriers by seeking out transplant centers who offer specialized services, and how language and mindset of facility staff drive a pro-transplant culture. In February 2023, a kidney care options educator from U.S Renal Care shared their approach to early CKD education and preemptive referral for waitlisting, health literacy, patient-to-patient advocacy, and transplant center communications.

Home Therapy Quality Improvement Activity May 2022-April 2023

Project Overview

The choice of home modality enhances a patient's quality of life and is more convenient than traveling to an in-center clinic three times per week. It is also shown to improve patient mortality and morbidity, making it a preferred treatment modality for ESRD. Dialysis patients need education and support to determine the appropriate dialysis modality that fits their lifestyle, including but not limited to, how each modality will affect travel, diet and fluid consumption, school, work, social interaction, and well-being. The Network has been committed to

- providing patients and staff with education and resources to create a pro home culture;
- encouraging provision of treatment modality education for patients with chronic kidney disease (CKD) in advance of their need to select their treatment modality;
- sharing best practices with facility staff to encourage patients to consider a home program; and
- supporting innovations that expand access to home or offer quick starts on a home therapy, such as urgent start peritoneal dialysis.

The Network's goals for this performance period were to increase number of new patients starting directly on a home therapy to 20% above the baseline measurement (April 30 -2020 – May 1, 2021) and the number of patients transitioning from incenter hemodialysis (IHD) to a home therapy by 6% over baseline.

Interventions

The Network continued to foster and expand the pro home culture that had been a focused goal for several years, with an additional emphasis on supporting low-performing facilities with achieving this goal. The high performing facilities dedicated time and resources to make a culture change to educate all staff on home dialysis, and Network staff members worked to expand that strategy to all the facilities in the Network's service area.

The Network also developed a CKD stakeholder group, identifying 90 CKD education programs delivering early education on home modalities in the region.

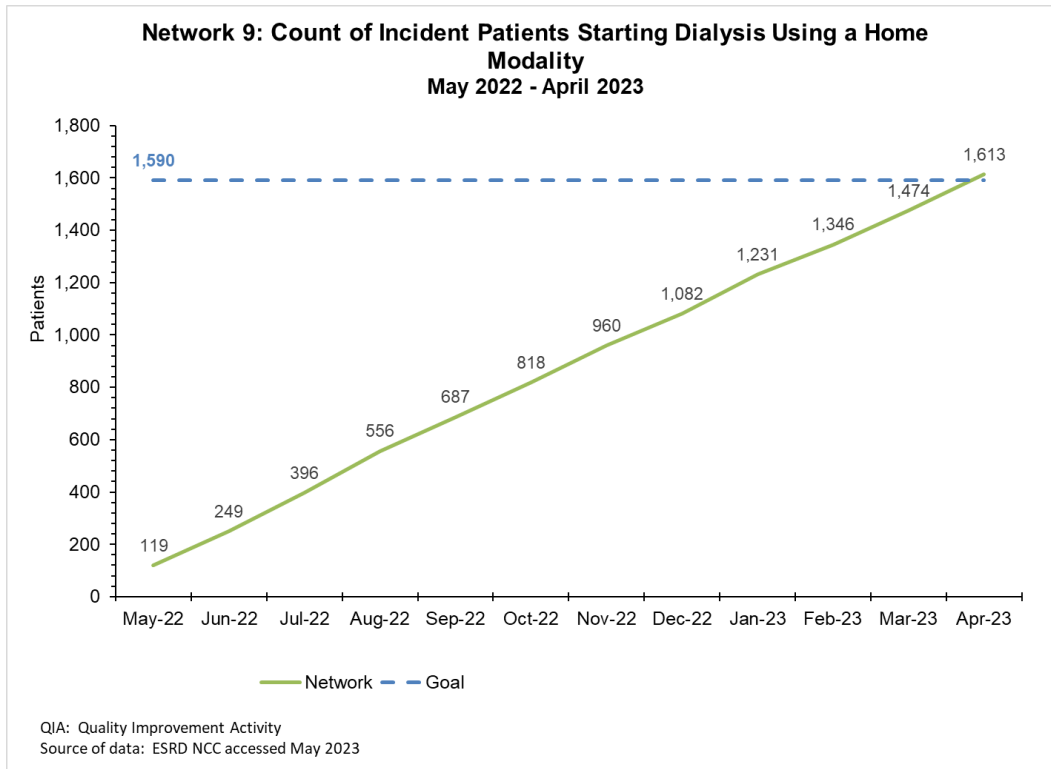
IPRO Learn is the Network's learning management system platform, used to disseminate education to the dialysis facilities. One of the educational pieces posted to IPRO Learn was an article provided by Home Dialysis Central, *Hitting Below the Belt: Home Dialysis and Sexuality*. Comments from 350 facilities (78%) of the facility staff who read the article indicated that they had found that patients' concern about body image was an obstacle to their consideration of peritoneal dialysis home therapy.

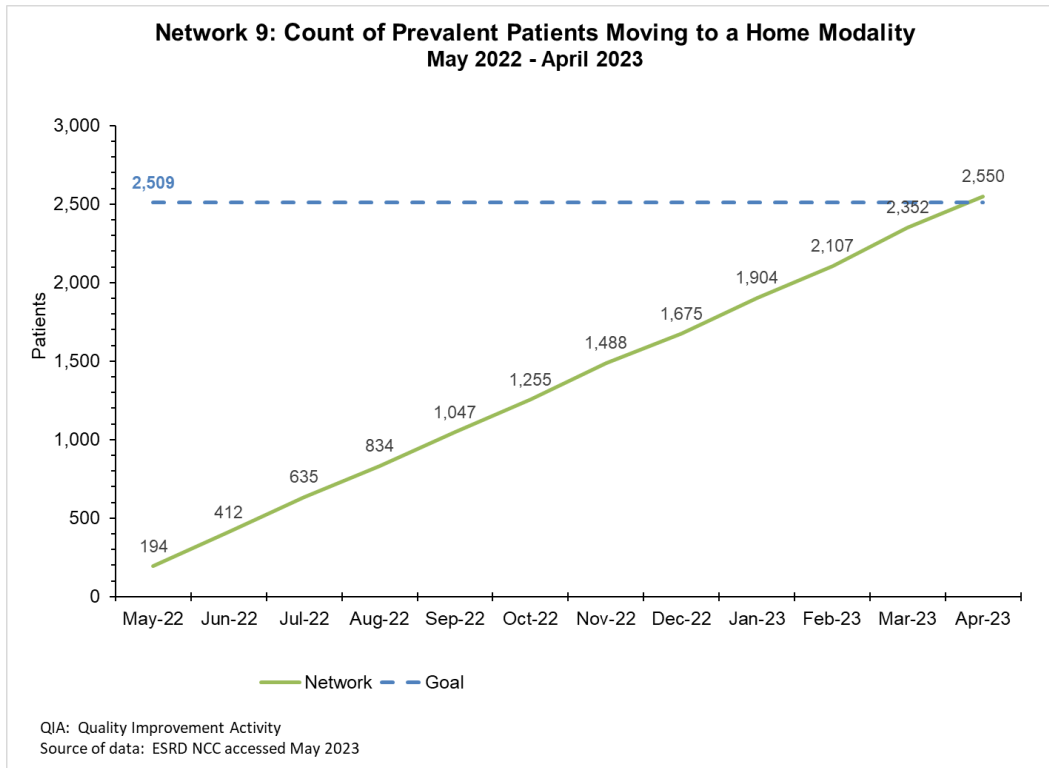
To address this identified barrier, the Network developed and released the resource, *Seeing Yourself in a Positive Light with a Peritoneal Dialysis Catheter*. Of the 617 facilities that

completed the activity in IPRO Learn, 372 indicated that they felt the tool would be helpful in talking to their patients about body image as related to peritoneal dialysis.

Outcomes

Within the Network's service area 1,613 patients (101.45% of goal) began their dialysis on a home modality and 2,250 prevalent patients (101.63% of goal) transitioned to a home modality during the performance period.





Barriers to Achieving Goals

The Network has observed that the number of patients transferring to home modalities is decreasing in its service area. Frequently when patients are receiving in-center dialysis, they get comfortable with their dialysis team, and they don't want to make the change to a home therapy. In order to mitigate this barrier, we have encouraged facilities to highlight the experiences of Patient Facility Representatives who have successfully transitioned to a home therapy. The Network implemented a process to educate the entire care team about home treatments and their benefits.

Best Practices Spread to Achieve Goals

During the performance period, community coalitions functioned as bodies of stakeholders within a community dedicated to defining a healthcare issue within the designated community, producing a root cause analysis to identify areas for improvement, committing to work as a group to achieve quantitative aims, and implementing specific actions tied to the identified root causes and designed to improve healthcare outcomes within the community. The Network shared best practices discovered within our coalitions to the entire service area.

Throughout the performance period, the Network shared best practices within our coalitions. The Network structured its coalitions (three per year) so that, within each coalition, the Network identified facilities that could be classified as low performers, moderate performers, and high performers in terms of moving patients to home modalities with a goal to have high performing facilities share their best practices with both low and moderate performing facilities. During each four-month intensive PDSA cycle with coalition facilities, the Network

selected a top performer, and that facility was featured on a Network-wide best practice call. In addition, the Network included Patient Facility Representatives in each coalition PDSA cycle to share information with other patients who may be hesitant about a home modality.

Influenza Vaccinations (Patient and Staff) May 2022-April 2023

Project Overview

According to the Centers for Disease Control and Prevention (CDC), “People with chronic kidney disease (CKD) are at high risk of developing serious flu complications, which can result in hospitalization and even death. This is because CKD weakens immune response, which can make the immune system less able to fight infections. People with CKD at any stage, people who have had a kidney transplant, and people who are undergoing dialysis treatment are all at increased risk of severe illness from flu.”

The Network worked to increase the vaccination rate for individuals with ESRD residing within its service area as well as the staff working in the facilities that treat them. Interventions, resources, and technical assistance were provided to dialysis centers, with a goal to facilitate an increase to 90% of the number of dialysis patients and to increase to 0% the number of facility staff receiving an influenza vaccination by the end of the performance period.

Patient data were reported by facilities in the End Stage Renal Disease Quality Reporting System (EQRS). Allowable exclusions for patients were medical contraindication or a history of severe allergic reaction to the vaccine. Staff data was reported in the National Health and Safety Network (NHSN) data set and did not include exclusions.

Interventions

The Network provided facilities with resources and interventions via its learning management system platform, IPRO Learn, with a goal to identify successful strategies for increasing influenza vaccination rates for patients and staff. Interventions were focused on education using resources including the ESRD National Coordinating Center’s (NCC) *Vaccination Change Packet* to allow facilities to select the primary drivers for influenza vaccines that were most appropriate for their patients and staff.

Facility participation in this intervention was high, with 387 facilities (60%) participating; 88 facilities focused on achieving a high performing culture, 42 focused on implementing quality improvement strategies, 32 focused on adopting processes to achieve quality goals, seven focused on expanding efforts beyond their facility staff, 130 focused on providing education on vaccinations, and 88 focused on addressing vaccine hesitancy. Of those facilities taking part in this intervention, 92% indicated they would adopt or adapt these processes.

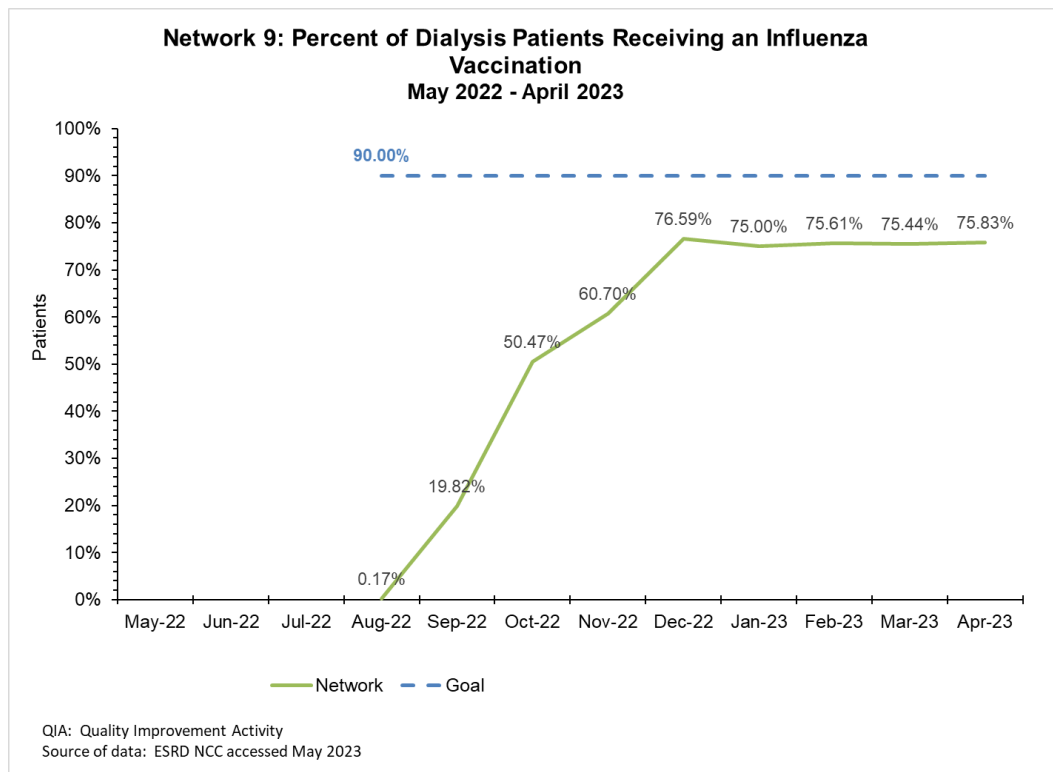
The Network also hosted a webinar, *EQRS Vaccinations: Patient Influenza (flu) and Pneumococcal (pneumonia) Vaccines in EQRS*, for facility staff to provide information on the importance of influenza vaccines and the impact of the flu on the unvaccinated community. Online views of this presentation exceeded 5,000, and the recording of the webinar had 664 YouTube views within one month of posting.

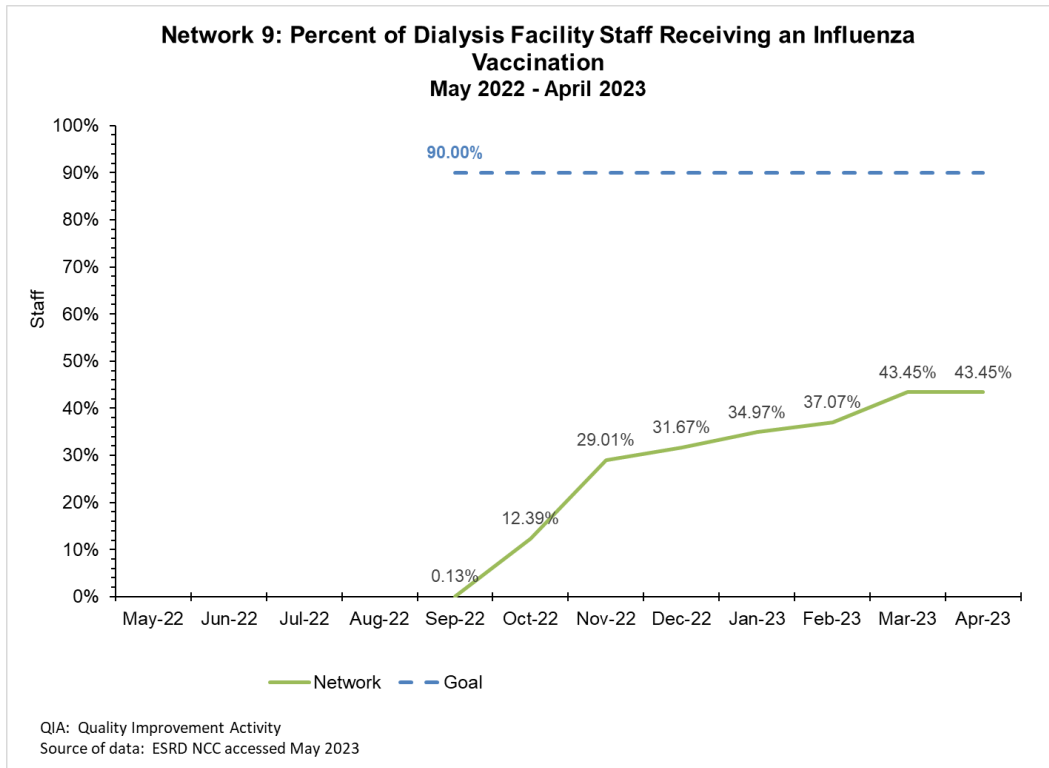
The Network encouraged facility staff to explore the *Increasing Vaccination Rate Toolkit* on the IPRO Learn platform, which contains resources from a variety of trusted sources, including CDC *Resources: Making a Strong Influenza Vaccine Recommendation*, and *What are the benefits of flu vaccination?*

Prior to flu season, the Network team worked with facilities to create a proactive approach to help increase the rate of influenza vaccines among their patients and staff. Having a plan of action allowed facilities to prepare their communications strategy to best support an increase in vaccinations during the influenza season. The Network team addressed low staff compliance from the perspective of protecting the patient, educating staff about how the vaccine protects the patients they treat, their colleagues, and their at-risk friends and family members.

Outcomes

The Network’s activities resulted in the following outcomes in the Network’s service area at the end of the performance period: a total of 25,099 patients, (75.83%) and 4,199 facility staff members (43.45%) in the Network’s service area received an influenza.





Barriers to Achieving Goals

Staffing shortages across the Network’s service area created a challenge for facilities to address vaccination education and administration on a consistent basis to improve rates. The Network also identified inconsistencies in data reporting across the different batch submitting organizations, due to the implementation of new EQRS data fields for vaccination documentation that were causing problems with how data was being sent to EQRS. This led to consistently low influenza vaccine rates reported across the Network service area. Even with ongoing education to facilities on how to document vaccines effectively in EQRS and conversations with the different batch submitting organizations, we were unable to improve the data reporting from facilities that submitted their data using a batching process throughout the flu season which ended in March 30, 2023.

Best Practices Spread to Achieve Goals

Best practices for increasing the influenza vaccination rates in patients and staff included discussing vaccines and the importance of getting vaccinated against influenza and other diseases with every patient upon admission to the facility. Having communication tools and huddle boards allowed patients and staff to visualize progress made in increasing vaccination rates within their facility. Discussing vaccines during QAPI meetings allowed staff and patients to review progress and better understand the importance of promoting vaccines. These best practices were shared to the service area through discussion forums on the IPRO Learn platform; best practice posters featured tips from these providers each quarter. We also asked best practice speakers to present every six months on their work and invited the entire Network service area to attend or listen to the calls to share and spread these ideas and processes.

COVID-19 Vaccinations (Patients and Staff) May 2022-April 2023

Project Overview

According to the National Institutes of Health, end stage renal disease (ESRD) patients were associated with increased severity and mortality of COVID-19 during the pandemic. The overall estimated case fatality rate of COVID-19 in ESRD patients was approximately 3.6 times that of the general population. The Network worked to ensure that a minimum of 80% of dialysis patients received a primary COVID-19 vaccination and/or vaccination series and 80% of fully vaccinated dialysis patients received any additional Centers for Disease Control and Prevention (CDC) and/or Centers for Medicare & Medicaid Services (CMS) recommended COVID-19 vaccinations. In addition, the Network worked to ensure that 100% of dialysis facility staff received a primary COVID-19 vaccination and/or vaccination series and 100% of fully vaccinated staff received any additional CDC and/or CMS recommended COVID-19 vaccinations. Data for these measures were based on data reported to the National Healthcare Safety Network (NHSN).

Interventions

The Network reviewed data to identify facilities that struggled with increasing COVID-19 vaccination rates. From that list we placed 63 facilities in a community coalition to determine the root cause of their barriers and assist them with a plan-do-study-act cycle to improve their outcomes. As part of the Network's coalition, these facilities were provided educational resources and tools via IPRO's educational platform, IPRO Learn, to guide facility staff in developing and executing strategies to increase vaccine uptake. Within the coalition facilities and the wider region, we focused education on addressing patient and staff vaccine hesitancy, combating community spread and preventing the spread of COVID-19 throughout dialysis facilities with our monthly intervention sharing on the IPRO Learn learning management system platform, which were activities that all facilities in the community coalitions were required to complete.

The IPRO Learn platform was promoted as a one stop shop for all facility staff in the region to have 24-7 access to the Network's *COVID-19 Toolkit*, which included COVID-19 resources/tools and interventions. Some of the target areas on which the Network focused education included strategies to combat hesitancy and promote vaccination. Facilities received resources including the *OSHA Coronavirus Disease (COVID-19)* to provide guidance on infection control and prevention to prevent the spread of COVID-19 in the workplace. This resource provided valuable information and links to other resources, including a tool to help people find COVID-19 vaccination site locations. Facilities received resources to help deal with patients and staff with vaccine hesitancy, encouraging them to ask open-ended questions to help patients and staff find their own reasons to get vaccinated.

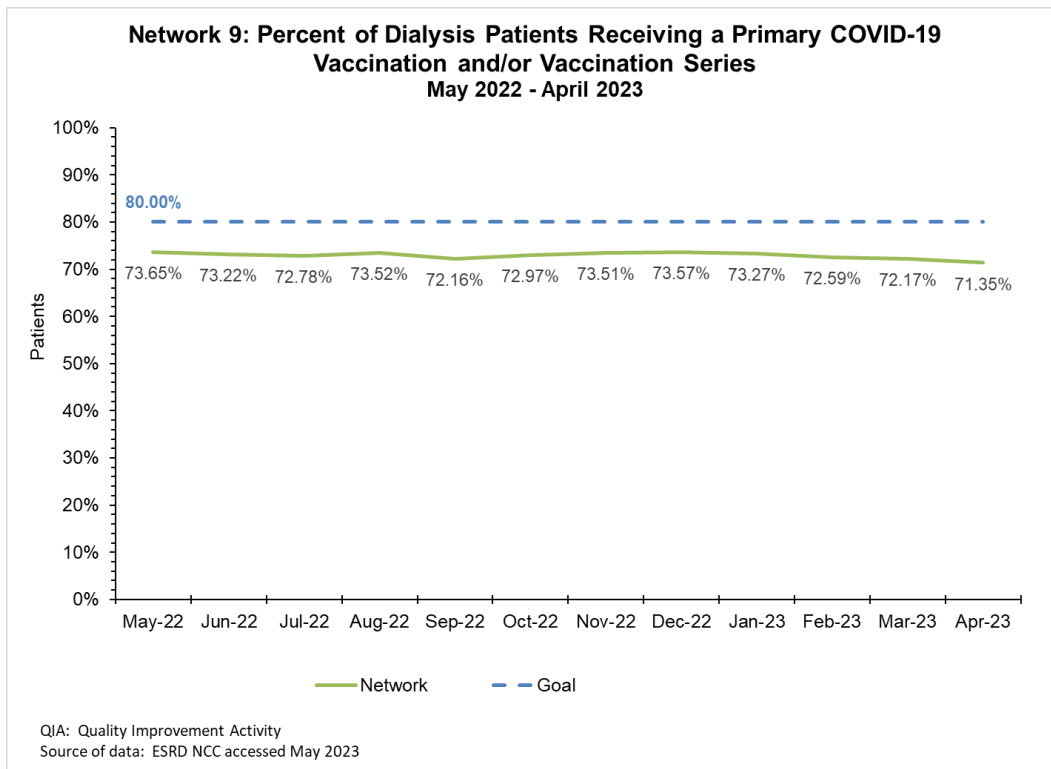
More than 50% of facilities in the Network service area (350 facilities) reported they would use this information to continue to educate patients and staff on the importance of vaccination.

Over 55% or 365 facilities responded they would implement the measures shared to prevent community spread.

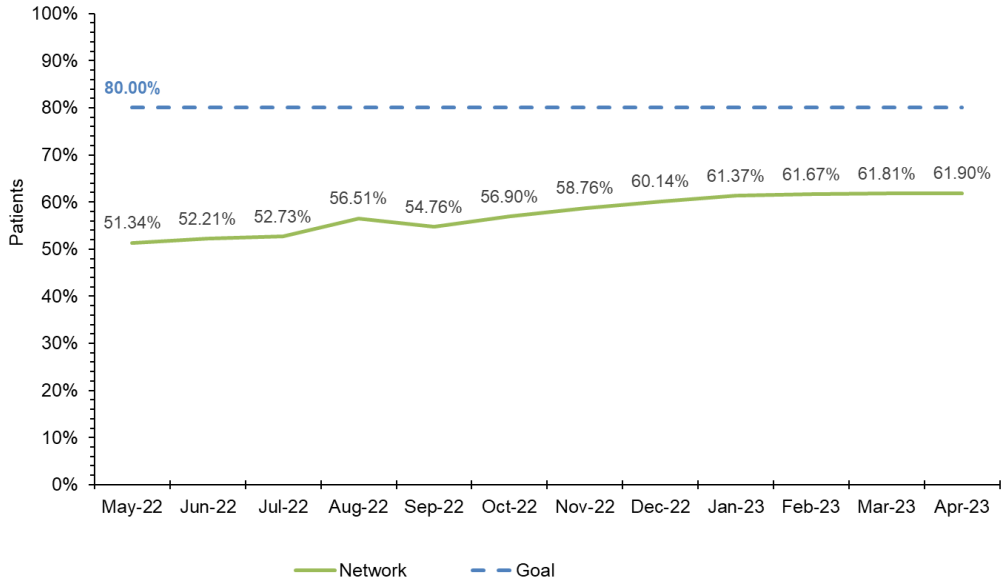
The Network identified patients who remained unvaccinated and provided a list of these patients to facilities as a performance report. Facilities were asked to investigate and record information for any patients who may have received the vaccine but were not documented, as well as any newly vaccinated patients. The Network worked with facilities to encourage individual coaching and education on the benefits of the COVID-19 vaccine for both patients and staff who had not been vaccinated.

Outcomes

The Network's activities resulted in the following outcomes in the Network's service area at the end of the performance period: a total of 32,849 patients, (71.35%) and 13,782 staff members (78.50%) received a primary COVID-19 vaccination and/or vaccination series.

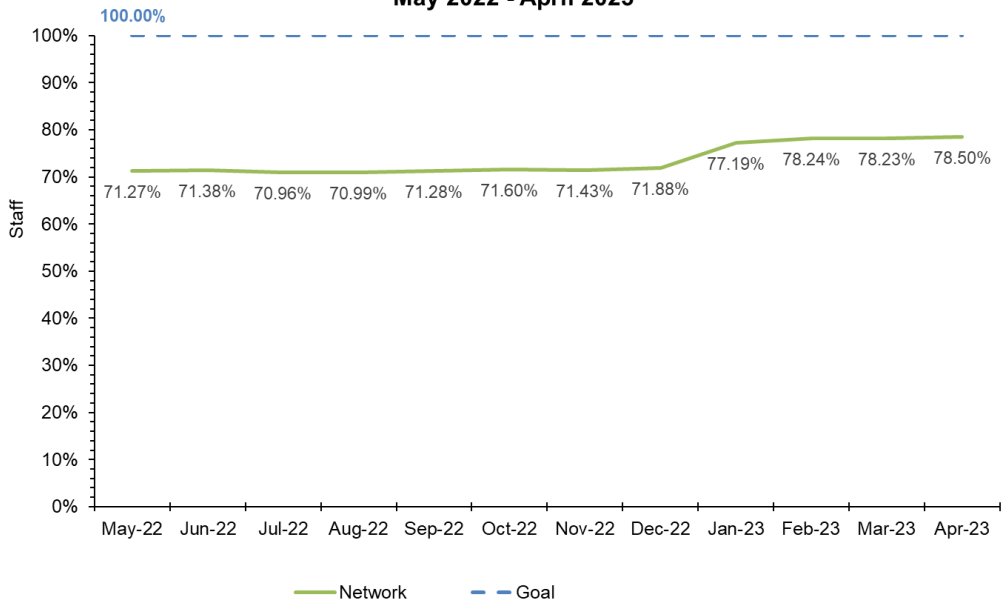


**Network 9: Percent of Fully Vaccinated Dialysis Patients Receiving
COVID-19 Vaccination Booster
May 2022 - April 2023**

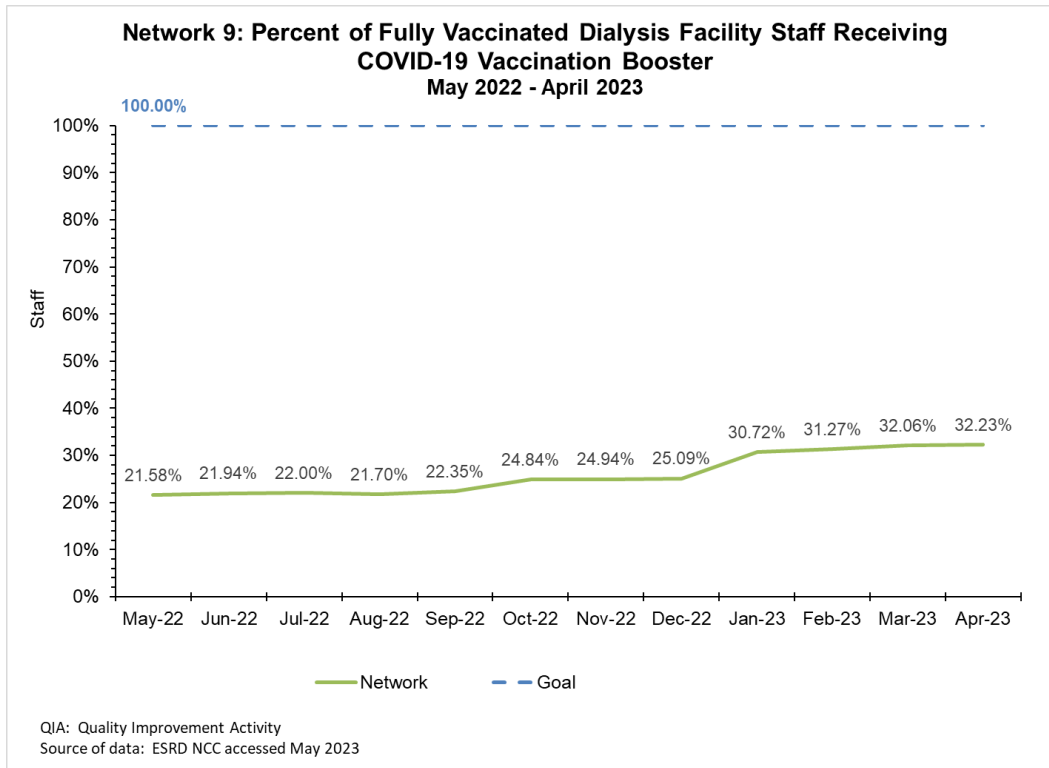


QIA: Quality Improvement Activity
Source of data: ESRD NCC accessed May 2023

**Network 9: Percent of Dialysis Facility Staff Receiving a Primary
COVID-19 Vaccination and/or Vaccination Series
May 2022 - April 2023**



QIA: Quality Improvement Activity
Source of data: ESRD NCC accessed May 2023



Barriers to Achieving Goals

Staffing issues continued to cause operational barriers, which impacted facility efforts to promote and provide vaccinations. Also, the frequent turnover and newly hired staff made it difficult for facilities to follow PDSA project cycles consistently, hampering the coalition facilities' ability to attain improvement. This, combined with facilities citing vaccination fatigue and ongoing hesitancy, were all factors undermining efforts to establish a pro vaccine culture.

Best Practices Spread to Achieve Goals

The Network gathered best practices and shared these in discussion board forums on the IPRO Learn platform, via semiannual best practice calls hosted by the Network, and during all one-on-one technical assistance interactions. The Network highlighted those facilities that shared their best practices quarterly in a poster session on IPRO Learn. One facility shared their experience of how ongoing education and follow up with patients who were formerly resistant established a sense of sense of trust and a belief that the facility was acting in the patient's best interests for their health and safety. This resulted in the patients accepting a vaccination. Another best practice shared was how they educated patients on the importance of being vaccinated as an ESRD patient, using patient stories and information on the associated risks for patients with ESRD to help those who were reluctant to be vaccinated.

Data Quality (Admissions, CMS Form 2728, CMS Form 2746) May 2022-April 2023

Project Overview

The Network sought to attain the following goals:

- Achieve a 5% relative improvement in the rate of patient admission records from dialysis facilities entered within five days,
- Achieve a 4% relative improvement in the rate of initial CMS-2728 forms submitted from dialysis facilities within 45 days,
- Achieve a 5% relative improvement in the rate of CMS-2746 forms submitted from dialysis facilities within 14 days of the date of death.

The data used for the project reflect a 12-month rolling average.

Interventions

The Network used IPRO Learn to help facilities reliably and easily establish a routine process for downloading and reviewing the ESRD Quality Reporting System (EQRS) Patient Roster Report each month. By requiring that facilities submit the number of patient records that were corrected after completing the activity, facility staff were able to clearly see the benefit of performing the review process regularly; specifically, the positive impact it would have on patient records accuracy, cleanup, and the 2744 Annual Facility Survey.

In response to facility requests for “more training/resources/ease of use in EQRS reports,” the Network developed, recorded, and posted to YouTube and on the IPRO KnowledgeBase, several training videos providing facilities with step-by-step information on how to perform various EQRS-required activities. Videos on the following topics were widely viewed and well received as evidenced below. Note: The data reported below represent results across the IPRO ESRD Network Program, inclusive of results from Networks 1, 2, and 6.):

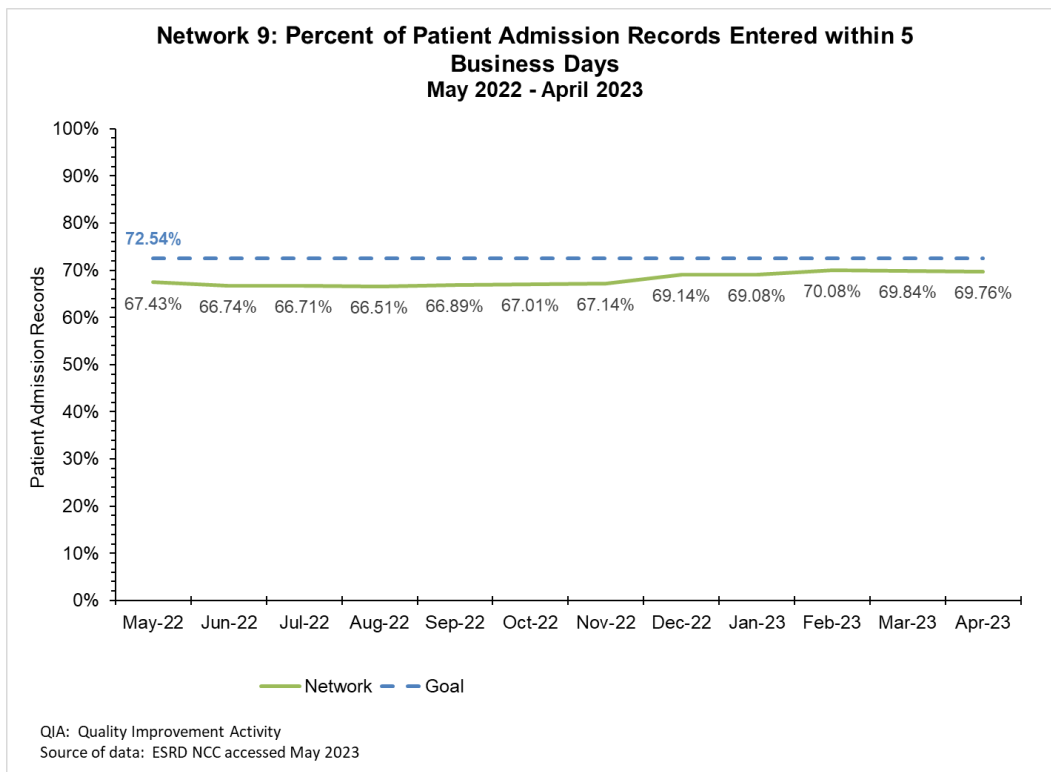
- EQRS Patient Roster Report: 4,119 article views, 125 YouTube ‘likes.’
- Improving Facility EQRS Data Submission Compliance: 1,535 article views, 18 ‘likes,’ 883 YouTube views.
- EQRS Vaccinations: Patient Influenza (flu) and Pneumococcal (pneumonia) Vaccines in EQRS: 5,139 article views, 60 ‘likes,’ and 664 YouTube views (within one month of posting).
- EQRS Depression Screening Reporting: 2,265 article views, 28 ‘likes,’ webinar/recording in development.

In addition, the Network distributed to dialysis facilities and transplant centers monthly EQRS newsletters that addressed the questions asked by facilities during that time period, CMS updates, and new training opportunities and resources. This helped EQRS users stay current on EQRS priorities, deadlines, and best practices.

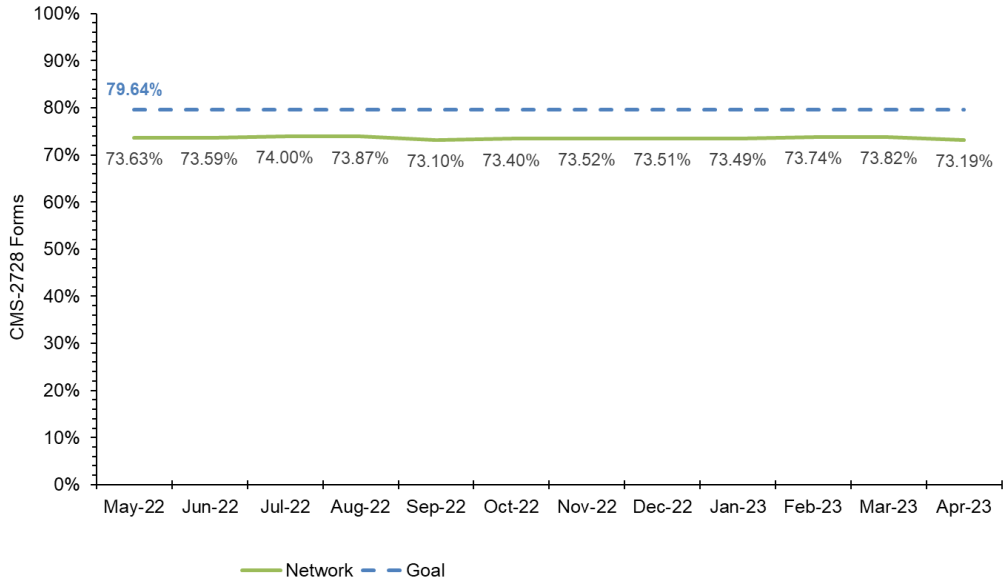
Having streamlined the process for facilities to obtain assistance from the Network, facility staff were able to direct all requests for assistance through the IPRO KnowledgeBase. The KnowledgeBase also offered facility staff access to educational resources, including training materials and webinar recordings that provided information on EQRS processes. Should they still require support, the IPRO KnowledgeBase offered facilities the option to submit a ticket that was quickly routed to the team that was best able to provide assistance. This eliminated time spent arranging phone calls and searching through individual emails; with 97% of tickets fully resolved within five business days.

Outcomes

The Network was not successful in achieving the 5% improvement goal for Admissions, the 4% improvement in 2728 Forms, and the 5% goal for the 2746 Forms measure, although facilities made significant efforts to improve timeliness for all three measures.

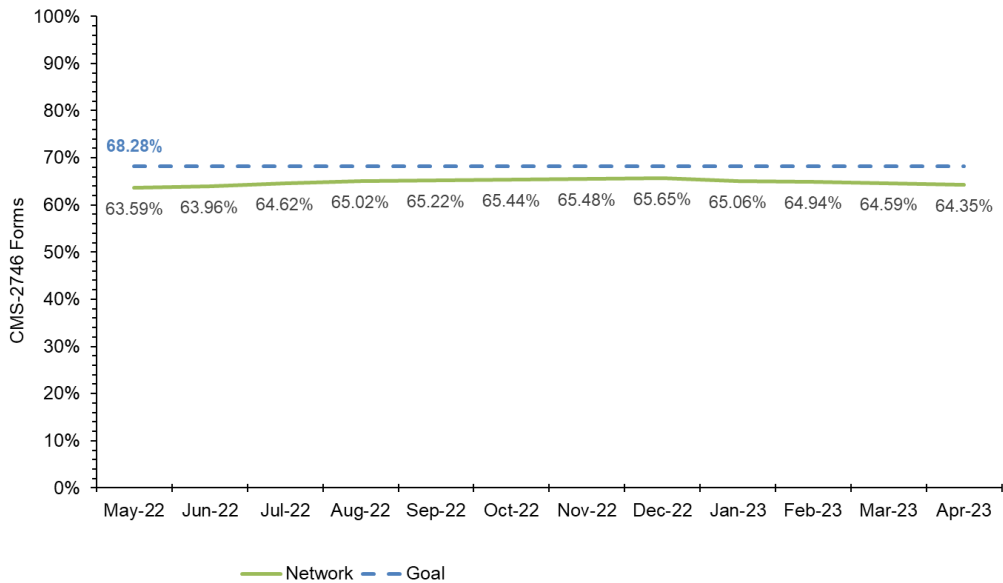


**Network 9: Percent of CMS-2728 Forms Submitted within 45 Days
May 2022 - April 2023**



QIA: Quality Improvement Activity
Source of data: ESRD NCC accessed May 2023

**Network 9: Percent of CMS-2746 Forms Submitted within 14 Days of Death
May 2022 - April 2023**



QIA: Quality Improvement Activity
Source of data: ESRD NCC accessed May 2023

Barriers to Achieving Goals

Large Dialysis Organizations (LDO) comprised 77% of the total number of facilities in the Network's service area, and their compliance with EQRS had a strong impact on Network-wide performance. The Network provided the LDOs with corporate-level EQRS compliance data from month to month to show that overall, the LDOs averaged a consistently low compliance rate and often a declining rate rather than improvement. LDO teams advised the Network of their plans to make corporate-level changes aimed at improving their compliance, the effects of which are expected to be apparent after the publication date of this report.

Facilities continued to have high staff turnover rates, with skilled employees leaving the facility permanently or temporarily. This created a need for the Network to provide continuous training of new facility staff. Providing consistent training, maintaining timely and accurate contact information, and sending monthly newsletters helped the Network ensure that essential information was being distributed to existing facility staff, with a request that they share all information with their newest teammates.

The Network worked with a sizable number of facilities that were pediatric-only or treated nursing home patients; the special circumstances of these patients made it more challenging for facilities to obtain enough of the information needed to complete admissions and Forms within the required timeframes.

Best Practices Spread to Achieve Goals

Facilities in the Network's service area implemented process improvements, designated staff to perform EQRS tasks, and developed a sustainable process for reviewing the EQRS Patient Roster on a regular basis to ensure timeliness and accuracy of patient data.

The Network trained facilities to ensure that all staff contact information was maintained accurately and in real time in the IPRO Contacts Management System, so that Network communication and EQRS cleanup reports would reach the right people responsible for the EQRS tasks, as well as those who provided oversight. With quarterly IPRO Learn activities reminding facilities to update their personnel, the Network maintained a bounce rate of less than 5% for emails sent to facilities.

The Network collaborated with Small Dialysis Organizations to encourage them to improve their EQRS compliance process. This led to several organizations designating corporate-level EQRS data contacts to help monitor facility EQRS performance and caused some to enhance their EMR systems to be more compatible with EQRS batching.

The Network gathered *Best Practices for Improving EQRS Compliance* from successful dialysis facilities and distributed the list of suggestions throughout the Network. When asked via the IPRO Learn platform whether their facility planned to implement some of the best practices provided, 97% responded that they would.

Hospitalization (Inpatient Admissions, ED Visits, Readmissions and COVID-19 Admissions) May 2022-April 2023

Project Overview

Individuals with end stage renal disease (ESRD) have the highest risk for acute care services, including hospitalizations and emergency department visits, among those with chronic medical conditions¹. There are many reasons dialysis patients may not be able to achieve and maintain optimal health. These can include comorbidities associated with ESRD (e.g., anemia, diabetes, cardiovascular disease, mental health issues) and increased risk of bloodstream infections, pneumonia, urinary tract infections, peritonitis and access site infections. They may also be related to health maintenance behaviors, such as lapses in preventive health checkups, medication errors, dietary issues, physical inactivity, use of alcohol or tobacco, and missing or shortened dialysis treatments. These risks are further compounded when patients have an unstable social support system; financial problems; or limitations in access to food, shelter, transportation, clothing, medication, medical care, or emotional support. When combined, these issues cause the ESRD population to be more at risk than others for use of acute care services, i.e., emergency department visits and hospitalizations.

The Network collaborated with dialysis providers across its service area to reduce inpatient hospital admissions, 30-day hospital readmissions, and outpatient emergency department visits related to the CMS Primary Diagnosis Categories. Network staff met with patients, nephrologists, primary care practitioners, transplant and dialysis facility staff representing all modalities, regional management of dialysis organizations, and Quality Innovation Network-Quality Improvement Organization (QIN-QIO) staff working on improving care transitions in the Network's service area. Informed by these meetings, Network staff planned, developed, and implemented quality improvement strategies that included peer mentoring, guiding staff in working with patients to create comprehensive and meaningful plans of care, and patient centric quality improvement activities at dialysis facilities. In addition, the Network incorporated a cross-cutting focus on health equity, rural health, and patient and family engagement to reduce incidents of hospital admissions, readmissions, and emergency department visits.

Interventions

To foster a community of practice focused on reducing hospitalizations, the Network collaborated with facilities to create a Transitions Champion role, and each facility in the Community Coalition was asked to assign a staff member to that role. We also encouraged facilities to spotlight the importance of their quality improvement efforts using strategies such as huddle boards and visual displays that shared data and resources. These displays informed and engaged staff members and patients in the process of attaining quality improvement goals.

¹ Li HL, Tai PH, Hwang YT, Lin SW, Lan LC. Causes of Hospitalization among End-Stage Kidney Disease Cohort before and after Hemodialysis. *Int J Environ Res Public Health*. 2022 Aug 18;19(16):10253. doi: 10.3390/ijerph191610253. PMID: 36011888; PMCID: PMC9408097.

The facilities were asked to focus their education on reducing incidents of one of the three topic areas: inpatient admissions, emergency department visits, or readmissions; and each facility included a patient representative in the creation of the visual displays. One hundred and seventy-six (176) facilities in the Network's service area participated in this intervention and shared their displays with the Network.

Facilities were presented with a synopsis of the American Hospital Association's *Preventable Readmissions Change Package*, which included information on the primary drivers and associated secondary drivers for unnecessary readmissions. Facilities were asked to identify a primary and secondary driver and indicate an action that they would take to address the identified drivers. They then were asked to discuss the drivers and the proposed action with their facility's Quality Assurance and Process Improvement (QAPI) team. The majority of facilities chose dialysis facility staff education as the primary driver, and patient education as the secondary driver to ensure that patients play an active role in taking steps to avoid hospitalizations. Ninety-two percent of the 392 facilities in the Network's community coalition answered that they would incorporate the *Preventable Readmissions Change Packet* in their work to reduce readmissions. They also stated that they would discuss these drivers with their QAPI team to support reduction of acute incidents within their facilities. Facilities then were asked to share examples of their first steps in implementation.

Outcomes

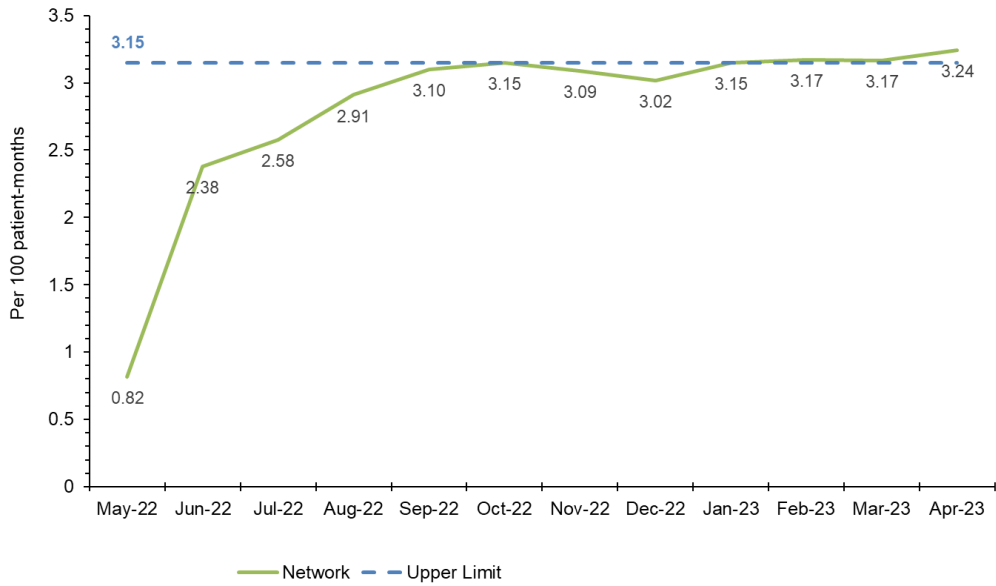
During the performance period, the Network's goal was to support dialysis facilities in its service area in attaining a 3% reduction in hospitalizations, readmissions, and emergency department visits: for an aggregate total reduction goal of 5% from baseline. The baseline data were collected from Medicare Claims for January-December of 2020. The Network worked with facilities and stakeholders to achieve a reduction in hospitalizations from 6,644 at baseline to 4,777 at remeasurement; a reduction in readmissions from 726 at baseline to 464 at remeasurement; and a reduction in emergency department visits from 3,581 instances at baseline to 2,634 at the end of the performance period.

Based on an average admission cost of \$12,944 per instance for a fee-for-service Medicare patient, the Network successfully reduced Medicare costs in its service area by \$24.1 million by decreasing the number of inpatient admission incidents from baseline by 1,867. The Network's efforts led to a reduction of emergency department visits by 947 from baseline, yielding Medicare cost savings of \$688,000 (based on average savings of \$727 per visit)².

The Network's service area achieved a 50% reduction in COVID-19 hospitalizations, exceeding the goal with 611 fewer admissions than the baseline period.

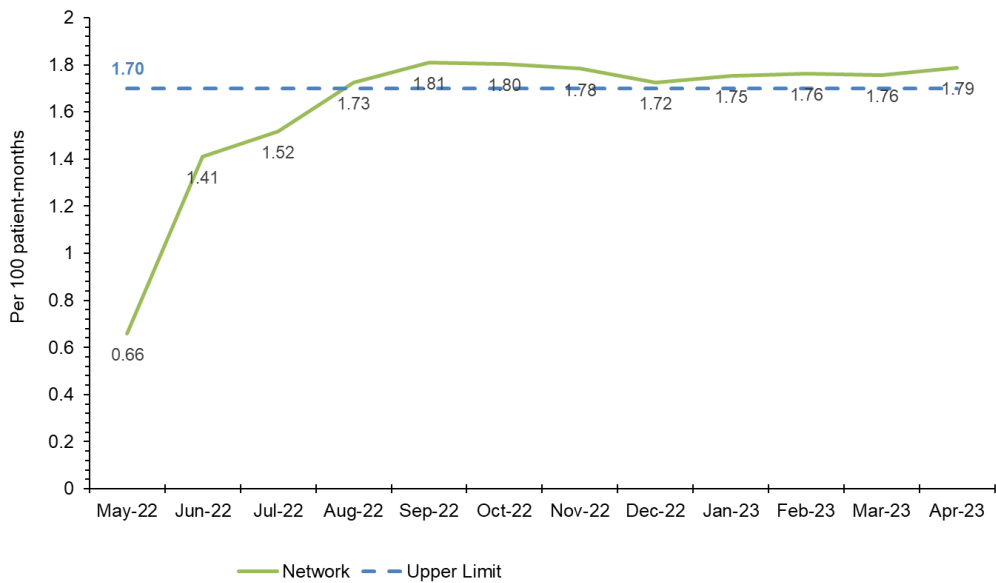
² ESRD National Coordinating Center (NCC) data as of April 2023).

**Network 9: Rate of ESRD-Related Hospital Admissions per 100 Patient-months (lower values are better)
May 2022 - April 2023**

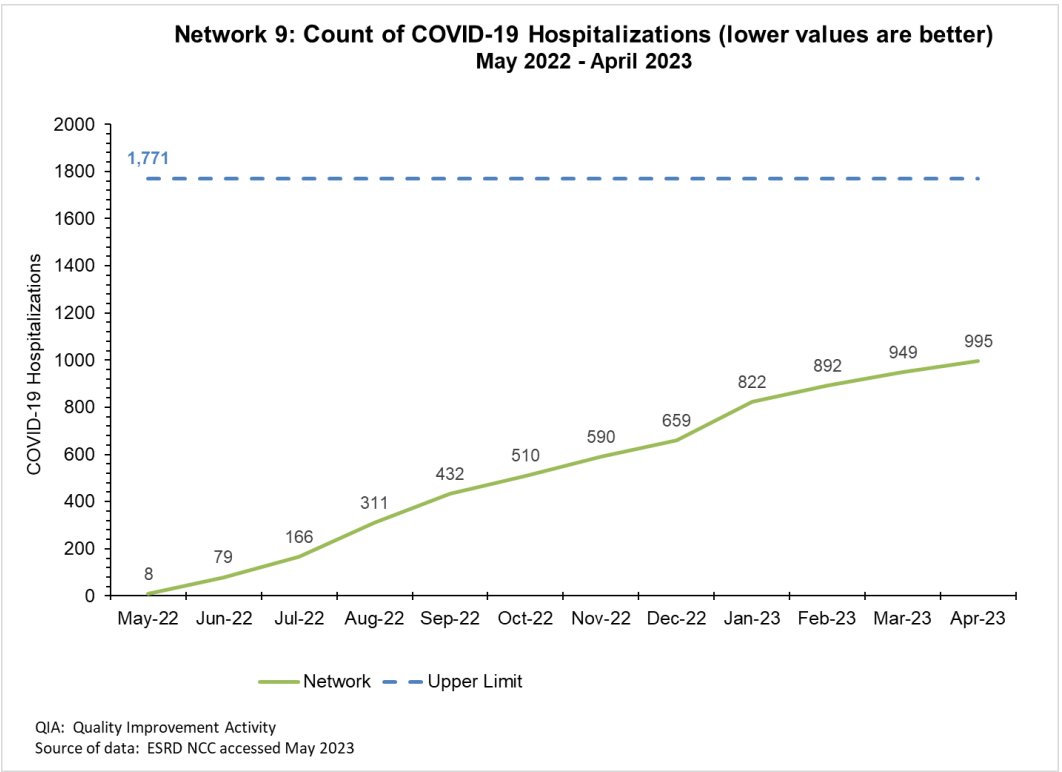
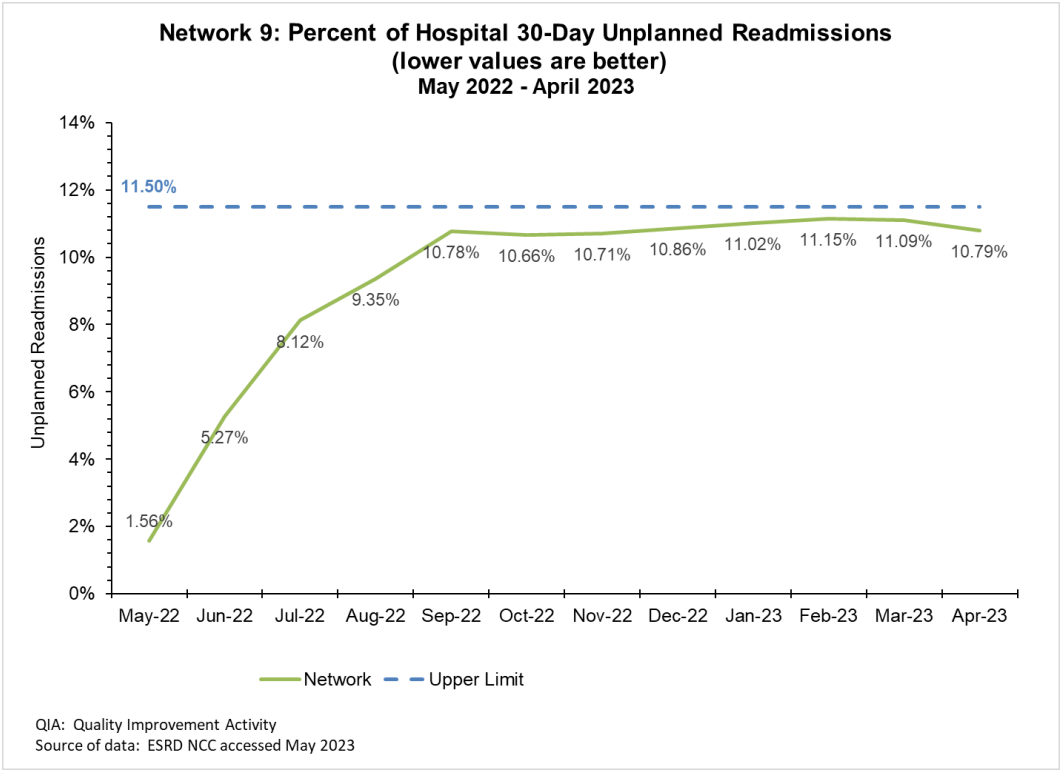


QIA: Quality Improvement Activity
Source of data: ESRD NCC accessed May 2023

**Network 9: Rate of Outpatient Emergency Department Visits per 100 Patient-months (lower values are better)
May 2022 - April 2023**



QIA: Quality Improvement Activity
Source of data: ESRD NCC accessed May 2023



Barriers to Achieving Goals

The baseline data for all indicators were collected during 11 months of the COVID-19 pandemic (June 2020 to April 2021). Due to the COVID surge during this period patients were discouraged or unable to seek acute services for anything other than absolute emergencies which lowered the overall admission rates and use of emergency department visits. Attempting to lower utilization of these services with an artificially low baseline was a barrier for the Network in achieving its goal.

CMS removed the requirement for hospitalization reduction this performance period due to this barrier and is realigning baseline hospitalization rates to reflect May 2022 – April 2023 activity.

Best Practices Spread to Achieve Goals

One of the best practices adopted by a healthcare quality improvement partner was to assign a Transition Champion (TC) to a dedicated role focused on ensuring that patients' transfer of care between acute care hospitals and incenter/home dialysis facilities was without problems, clearly explained, and smooth. Facilities were asked to select a Transitions Champion and provide contact information so IPRO staff could easily check in on the patient's progress.

To foster a community of practice focused on reducing hospitalizations, the Network worked with facility Transitions Champions and Community Coalition groups to encourage facilities to spotlight the importance of their quality improvement efforts using strategies such as huddle boards and visual displays that shared data and resources. The facilities were asked to focus on reducing incidents of one of the three topic areas: inpatient admissions, emergency department visits, or readmission. Each of the facilities included a patient representative who participated in creating the visual displays. Thirty percent (176) of the facilities in the Network's service area shared their displays with the Network.

Depression Treatment September 2022-April 2023

Project Overview

Due to the high incidence of depression being identified in ESRD patients the goal of this project was to increase the depression screening rates to a minimum of 80% and to increase the percentage of patients who are screened positive for depression that receive mental health treatment by 6% from base year. Depression not only affects one's mental health but can also have negative impacts on physical health. Studies have shown that depression in ESRD patients can lead to an increased risk of mortality and a decreased quality of life. The Network worked to increase awareness in the community about the importance of mental health treatment in the ESRD population and to identify and mitigate barriers that prevented patients from receiving mental health services.

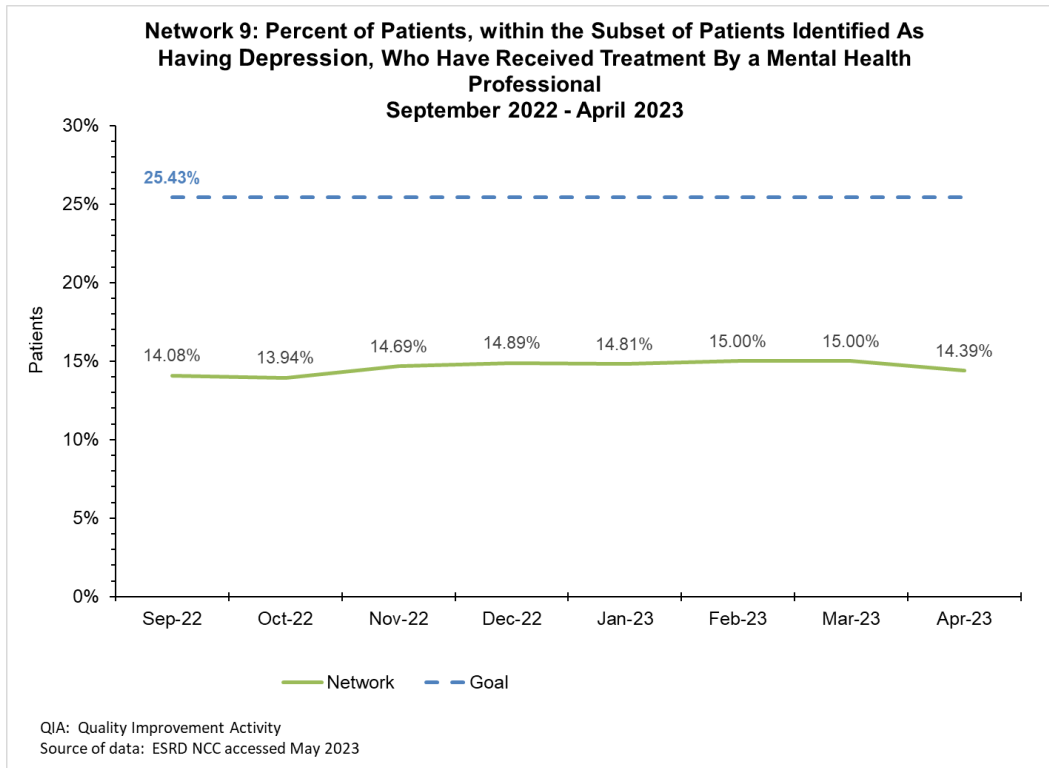
Interventions

The Network identified 30% (195) of the facilities in the service area with low performance metrics in depression screening or treatment. These facilities were provided technical assistance and participated in a community coalition supported by the Network. The Network guided facility teams through a root cause analysis process and then supported them in completing a plan-do-study-act cycle over a period of four months to improve their referral to treatment outcomes. Through the root cause analyses, the Network was able to identify common barriers. The most identified barrier was stigma in seeking mental health treatment. In response to this barrier the Network created and distributed two resources *Stop the Stigma Surrounding Depression* and *Shatter the Stigma: Flipping the Facility Culture Frequently Asked Questions*.

Another barrier identified was a shortage of mental health providers and appointment burnout. To mitigate these barriers, the Network shared internet-based resources to assist facilities in directing patients to local mental health providers and information to help them access telehealth for mental health services. These resources included the National Institute of Mental Health's *What is Telemental Health? Locating Telehealth Services for Behavioral Health*, and *Psychology Today*, and included links to the Substance Abuse and Mental Health Services Administration (SAMHSA).

Outcomes

The Network exceeded the depression screening goal of 80% with a screening rate of 99.15%. Of those patients who screened positive for depression, a second goal was for 26.33% to receive mental health treatment. While the Network did not meet that goal, its efforts resulted in 14.39% of patients who screened positive receiving treatment. The Network-shared interventions listed above were cited as very successful by facilities, with a facility adoption rate of 84%, and a patient reach of up to 11,062 for some of the interventions.



Barriers to Achieving Goals

The most common barriers included patients’ stigmatizing beliefs, shame, appointment fatigue, and denial, as well as shortages of mental health providers. In addition to the community barriers, the Network identified barriers related to inaccurate data reporting, timing issues with the dataset used, and unclear understanding of fields used for data entry. The Network collaborated with the ESRD National Coordinating Council (NCC) and ESRD provider entities to work on data accuracy, entry, and timeline issues to eliminate these barriers.

Best Practices Spread to Achieve Goals

The Network worked closely with facilities to ensure they understood the new depression treatment rate data. The Network hosted a best practice call, presenting to more than 69 facility staff participants from across the Network’s service area. The call provided an opportunity for the Network to review, in detail, the data and the facility depression performance report card to help ensure that facility staff entered correct information into the ESRD Quality Reporting System (EQRS). The Network made enhancements to the report card and to its reporting processes based on feedback from several facilities. The Network provided resources on the IPRO Learn platform including the National Institute of Mental Health’s *What is Telemental Health?* and provided links to telehealth services that included the Substance Abuse and Mental Health Services Administration (SAMHSA) website and the *Find a Teletherapist Directory* on the *Psychology Today* website.

Nursing Home (Blood Transfusion, Catheter Infection, and Peritonitis) May 2022-April 2023

Project Overview

The Network team recognizes the importance of ensuring the safety and quality of care provided for the vulnerable population of renal patients receiving dialysis in a nursing home setting. As reported in the United States Renal Data System (USRDS) Annual Data Report (ADR), *“nursing home ESRD patients have high rates of comorbid disease: 77.5% cardiovascular disease, 62.9% diabetes, 36.5% depression, 19.9% Alzheimer’s/dementia, and 15.5% chronic obstructive pulmonary disease (COPD). Furthermore, mortality is significantly higher in nursing home ESRD patients compared to all ESRD patients. In the USRDS 1998-2000 ESRD cohort, the mean death rate for nursing home patients with ESRD was 3.5 times that of the ESRD population in general.”*³

The Network collaborated with ESRD providers who provide dialysis in the nursing home setting, nursing home facilities, patients and other key stakeholders to improve patient safety, reduce harm, and improve care for ESRD patients living in a nursing home and receiving their dialysis care in that setting. The Network focused activities on attaining a 6% reduction in hemodialysis catheter infection rates and a 3% reduction in the rate of patients receiving blood transfusions from the prior year’s baseline rates.

Interventions

The Network provided one-on-one technical assistance to facilities conducting root cause analyses (RCA) for each infection or transfusion reported. Based on the findings of the RCA, facilities were given resources to help mitigate identified barriers and were prompted to conduct plan-do-study-act (PDSA) cycles to evaluate interventions they put in place. Nursing home staff members were provided education on infection control best practices with an emphasis on how to manage care of the hemodialysis catheter to prevent infections throughout the year.

For blood transfusions the Network focused on working with facility staff to ensure care coordination and medical management of any at risk patients who had low hemoglobin counts. The Network released two care coordination resources: 1.) a hand-off checklist to help with communication between the dialysis provider and the nursing home at the point of care. and 2.) an integrated care plan to encourage staff from the dialysis provider and the nursing home to conduct a joint care planning sessions for their patients. We also provided tools to help staff members conduct reviews of blood transfusion indices and shared best practices on the use of red blood cell stimulating medications administered with greater frequency (e.g., three times

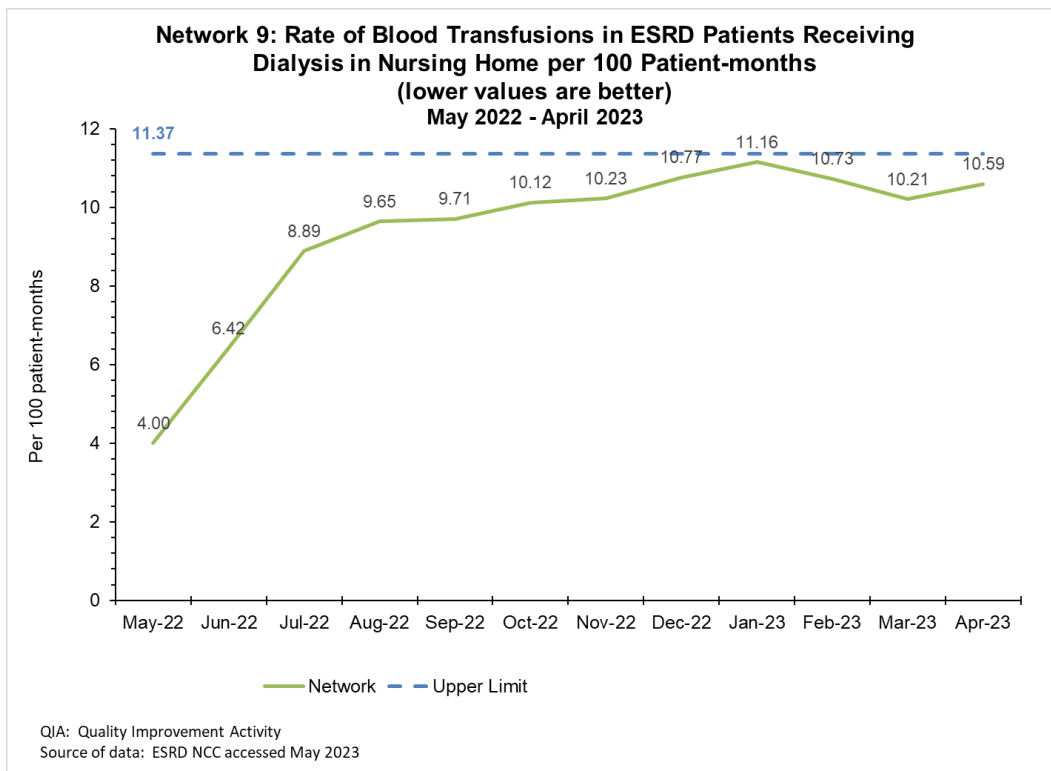
³ Yang A, Lee, W, Hocking, K. Health outcomes in nursing home patients on dialysis. Helio. 2014; Online.

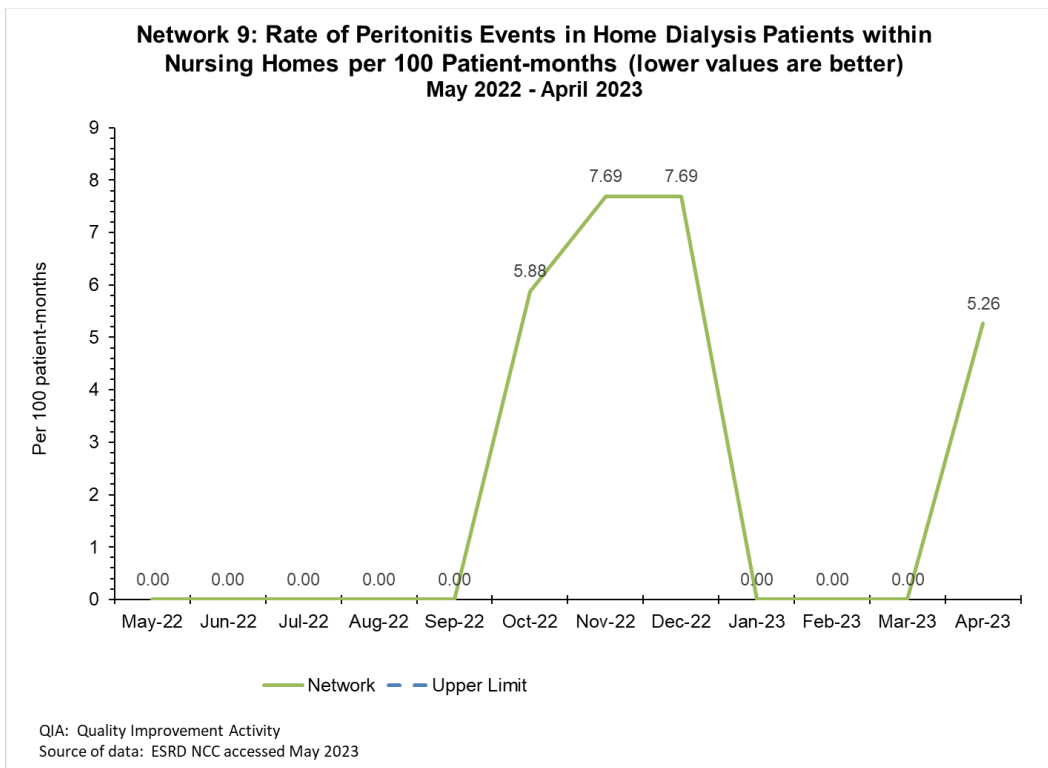
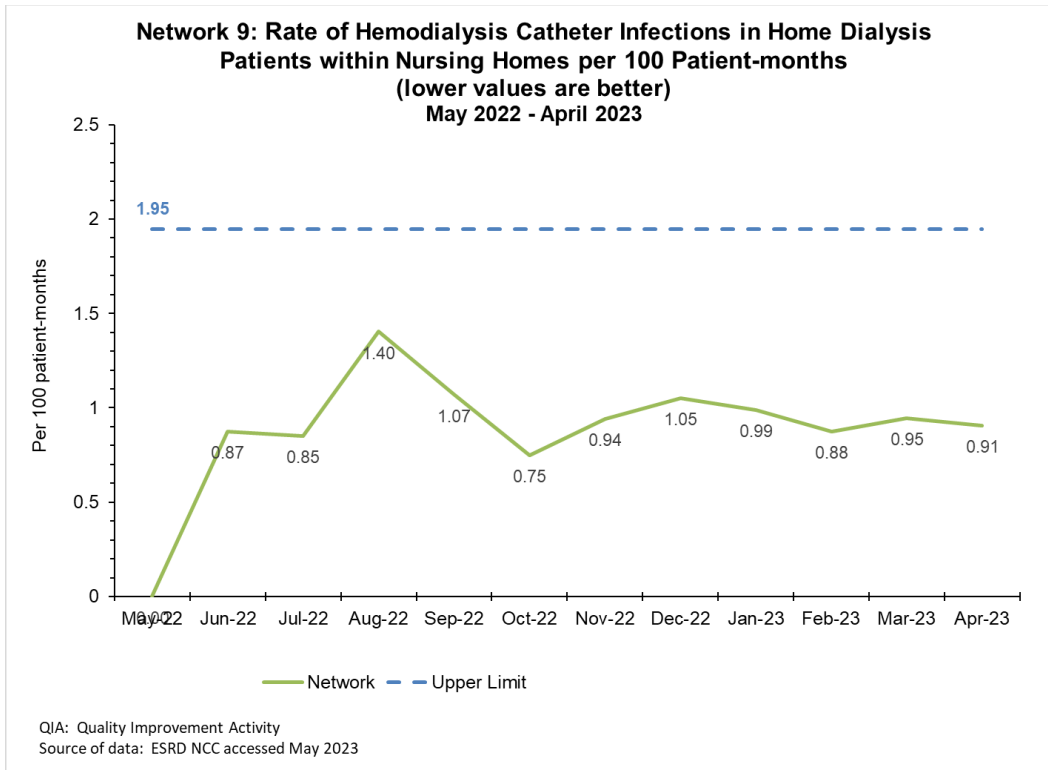
per week rather than long-acting medication administered one time per week) for nursing home residents.

Outcomes

During the performance period, the census of patients receiving dialysis in nursing homes increased significantly in the Network's service area. The Network's activities resulted in a 45% reduction in the rate of nursing home catheter infections, with a total of 16 infections reported in the Network's service area.

The Network's efforts resulted in a total of 189 transfusions during the performance period, achieving a 14% reduction within the Network's service area, significantly above the 3% reduction goal.





Barriers to Achieving Goals

Bloodstream infections reported in NHSN can originate at various sites and are not always caused by a hemodialysis catheter. A barrier for this quality improvement activity was difficulty in correctly identifying the most likely source of the infection in patients with multiple potential sites. Often the bloodstream infections reported were due to other sources of infection which were outside the Network's scope.

The Network team took a broad approach in addressing this barrier by providing education to all the dialysis providers on the CDC's catheter care and infection control protocols. The Network also provided education to the nursing home staff on how to care for a patient with a hemodialysis catheter.

Best Practices Spread to Achieve Goals

The Network worked one-on-one with nursing home dialysis providers to share information on a best practice to reduce blood transfusion rates, focusing on the use of red blood cell stimulating medications administered with greater frequency (e.g., three times per week), rather than a long-acting medication administered one time per week, for in the nursing home population. With the frequency that a nursing home patient's condition changes, as well as the potential for missed doses, dialysis providers in the nursing home setting have found more success in maintaining the patient's hemoglobin using a red blood cell stimulating medication administered with greater frequency. The Network also focused on increasing communication between the dialysis provider and the nursing home and shared best practices for improving communication about the care of their patients.

Telemedicine

May 2022-April 2023

Project Overview

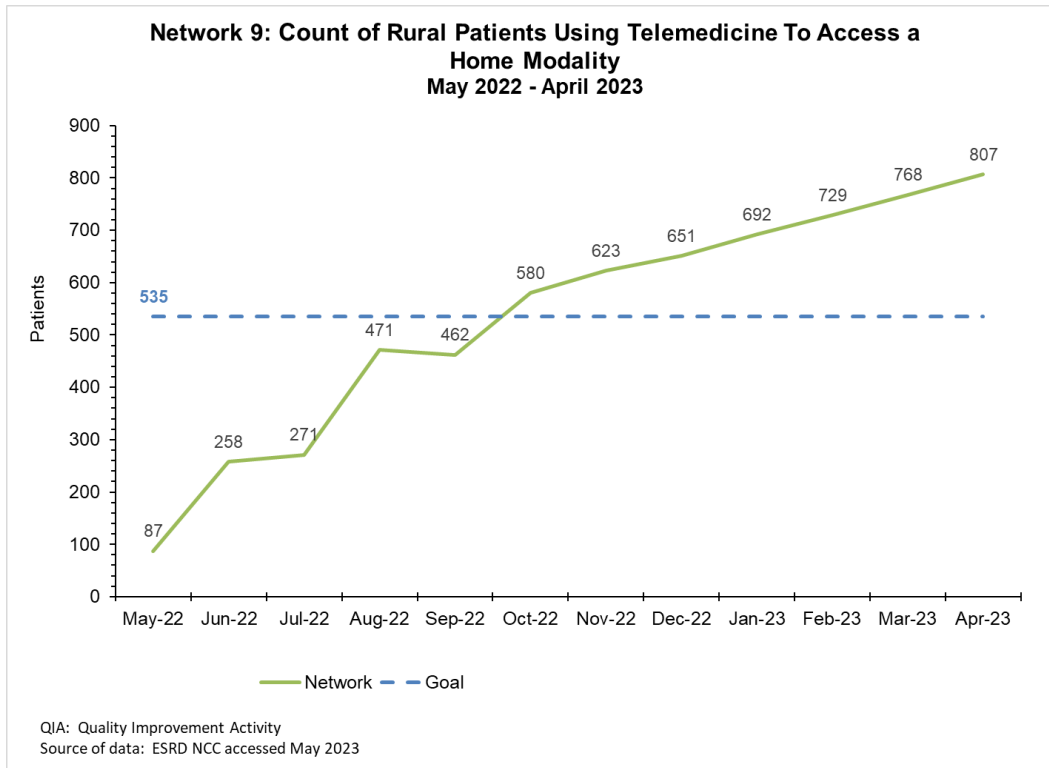
Telemedicine has been found to provide a useful tool to improve access to care for patients living in rural settings who must travel long distances to meet face-to-face with their care team. It also can reduce the risk of travel accidents and exposure to infection in vulnerable populations. During the performance period, the Network focused on increasing the number rural patients participating in telemedicine visits by 3%. Based on zip codes, the Network identified facilities that provided care to rural patients and then worked with this group of facilities as a community coalition to share information, interventions, and resources to improve use of telemedicine with their rural patients.

Interventions

The Network focused on education for the provider community to emphasize the need to schedule at least two telehealth visits every three months, as a gold standard. One of the issues we routinely heard in our work was that physicians preferred face-to-face visits over telehealth appointments to better assess the patient. To help the physicians overcome their concerns, the Network shared a Medscape article titled, *Sharpen Your Telehealth Skills: 9 Tips for Doctors*, as it provides good insight about how to conduct a successful telemedicine visit with patients. The article also discusses how seeing a patient in their own element may help build a rapport with the patient and give the physician an opportunity to meet other family members or caregivers to provide a more comprehensive understanding of the patient.

Outcomes

Network 9 exceeded the CMS goal, accomplishing 50% more visits than the 3% goal for a total of 807 rural telemedicine visits.



Barriers to Achieving Goals

Barriers identified in the Network’s service area included practitioner perception about the limitations of a telemedicine visit due to their inability to physically assess the patient. Distribution of the article mentioned above helped to mitigate that barrier and helped treatment teams start to build a foundation for telemedicine visits. The other major barrier that came up frequently was patient difficulty in using technology. The Network focused on providing easy to use checklists and best practice tips to help providers support patients and provide easy to follow instructions for conducting successful telemedicine visits.

Best Practices Spread to Achieve Goals

The Network contacted facilities that were achieving the highest rates of telemedicine visits with their rural population to determine best practices to share. Each quarter we released a poster recognizing those facilities that had the highest performance and highlighting best practice tips that helped them achieve success.

We also featured key staff from high-performing facilities as speakers on our Network service area best practice calls to describe how they were able to achieve their results. They shared best practices that included:

- calling the patient the day before the scheduled telehealth meeting to remind them of the visit, review the technology and address any questions they have regarding the technology;
- introducing the option of telemedicine during patient home training sessions to establish a comfort level with the use of the technology; and

- suggesting telemedicine as an option to help patients avoid traveling in inclement weather during the winter months.

Both the posters and sessions recordings of the best practice calls were posted on the IPRO Learn learning management system platform to make the information available to all facility staff in our region and to spread best practices.

Pneumococcal Vaccinations (PCV13 & PPSV23) May 2022-April 2023

Project Overview

Pneumococcal disease is a serious infection caused by *Streptococcus pneumoniae* bacteria, causing contagious and potentially severe illness, including pneumonia, meningitis, and sepsis. The Centers for Disease Control and Prevention (CDC) estimates that more than 150,000 hospitalizations from pneumococcal disease occur annually in the U.S. According to the CDC, an estimated 30,300 cases and 3,250 deaths from invasive pneumococcal diseases (bacteremia and meningitis) occurred in the United States in 2019.

The Network worked to increase the vaccination rate for individuals with ESRD residing within its service area working to achieve the following goals:

1. Achieve a 10% increase in the number of dialysis patients receiving a PCV 13, for a 20% total increase from the baseline (May 2021- April 2022) by the end of performance period (April 2023).
2. Work to ensure 90% of dialysis patients receive a pneumococcal polysaccharide vaccine (PPSV 23).
3. Achieve a 10% increase in the number of patients receiving a booster PPSV 23 from the baseline to the end of Option Period 1. (Baseline May 1st, 2021 – April 30th, 2022).
4. Work to ensure 85% of dialysis patients over age 65 receive a PPSV 23 by the end of the performance period.

Interventions

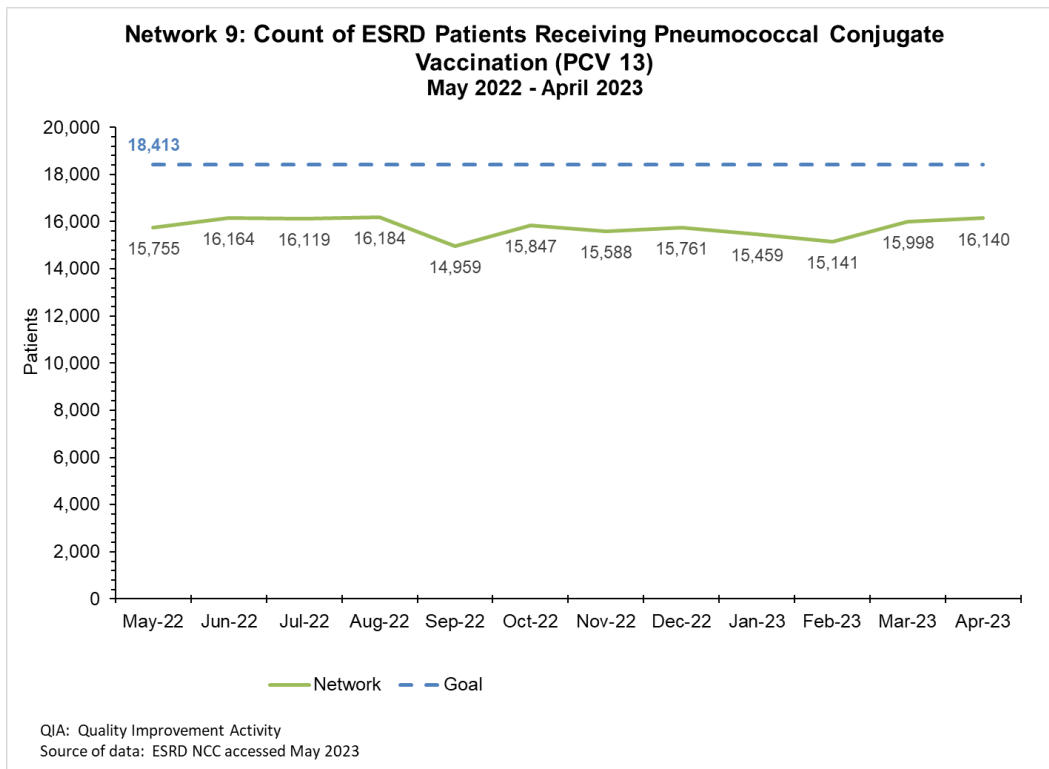
Using the educational platform, IPRO Learn, the Network provided facilities with resources and interventions to support implementation of effective strategies aimed at increasing patient vaccination rates throughout the program year. The Network focused its approach on providing education to patients on the importance of pneumococcal vaccination, with a goal to increase the number of PCV 13 and PPSV 23 vaccines for patients with ESRD. Special attention was given to creating an update in vaccines for patients 65 years and older. The Network created and distributed the “Get the Vaccines You Need!” educational pamphlet on the recommended vaccines for the adult ESRD population. In addition, the Network developed resources on its IPRO Learn educational platform to ensure that facility staff were up to date with vaccination information. Materials developed and posted to IPRO Learn included: CDC Pneumococcal Vaccination, a FAQ produced by the CDC called, Pneumococcal Conjugate Vaccine: What You Need to Know, a PCV 13 and PCV 23 dosing algorithm produced by the CDC and a guide on how to enter pneumococcal vaccinations into the ESRD National Database that were assembled into a vaccination rate toolkit providing clear information on pneumococcal vaccine schedules and instructions for documentation in the End Stage Renal Disease Quality Reporting System (EQRS) to ensure that all vaccinations were recorded. To ensure timely administration of vaccines, facilities were provided the CDC’s *Pneumonia vaccine protocol* to support development of a vaccination schedule for patients. The Network provided facilities

participating in a community coalitions specific assignment for the implementation of PDSA cycles to assist in their quality improvement efforts.

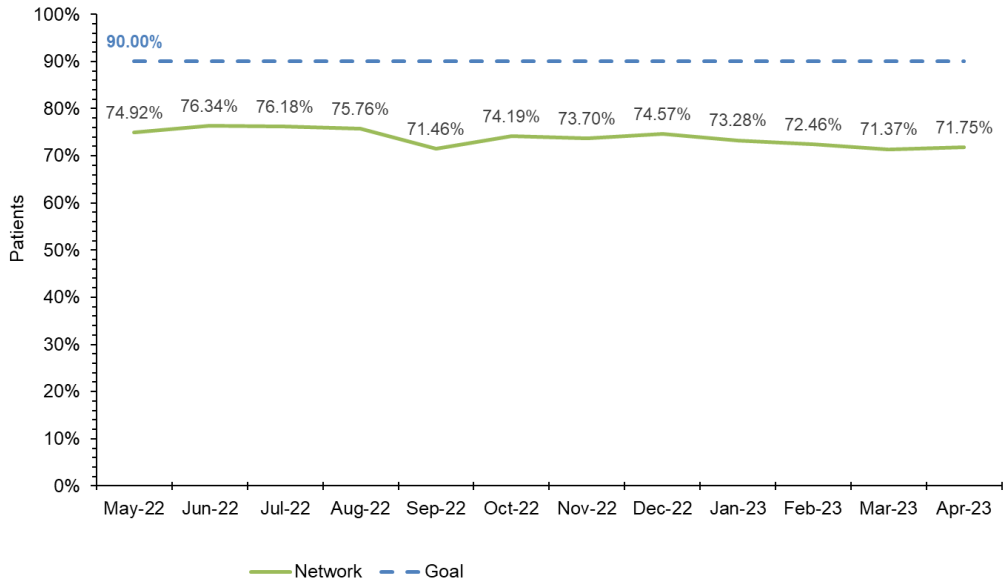
The Network’s newly formatted Vaccination Rate Toolkit, available on IPRO Learn, offered facilities easy access to pneumococcal vaccination resources. When facility staff were asked about the usefulness of the interventions, tools, and resources made available by the Network, 90% of all facilities who reviewed these resources acknowledged they would be using the resources to improve their patient vaccination uptake.

Outcomes

In September 2022, the CDC released new pneumococcal guidelines to the community. These guidelines were updated to reflect new pneumococcal vaccinations that were available to the community which completely revised the vaccination dosing protocols for which the CMS goals were written. The Network encouraged ESRD facilities to adhere to the CDC pneumococcal guidelines to ensure patients were fully vaccinated by the current standards. CMS removed the outcome measures for pneumococcal vaccine from the 2022 – 2023 performance period for all Network programs since these goals did not align with the new standards.

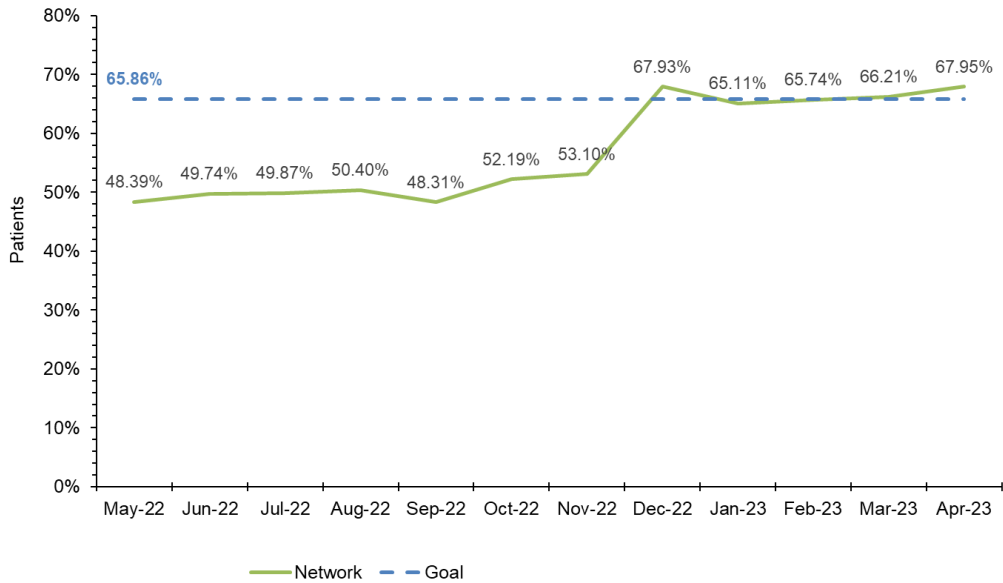


**Network 9: Percent of ESRD Patients Receiving an Initial Pneumococcal Polysaccharide Vaccination (PPSV 23)
May 2022 - April 2023**

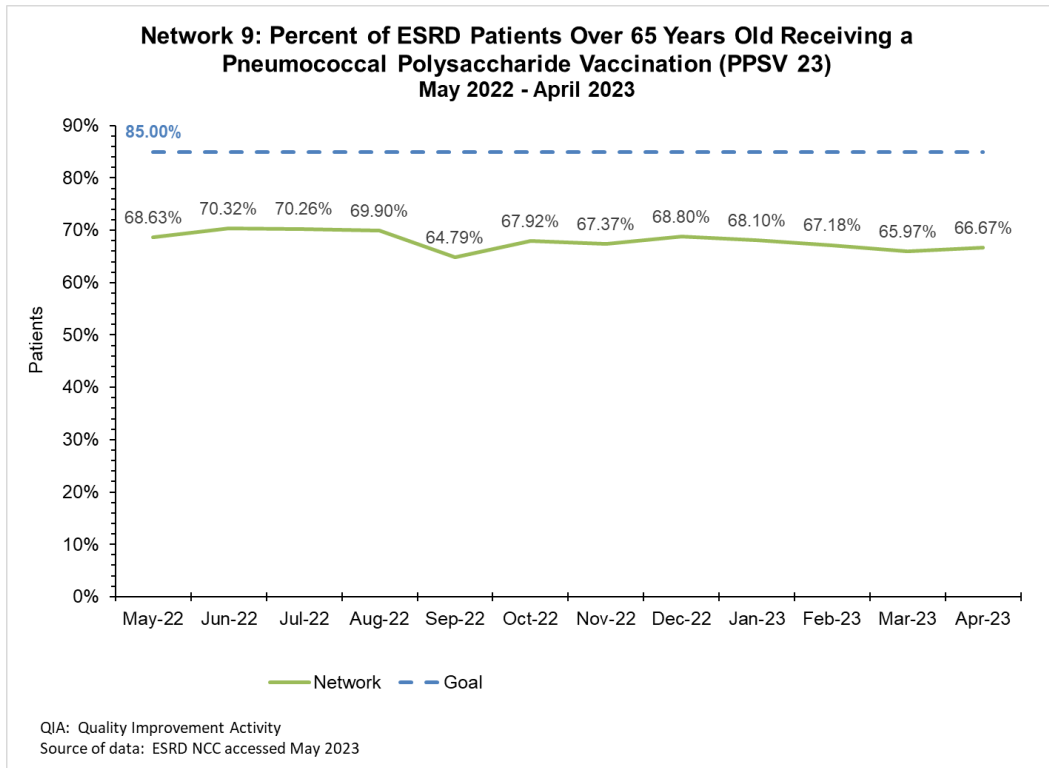


QIA: Quality Improvement Activity
Source of data: ESRD NCC accessed May 2023

**Network 9: Percent of ESRD Patients Receiving a Booster Pneumococcal Polysaccharide Vaccination (PPSV 23)
May 2022 - April 2023**



QIA: Quality Improvement Activity
Source of data: ESRD NCC accessed May 2023



Barriers to Achieving Goals

The change in CDC guidelines for pneumococcal vaccine administration in the ESRD population created challenges in meeting project goals. The Network observed confusion among dialysis facility staff related to how vaccine administration dates should be recorded in the End Stage Renal Disease Quality Reporting System (EQRS); and patients lacked knowledge of their personal vaccine schedules and vaccines they had received.

Best Practices Spread to Achieve Goals

Using the IPRO Learn platform discussion board the Network facilitated discussions regarding best practices that were occurring in the community. Some best practices shared in this forum included utilizing Network patient resources in their new patient education as well as during times when vaccines were offered within the clinic and in bulletin board displays. Facilities also indicated that the information from the Centers for Disease Control and Prevention (CDC) was shared with new patients who requested to know more about pneumococcal disease and vaccines. The Network also called all top performers in the region and shared best practice tips they provided via a poster session provided on our IPRO Learn site. These best practices were also then featured in our biannual best practice calls series to reach all providers in the service area.

ESRD Network Recommendations

Facilities that Consistently Failed to Cooperate with Network Goals

With the pandemic drawing to an end the Network has garnered the support of facilities throughout its community to aid in the implementation of Network initiatives and to collaborate in meeting Network goals. The Network did not identify any facilities in its service area that failed to cooperate with the goals.

Recommendations for Sanctions

The ESRD Network did not recommend any facility for sanctions.

Recommendations to CMS for Additional Services or Facilities

In working with the facilities across the region the Network identified these additional services which would benefit our provider community:

1. Creating a mechanism to support reimbursement to grow self-care dialysis facilities in the densely populated urban areas would help to link patients to the benefits of a home dialysis prescription who have physical constraints and in turn expand home dialysis referrals/acceptance.
2. Improving the availability of transportation services for dialysis is a consistently requested additional service that facilities cite would improve their process.

ESRD Network COVID-19 Emergency Preparedness Intervention

To assist in preventing the transmission of COVID-19 within the dialysis population, the Network reinforced infection control guidance based upon the current Center for Disease Control and Preventative (CDC) recommendations for dialysis facilities which included screening for COVID-19, personal protective equipment (PPE) and cleaning and disinfections while providing 1:1 technical assistance to facilities who trigger increased hospitalizations and completing an environmental scan to identify the true root cause to help minimize COVID-19 impact within the ESRD population. The Network built strong connections with the offices of emergency management and state departments of health in the three states comprising the Network’s service area to gain situational awareness related to COVID-19.

Network 9	Sum of COVID-19 Positive(+) Patients	Sum of COVID-19 Positive(+) Staff
Indiana	4,462	650
Kentucky	3,047	470
Ohio	8,198	1577
Total	157,07	2,697

Due to the impact of COVID-19, many professionals transitioned out of the healthcare field, leaving dialysis units with a shortage of technicians and nurses. As the pandemic comes to an end, preparedness activities become less frequent, however, many facilities in the Network service area were forced to suspend services temporarily or permanently. The Network provided 1:1 technical assistance to providers coping with staffing shortages, including assisting with transitioning patients in nearby facilities. The Network strongly advocated for practitioners to be transparent with patients and their support networks regarding staffing shortages, including how it could impact treatment times and transportation.

The Network provided facilities with the *CMS Checklist for Dialysis Facilities in COVID-19 Hotspots*, available through IPRO learn and the ESRD Website. This checklist educated facilities on ways to perform self-assessments to ensure the facility is prepared to prevent the spread of COVID-19, which also provided guidance on routine infection control and reference regarding outpatient dialysis facilities having established policies and practices to reduce the spread of contagious respiratory pathogens.

The Network continued to maintain COVID-19 designated pages for both patients and professionals on its website, where new resources are easily identified by “New!” to alert the ESRD community of timely content. Network staff conducted additional 1:1 technical assistance to facilities to support and provided strategic ways to navigate through the pandemic.

ESRD Network Significant Emergency Preparedness Intervention

During the performance period, the Network documented all effects on facility operations due to emergency events using its Emergency Operational Status Report. This information was combined with data from the End Stage Renal Disease Quality Reporting System (EQRS), Critical Asset Annual Survey data, and information provided by the dialysis organizations. The combined data sets were provided to Kidney Community Emergency Response (KCER).

The Network developed and released the ESRD Emergency Mobil Hub Application in September 2022. The application allows patients and their support systems to subscribe to receive notifications regarding emergencies in their area. It additionally allows patients to store information regarding medications, preferred emergency contact and prepare an emergency to-go bag. Network 9 currently has 200 users in the Ohio River Valley.

Situations arising from the following events affecting dialysis facilities and patients were addressed by the Network during the performance period:

- Weather Related Events: 41
- Emergent Events: 33
- Altered Treatment Schedule: 50
- Staff Shortage: 20
- Temporary Closure: 44
- Permanent Facility Closure: 36

The Network 9 service area experienced 36 permanent outpatient dialysis closures in the 2022 calendar year and 23 reports of staffing shortages. A review of the data revealed that most closures were due to staffing constraints. Because of the reduced number of staff members at outpatient dialysis clinics, facilities rely on all staff members being present for successful daily operation. There were incidents in which a nurse or patient care technician was unable to report to work, and patients had to be re-routed to a nearby clinic for safe treatment. The Network outreached to facilities suffering from lack of staff, encouraging them to utilize travel staff agencies or reroute patients to sister clinics.

On August 3, 2023, the Network received reports of severe flooding in the eastern region of Kentucky. The Network was in close contact with the Kentucky Department of Public Health's readiness and response coordinator, as well as LDO leadership, to discuss the impact of flooding on the dialysis population. Network staff worked with American Kidney Fund (AKF) to offer resources to patients and staff who were displaced due to water damage. The Network worked 1:1 with local facilities on a daily basis to gain situational awareness and report needs to AKF.

Acronym List Appendix

This appendix contains an [acronym list](#) created by the KPAC (Kidney Patient Advisory Council) of the National Forum of ESRD Networks. We are grateful to the KPAC for creating this list of acronyms to assist patients and stakeholders in the readability of this annual report. We appreciate the collaboration of the National Forum of ESRD Networks especially the KPAC.