



ESRD NETWORK 4 2021 ANNUAL REPORT

This report will cover quality improvement efforts led by ESRD Network 4 from January 1, 2021 – May 31, 2021 and the Base Year of Task Order Number 75FCMC21F0003, June 1, 2021 – April 30, 2022



Quality
Insights

Renal Network 4

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ESRD Demographic Data

Quality Insights Renal Network 4 (QIRN4) is pleased to present our 2021 Annual Report. QIRN4 serves dialysis and transplant patients and providers in Pennsylvania and Delaware.

Corporate Affiliation

Quality Insights Renal Network 4 (QIRN4) is part of the Quality Insights family of health care improvement companies. In 2021, Quality Insights held the Medicare Quality Improvement Network-Quality Improvement Organization (QIN-QIO) contracts for Pennsylvania and West Virginia and three ESRD Network contracts: Network 5 (covering Maryland, Virginia, West Virginia and Washington DC), Network 3 (covering New Jersey, Puerto Rico and the US Virgin Islands), and QIRN4.

Geographic Description

QIRN4 is responsible for two neighboring states, Pennsylvania and Delaware, which are located in the Northeast United States. As of December 31, 2021, there were 18,094 patients receiving dialysis services in the state at one of 326 dialysis facilities. Of the total, 2,713 patients received dialysis at home from 175 of the providers. 308 facilities provided dialysis to the 15,381 patients receiving dialysis in-center.

Delaware, the other state in the Network 4 service area and is the fourth smallest state in the country. Delaware's location provides patients with easy access to several of the major metropolitan areas of the Northeast, including Washington, D.C., Philadelphia, and Baltimore. As of December 31, 2021, there were 1,767 patients receiving dialysis services in the state at one of 33 dialysis facilities. Of the total, 287 patients received dialysis at home from 10 of the providers. All 33 facilities provided dialysis to the 1,480 patients receiving dialysis in-center.

As shown in Figure 1, as of December 31, 2021, there were 16,806 patients receiving treatment in dialysis facilities in the Network 4 service area, and an additional 3,000 patients receiving treatment in their homes. This total of 19,806 patients receiving dialysis, plus an additional 13,244 patients living with a functioning kidney transplant in the Network 4 service area brings the total ESRD patient count for this area to 33,050. As shown in Figure 2, in 2021 5,053 patients started dialysis in Network 4 facilities – 4,289 in-center and 764 at home. An additional 182 patients received a transplant before requiring dialysis.

The number of ESRD facilities in the Network 4 service area, by treatment modalities offered, is shown in Figure 3. During 2021 there were 20 transplant centers, 175 dialysis centers offering both in-center dialysis and home dialysis support, 174 dialysis centers offering in-center dialysis only, and 19 dialysis centers offering home dialysis support only, for a total of 368 dialysis centers and 388 centers that support ESRD patients.

Figures 4 through 9 illustrate the percentage of national totals of patients and facilities that those in the Network 4 service area constitute.

Figure 1- Number of Patients Treated as of December 31, 2021 by Treatment Modality

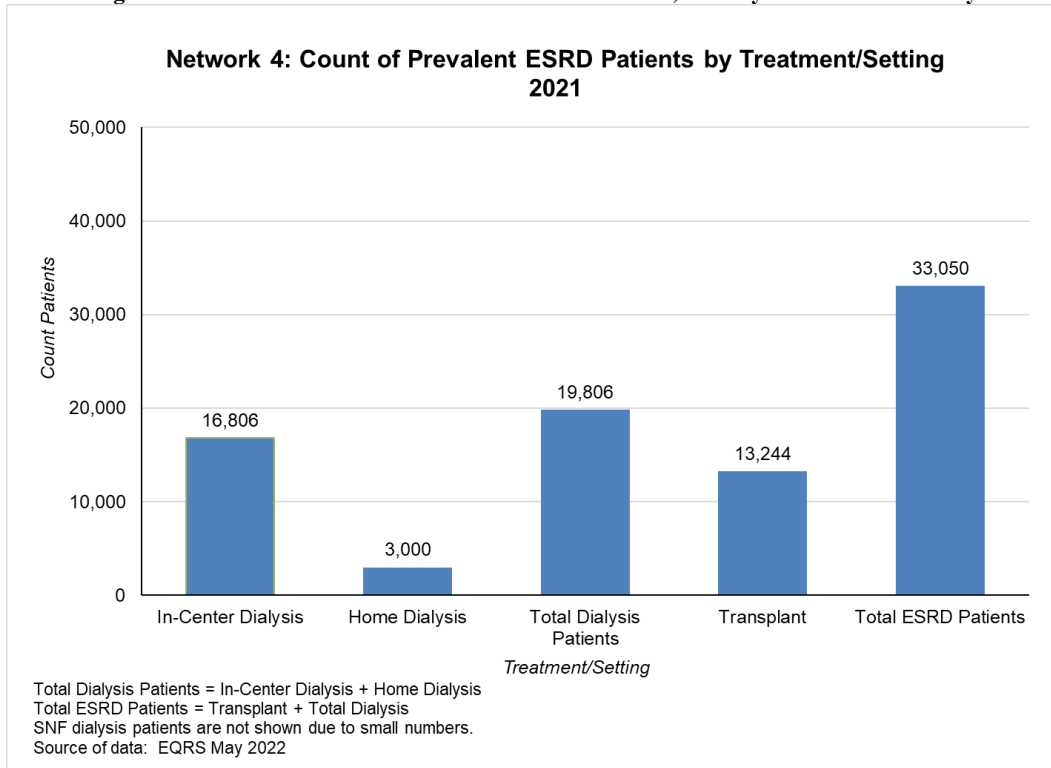


Figure 2- Count of Incident ESRD Patients by Initial Treatment and Setting, 2021

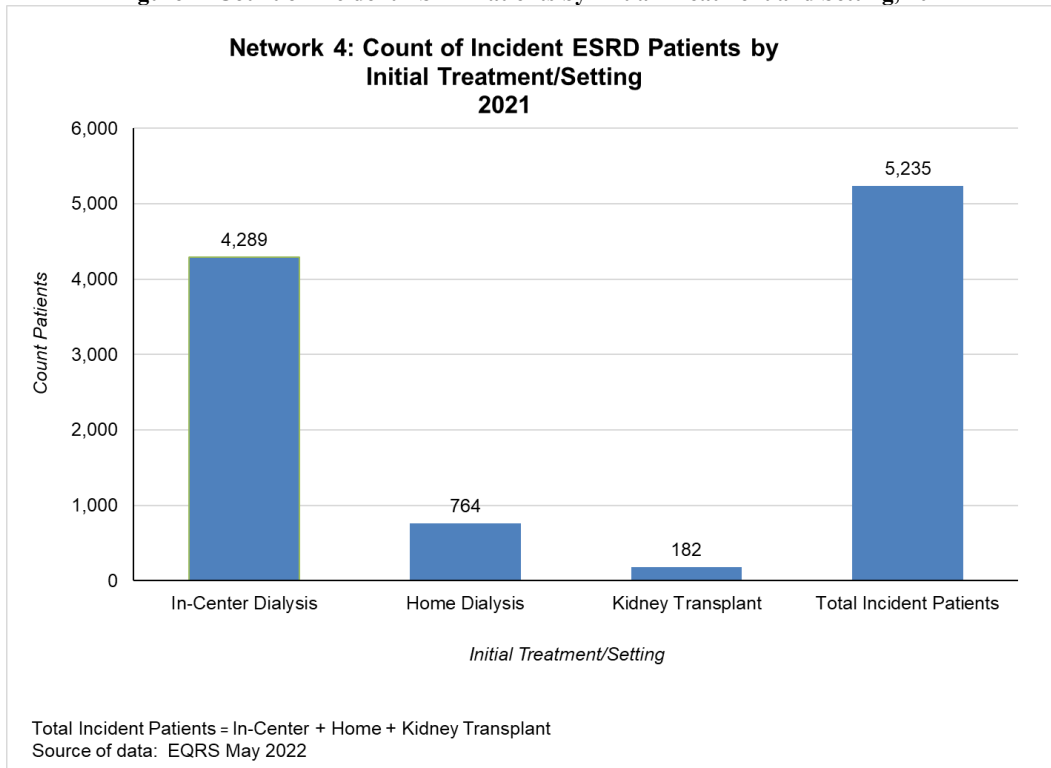


Figure 3 -Number of Medicare-Certified Facilities in the Network 4 Service Area by Modality Offered as of 12/31/2021

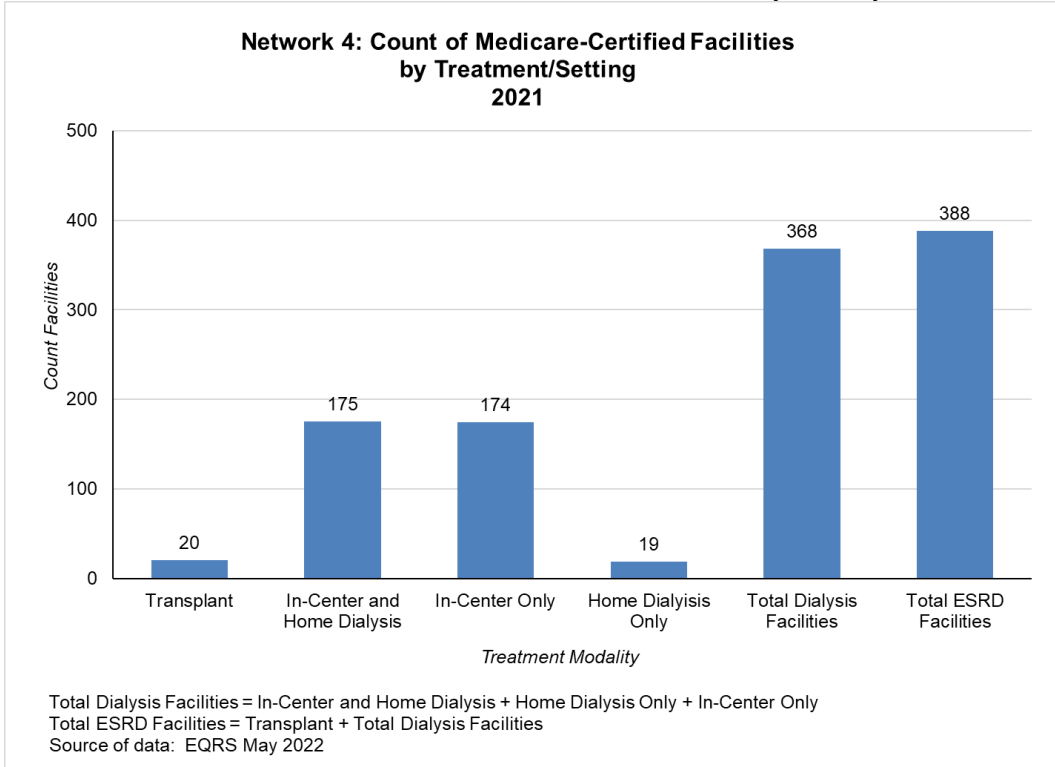


Figure 4 - Percent of National Prevalent Dialysis Patients in each Network Service Area as of 12/31/2021

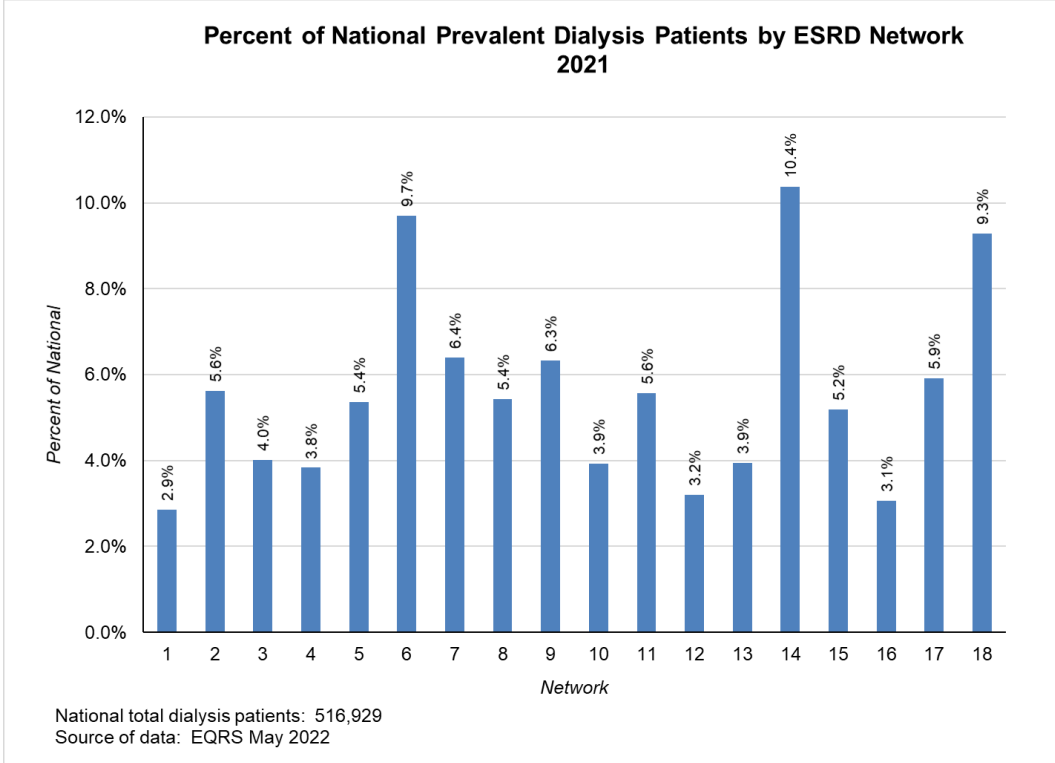


Figure 5 - Percent of Incident Dialysis Patients in each Network Service Area as of 12/31/2021

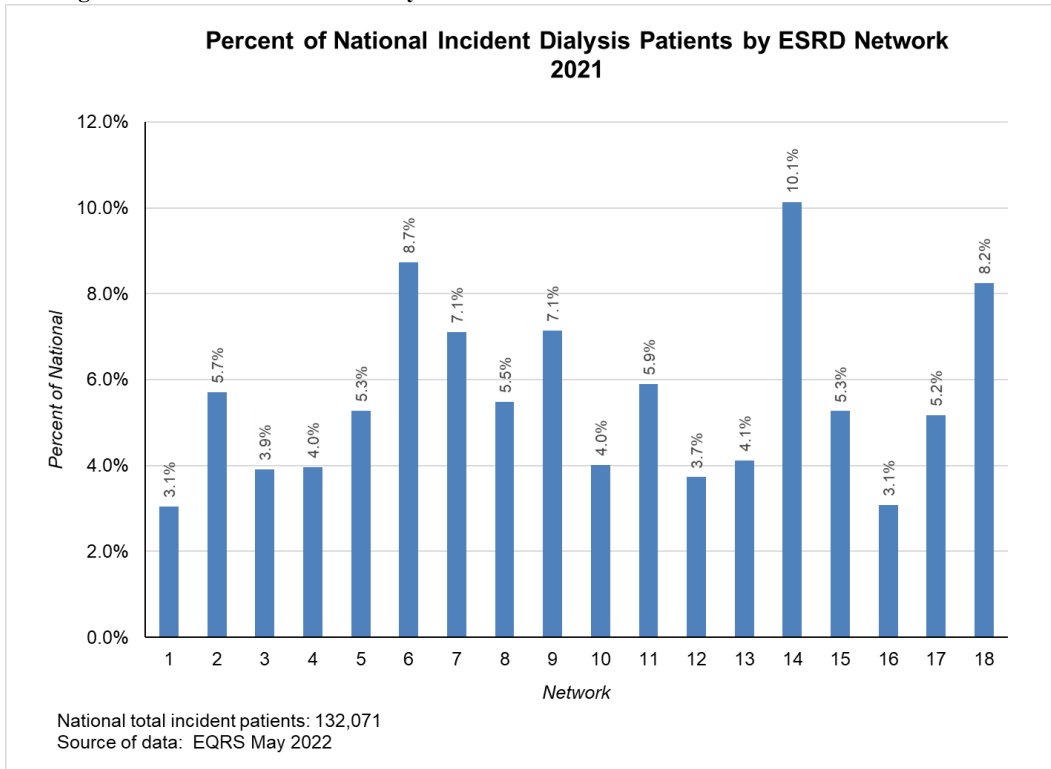


Figure 6 - Percent of Medicare-Certified Dialysis Facilities in each Network Service Area as of 12/31/2021

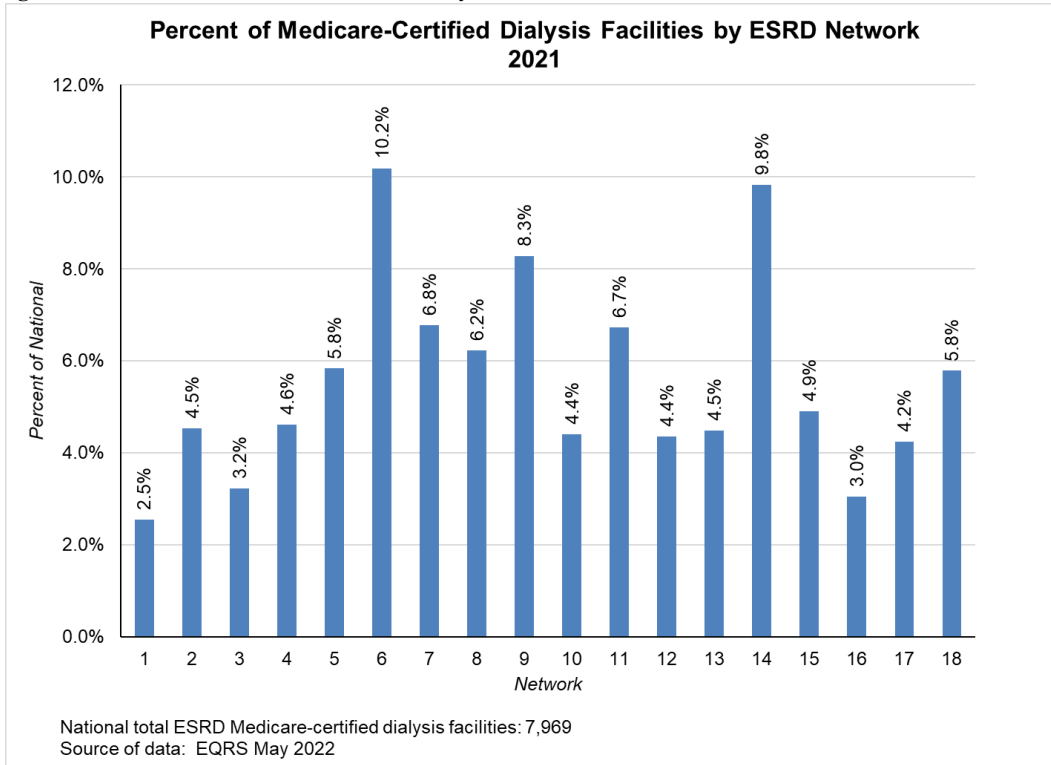


Figure 7 - Percent of National Home Hemodialysis and Peritoneal Dialysis Patients in each Network Service Area as of 12/31/2021

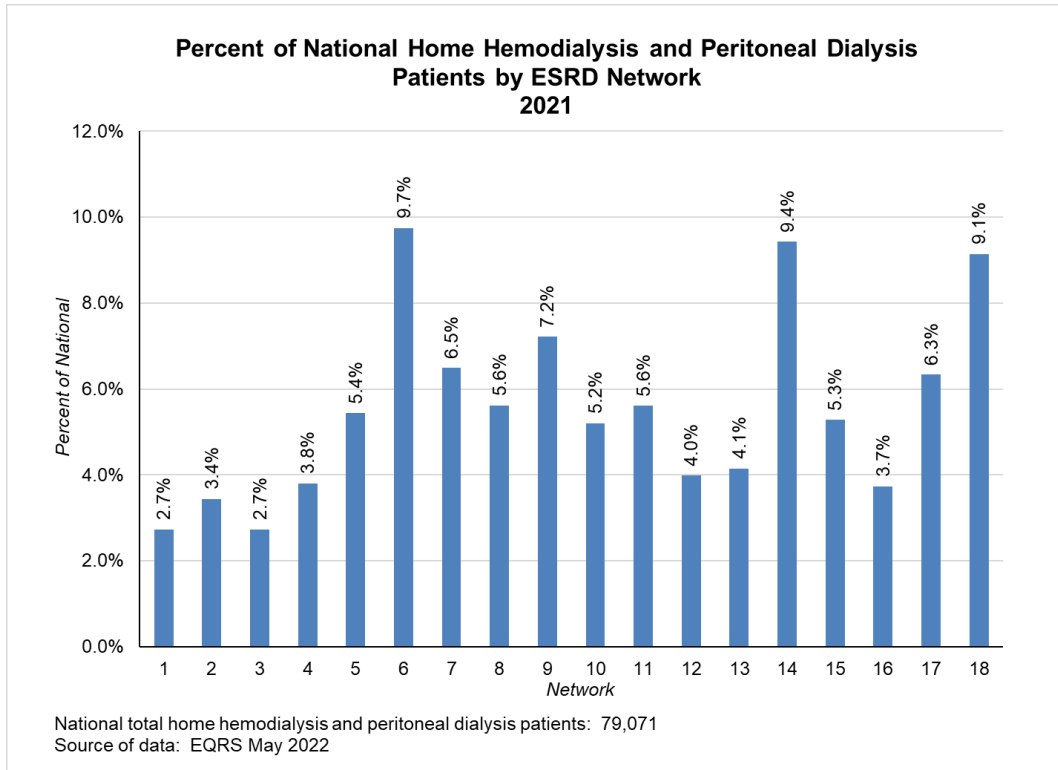


Figure 8 - Percent of National Total Transplants Performed in Each Network Service Area as of 12/31/2021

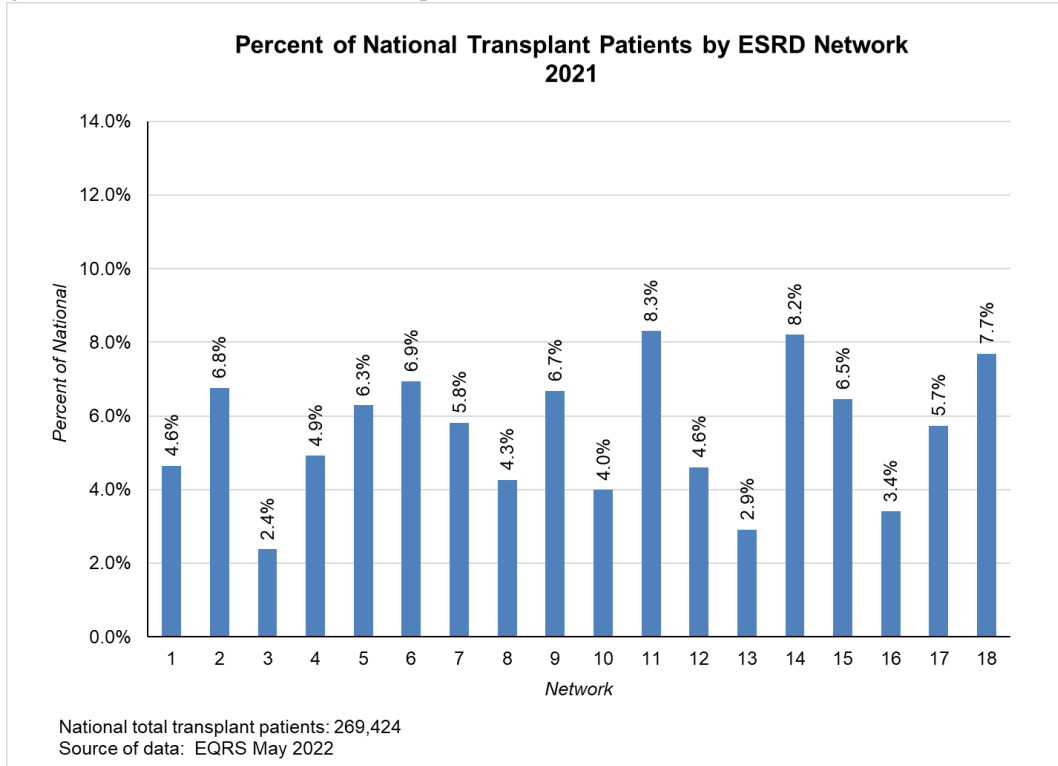
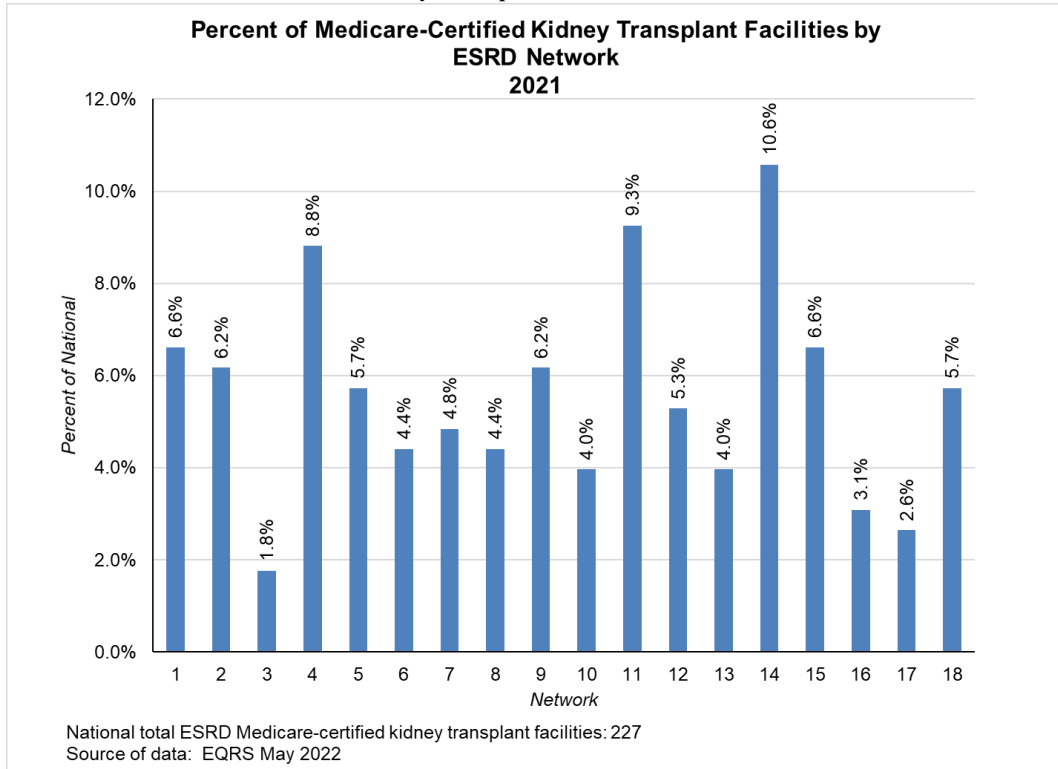


Figure 9 - Percent of Medicare-Certified Kidney Transplant Facilities in Each Network Service Area as of 12/31/2021





ESRD Network Grievance and Access to Care Data

The ESRD Network contract indicates the following in Section C.5.3 Improve the Patient Experience of Care by Resolving Grievances and Access to Care Issues:

“The Network has the responsibility to assist patients and dialysis facilities to resolve concerns in a manner that is satisfactory to all parties, as possible. A grievance is defined as a formal or informal written or verbal complaint that is made to any member of the dialysis or transplant center staff, by a patient, or the patient’s representative, regarding the patient’s care or treatment.”

We consider the management of grievances to be one of the top priorities of the work we conduct with our patients and providers. Patients, their family members and/or their representatives, have the right to file a grievance when they feel the quality of care provided to themselves or their loved ones does not meet CMS standards of care based on the ESRD Conditions for Coverage. We ensure that all of the dialysis providers in our service areas are aware of the patients’ right to file a grievance with us either anonymously or with consent of the patient to disclose their identity.

We developed and provided a flyer to all patients that outlined these rights. We e-mailed these flyers to each dialysis facility in September 2021 and required that a facility staff person attest to distribution to all their patients. This ensured that each dialysis patient was educated in 2021 on their right to file grievances.

We employ trained social workers and nurses who are adept at managing patient and/or family members’ grievances. Based on the many years of experience our staff have as direct care practitioners in the dialysis and transplant settings, we have an understanding of the dynamics of these settings. This experience allows us to investigate the grievances received with the skills necessary to ensure a fair and patient-centered approach to the investigation. We received 10 calls from January 2021-May 2021 and 15 calls from June 2021-April 2022 during which we could provide immediate advocacy. These cases included treatment related/quality of care issues, staff-related issues, other personal conflict and physical environment concerns.

We also investigated 15 Clinical Quality of Care case filed by patients in 2021-22. The cases required the review of medical records by a registered nurse.

We are also responsible for addressing Access to Care cases with our providers. From January 2021-May 2021 we had 26 access to care cases that included Involuntary Discharge (IVD) cases, Involuntary Transfer (IVT) cases, and Immediate Severe Threat cases, as well as patients At-Risk for IVD/IVT. In total we had 17 IVD’s and 6 IVD cases were averted. The 3 IVD patients were unable to be placed. From June 2021-April 2022 we had 72 access to care cases that included Involuntary Discharge (IVD) cases, Involuntary Transfer (IVT) cases, and Immediate Severe Threat cases, as well as patients At-Risk for IVD/IVT. In total, we had 28 IVDs and 18 At-Risk cases that were averted. Of the 28 IVD’s 15 were Immediate Severe Threats. Currently, 15 continue to receive treatment in hospital emergency departments and are considered “failure to place” (F2P). The F2P cases involved patients who were discharged from their outpatient dialysis facility because of immediate severe threats, ongoing verbal / abusive behavior, physical harm, non-payment and to the facility not being able to meet the patient’s medical needs. Our practice is to follow up with F2P cases for a period of one year to allow for our continued support of the patient and case managers at the admitting hospitals. Our efforts are focused on advocating for patients’ placement at dialysis centers and/or hospital-owned outpatient dialysis facilities near the patient’s home.

We are also responsible for addressing concerns identified by staff at dialysis facilities involving patients who have exhibited behaviors that are difficult to manage. These patients may eventually end up at-risk for IVD/IVT, and our early intervention helps the facility staff find alternatives that help reduce the need for discharges. In January 2021-May 2021 we fielded 17 calls and from June 2021-April 2022, we fielded 53 Facility Concerns.

The goal of each interaction with patients and staff is to ensure the care provided to and received by patients meets the ESRD Conditions for Coverage. This care cannot be provided if patients are involuntarily discharged from their dialysis provider. Every interaction with facility staff related to problem patient behavior is focused on actions that the staff can take to help patients alter their behaviors to ensure they can remain in their current facility.

Figure 10 - Percent of Grievance and Non-Grievances by Case Type (January 2021-May 2021)

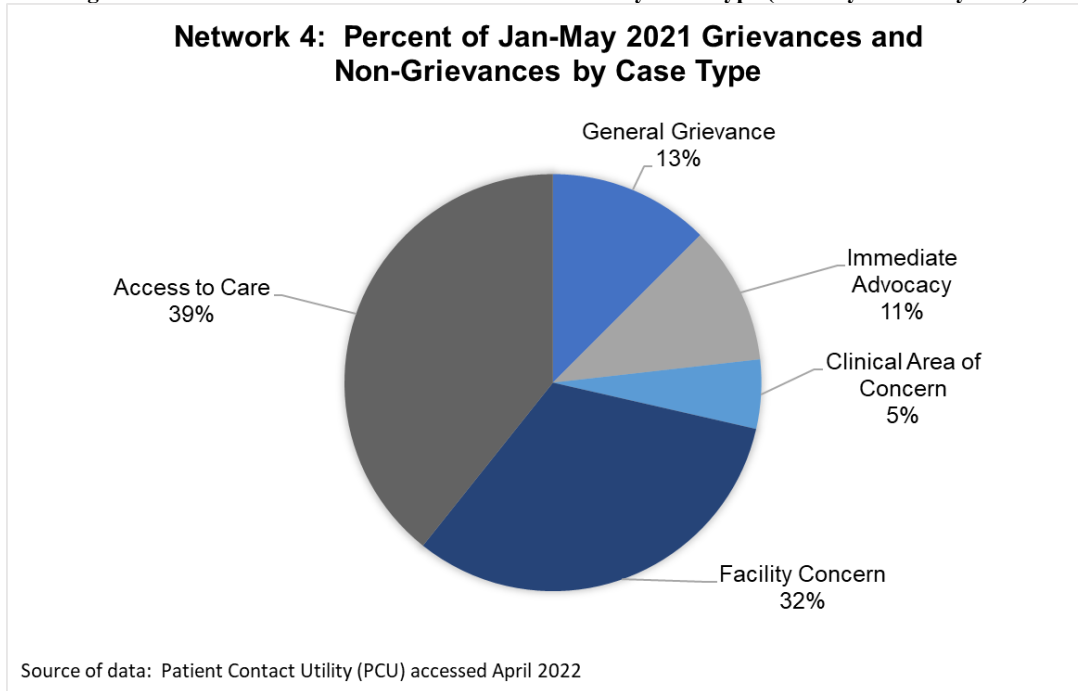
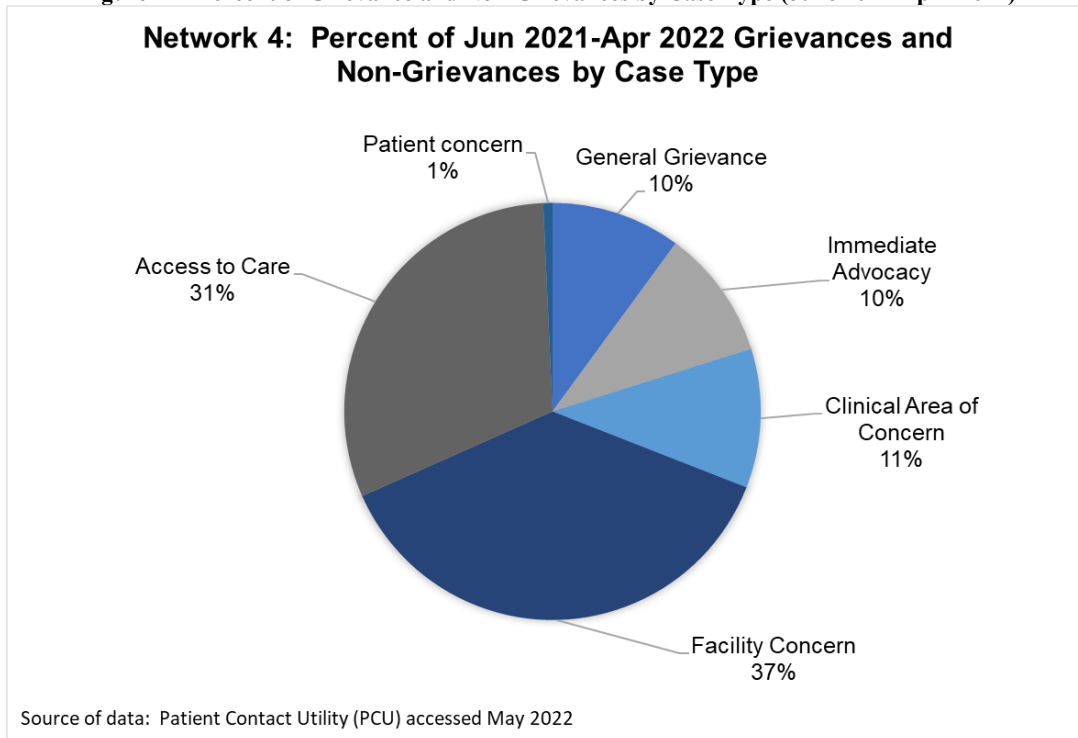


Figure 11 - Percent of Grievance and Non-Grievances by Case Type (June 2021-April 2022)

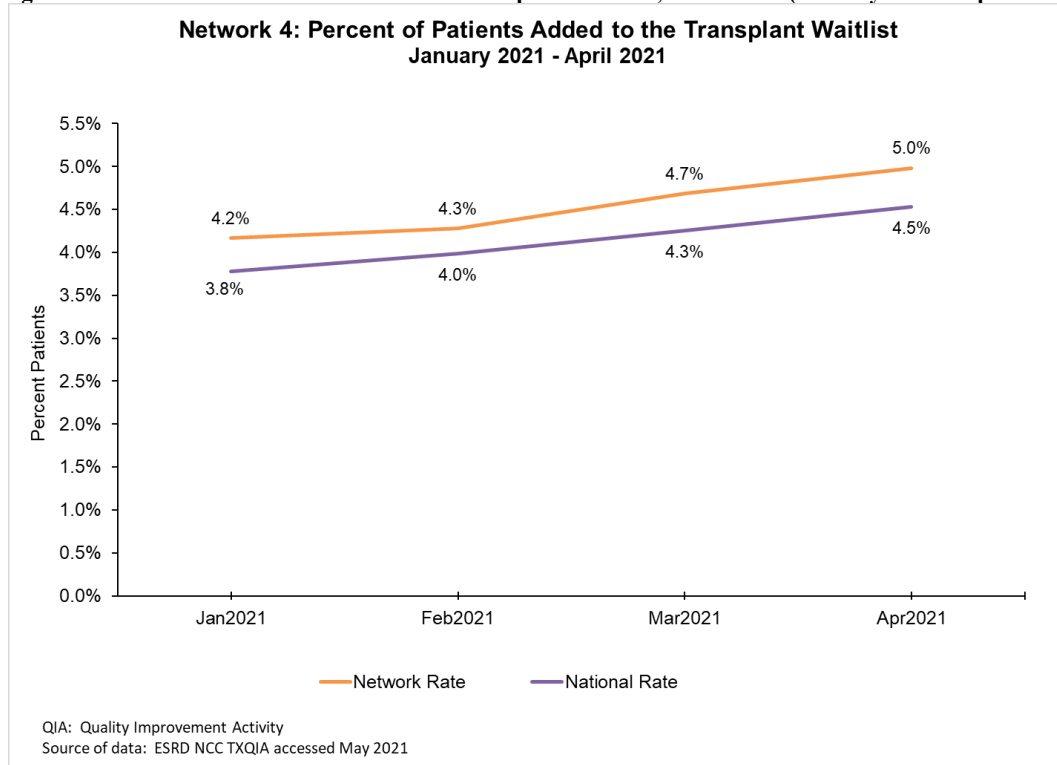


Transplant Waitlist Quality Improvement Activity through May 2021

Due to the COVID-19 pandemic limiting provider staffing and procedures, along with contract goal adjustments, the Network worked toward the goals of this quality improvement activity but was not evaluated on results through May 2021. In the new contract June 2021-April 2022 the Networks focused on Quality Improvement Goals.

Areas of effort included working with a small group of low-performing facilities to continue to use the NCC's transplant change package intervention during this timeframe. In addition, we focused on ascertaining high-performing providers to share best practices. A facility presented a best practice webinar to assist patients in getting on the kidney transplant waiting list and in receiving a transplant. We received positive feedback from participants with responses that they are likely to apply best practices from the webinar in their own facilities. In sharing barriers with a local transplant coalition, we collaborated to present a webinar on resources to address social determinants of health (SDOH) barriers to transplant. The webinar was an opportunity to learn about transplant centers and local areas' resources to address SDOH barriers and support your patients on their dialysis journey.

Figure 12 - Percent of Patients Added to the Transplant Waitlist, cumulative (January 2021 – April 2021)



Transplant Waitlist & Transplanted Quality Improvement Activity June-April 2022

Goal of QIAs: Achieve a 2% increase in the number of patients added to a kidney transplant waiting list by the end of the base period. Achieve a 2% increase in patients receiving a kidney transplant by the end of the base period. The goal was to add 1,019 patients to the transplant waiting list and for 857 patients to receive a kidney transplant in this project period.

Results: As shown in the following figures, providers in the Network 4 service area consistently added patients to the waiting list and assisted them in receiving a kidney transplant. Unfortunately, there were fewer transplants performed compared to the baseline year (2020). In particular, smaller transplant programs and transplant centers in the Central and Western parts of Pennsylvania reported that the new organ allocation rule resulted in fewer kidney offers. Additionally, the baseline year included 12 months of performance while the baseline year of the contract only included 11 months of performance.

Interventions: We deployed a multi-pronged partnership approach that included Advisory Committee, Community Coalition, and facility-level technical assistance. Our Advisory Committee met to discuss barriers and strategies at the beginning of the contract. At the local coalition level, we formed a collaboration with the local National Kidney Foundation and a transplant center in Delaware. Our community coalitions used the PDSA cycle to assist providers with barriers, lessons learned, and glean best practices to spread in our Network service area. We provided focus assistance for several low-performing facilities. We used the Institute for Healthcare (IHI) Model for Improvement methodology, including the use of root cause analysis (RCA), development of a facility-specific quality improvement plan, and use of Plan-Do-Study-Act (PDSA) cycle(s) to test change improvement. As targeted facilities submitted their monthly progress reports, facilities were expected to make changes to their proposed interventions if necessary until the completion of the project. The focus group received monthly PDSA feedback, and we followed up with technical assistance as needed. The focus groups were encouraged to incorporate patient and family engagement activities (QAPI, life plan, and peer mentorship) as interventions.

Identified Best Practices: We selected a small group of low-performing facilities to use the transplant change package intervention, and most of these facilities continue to show improvement. Our transplant coalition held monthly meetings to discuss and share intervention ideas for identified barriers. Social determinants of health (SDOH) assessment showed that the lack of transportation access was an area that limited patients' access to transplant evaluation. As a result of working with the transplant coalition, we collaborated to provide targeted webinars on sharing local resources that may assist patients with their transportation needs. Local coalition collaboration has proven invaluable and we will continue to grow community coalition collaboration in the next project cycle. Living donation education as increased during this project cycle. To address the communication gap reported by dialysis facilities and transplant centers to track patients, we continued to disseminate the patient level report to both entities. The patient-level reports allowed providers to identify patients' active/inactive waitlist status and removal reasons. Transplant centers used their reports to identify patients' dialysis facility locations and contact numbers. The best practice of peer-to-peer mentoring has and will be offered. Our Network 4 patient advocates are available to assist in educational lobby days and patient-to-patient dialogue. We will continue promoting these best practices the next project cycle.

Identified Barriers: In addition to the main barrier—the COVID-19 pandemic—other top barriers identified by the project facilities for getting patients on the transplant waiting list included the lack of

follow-through with appointments, transplant center criteria, transportation-related issues, lack of caregiver support, and educational knowledge gap for both facility staff and patients. Transplant centers reported that the new kidney allocation guideline impacted the number of organs offered to their transplant program. Furthermore, social determinants of health assessment (SDOH) showed that health literacy was an all-around barrier.

Figure 13 – Number of Patients added to a Kidney Transplant Waitlist, cumulative (July 2021 – April 2022)

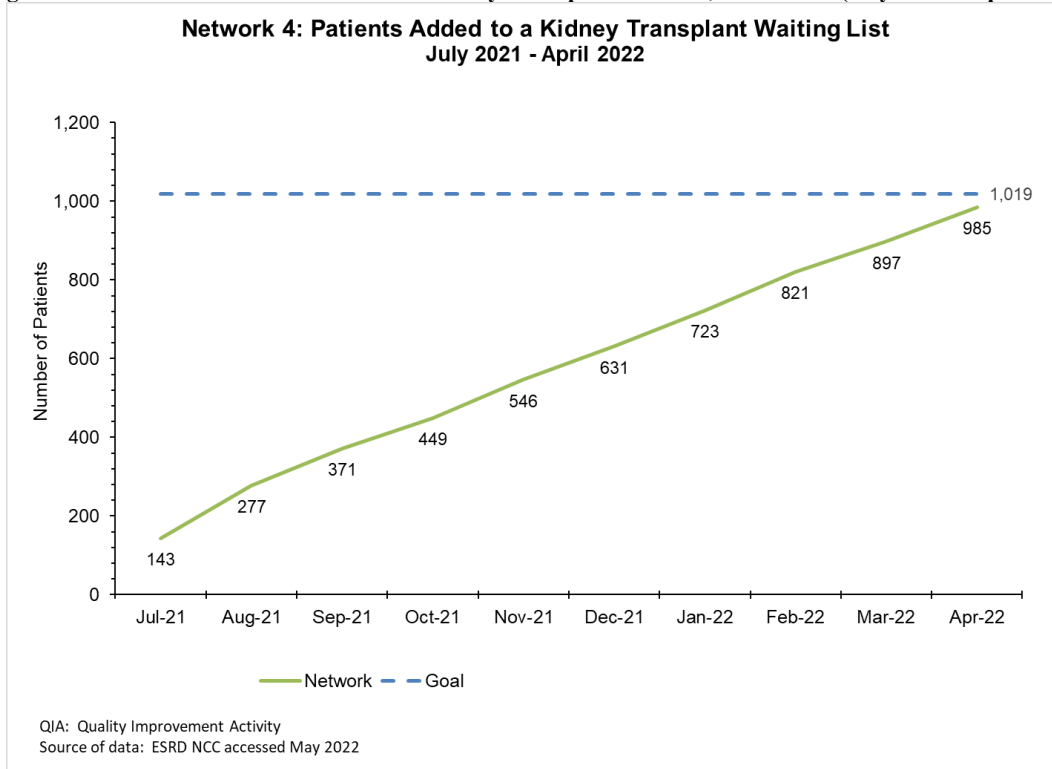
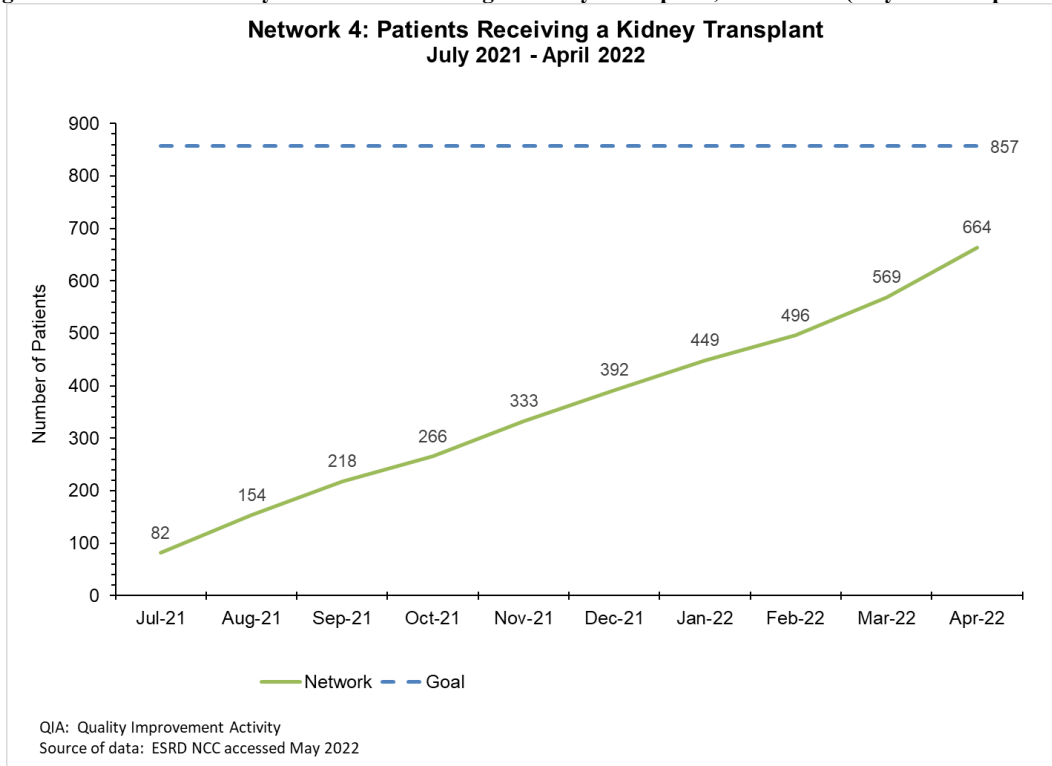


Figure 14 – Number of Dialysis Patients Receiving a Kidney Transplant, cumulative (July 2021 – April 2022)

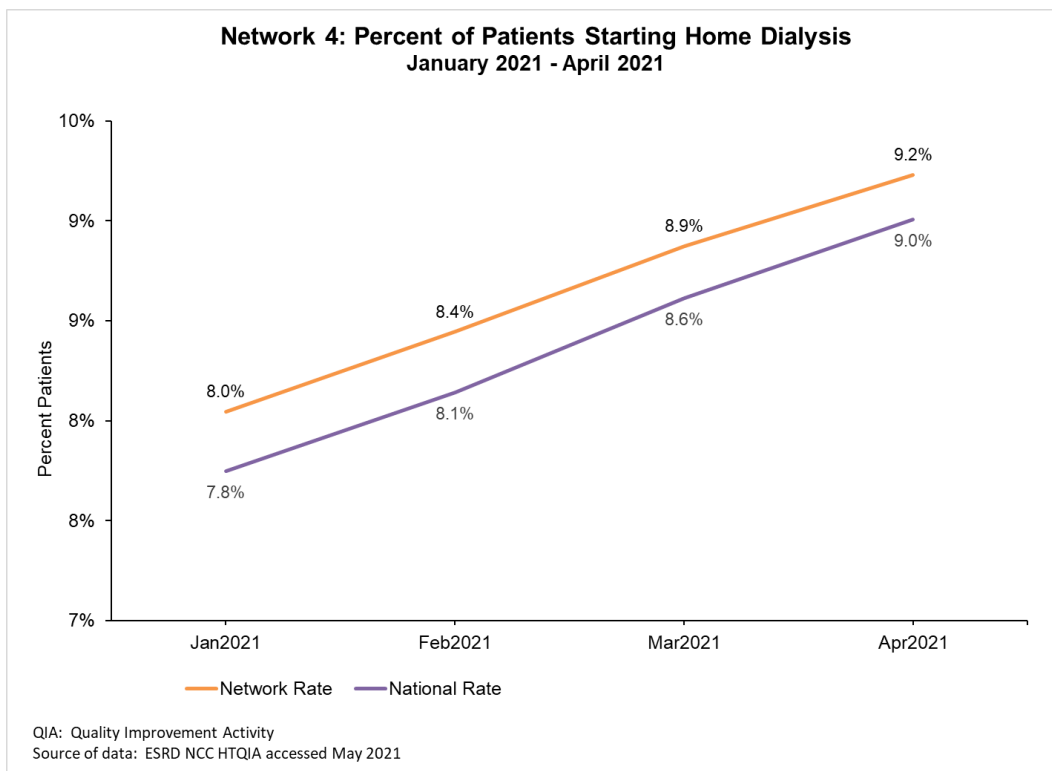


Home Therapy Quality Improvement Activity through May 2021

Due to the COVID-19 pandemic limiting provider staffing and procedures, along with contract goal adjustments, the Network worked toward the goals of this quality improvement activity but was not evaluated on results through May 2021. In the new contract June 2021-April 2022 the Networks focused on Quality Improvement Goals.

We worked with a small group of low-performing facilities to continue to use the NCC's home dialysis change package interventions during this timeframe. The top barrier the facilities identified was that patients were satisfied with in-center hemodialysis. Using the home dialysis change package interventions, these providers primarily focused on two primary drivers: (1) fostering physician support for home dialysis, and (2) educating and supporting patients and caregivers throughout the continuum of care. In addition, we deployed a campaign using one of the newly developed Network resources, Patient Voices: My Home Dialysis Experience, with a small group of low-performing facilities. The participants overwhelmingly stated they would continue to use the materials for patient education; in particular, one facility mentioned them as conversation starters for patients and families.

Figure 15 – Percent of Patients Starting Home Dialysis, January 2021 – April 2021



Home Therapy Quality Improvement Activity June-April 2022

Goal of QIA: Achieve a 10% increase in the number of incident ESRD patients starting dialysis using a home modality from baseline to the end of the base period. Achieve a 2% increase in the number of prevalent ESRD patients moving to a home modality from baseline to the end of the base period. The goals were to add 768 incident and 1,093 prevalent patients to a form of home dialysis in this project period.

Results: As shown in the following figures, providers in the Network 4 service area consistently added incident and prevalent patients to a form of home dialysis. Unfortunately, we did not meet these goals. Only 631 incident patients began dialysis at home and 1,039 patients transitioned from in-center to a home modality.

Interventions: We deployed a multi-pronged partnership approach that included Advisory Committee, Community Coalition, and facility-level technical assistance. Our Advisory Committee met to discuss barriers and strategies at the beginning of the contract. At the local coalition level, we joined three local meetings to glean community resources that might benefit the dialysis population. We provided focus assistance for several low-performing facilities. We used the Institute for Healthcare (IHI) Model for Improvement methodology, including the use of root cause analysis (RCA), development of a facility-specific quality improvement plan, and use of Plan-Do-Study-Act (PDSA) cycle(s) to test change improvement. As targeted facilities submitted their monthly progress reports, facilities were expected to make changes to their proposed interventions if necessary until the completion of the project. The focus group received monthly PDSA feedback, and we followed up with technical assistance as needed. The focus groups were encouraged to incorporate patient and family engagement activities (QAPI, life plan, and peer mentor) as interventions.

Identified Best Practices: We selected a small group of low-performing facilities to use the home dialysis change package intervention, and most of these facilities continue to show improvement. We attended monthly local community healthcare coalition meetings to discuss and share resources for the community. As a result of participating with the local community coalition, we could ascertain resources to support our dialysis providers. Local coalition collaboration has proven invaluable, and we will continue to grow community coalition collaboration in the next project cycle. The best practice of peer-to-peer mentoring has and will be offered. Our Network 4 patient advocates are available to assist in virtual educational lobby days and patient-to-patient dialogue. Providers continue to utilize telehealth to help care for their home dialysis patients. We will continue promoting these best practices in the next project cycle.

Identified Barriers: In addition to the main barrier—the COVID-19 pandemic—other top barriers included patients' not interested/refused/satisfaction with in-center hemodialysis, patients' not wanting responsibilities, and home environment-related issues. Furthermore, social determinants of health assessment (SDOH) showed that health literacy was an all-around barrier.

Figure 16 – Incident Patients Starting Dialysis Using a Home Modality, cumulative (July 2021 – April 2022)

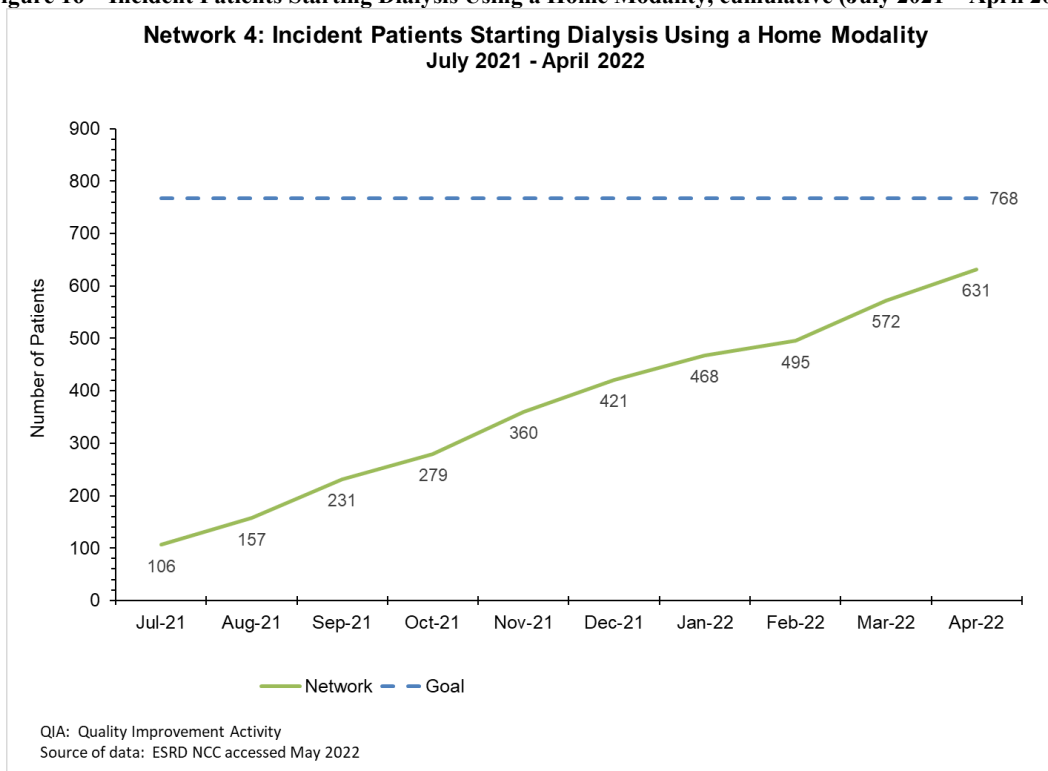
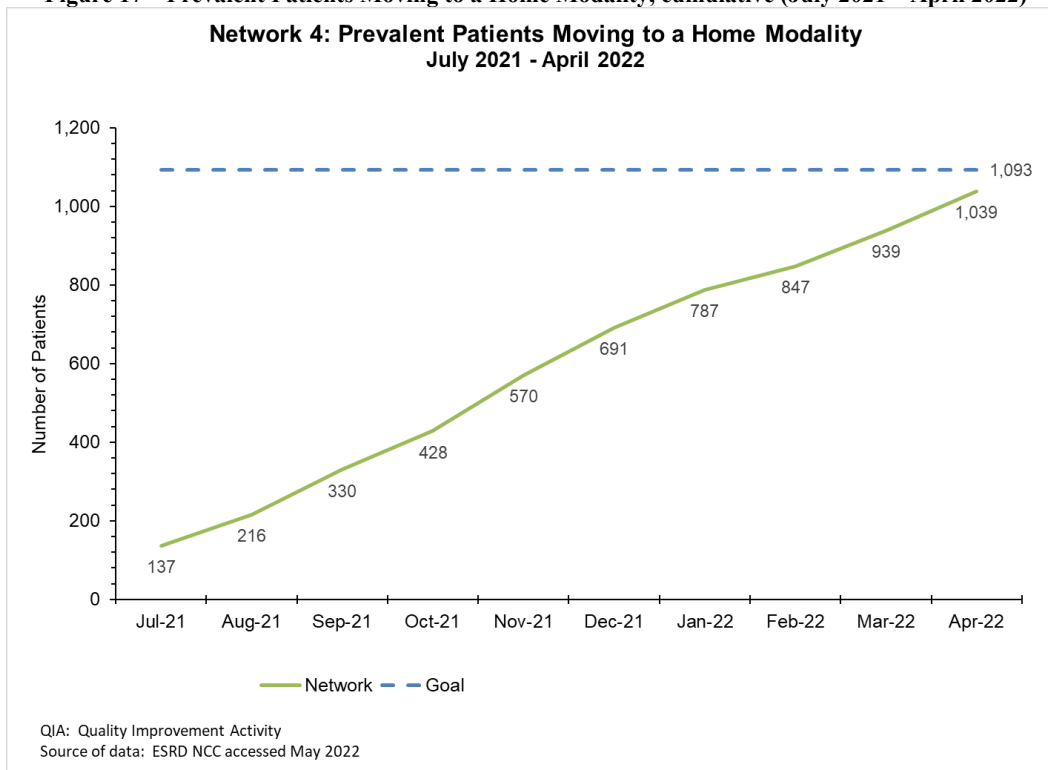


Figure 17 – Prevalent Patients Moving to a Home Modality, cumulative (July 2021 – April 2022)



Vaccinations June-April 2022

Goals of QIAs

Patient COVID-19 Vaccination

Ensure 80% of dialysis patients receive a COVID-19 vaccination.

- **Baseline:** 0%
- **Measure Goal:** 80%
- **Outcome:** 80.5%

Ensure 80% of fully vaccinated dialysis patients receive a COVID-19 booster.

- **Baseline:** 0%
- **Measure Goal:** 80%
- **Outcome:** 53.1%

Ensure 100% of dialysis facility staff receive a COVID-19 vaccination.

- **Baseline:** 0%
- **Measure Goal:** 100%
- **Outcome:** 85.3%

Ensure 100% of fully vaccinated dialysis facility staff receive a COVID-19 booster.

- **Baseline:** 0%
- **Measure Goal:** 100%
- **Outcome:** 25.4%

Results: We achieved the patient primary vaccine goal by a slim margin (80.5%) after struggling against multiple barriers month after month. The staff primary vaccine goal and the booster goals for both patients and staff were not achieved. Booster vaccine rates for patients started off reasonably strong for the first three months given the breadth of vaccine hesitancy seen with the primary vaccine, but hit a plateau for the last three months only gaining 3.2 percentage points. When comparing the curve shape of the primary vaccine to the booster for the time period Feb-Apr 2022 the curve flattens in both graphs with the staff booster rate 23 percentage points below the patients.

Interventions: We planned for the clinics to use the Institute for Healthcare Improvement's (IHI) Model for Improvement; the Plan-Do-Study-Act (PDSA) cycle. This quality improvement methodology includes a root cause analysis (RCA) activity followed by iterative steps of making a plan to effect change, implementing the plan followed by analysis of the data and finally determining if the plan should be adopted, adapted or abandoned. This process is repeated until target goals are attained or the project period ends.

We were unable to fully implement this methodology due to the pandemic staffing crisis. The success of patient primary vaccinations was grounded in the Network's use of a multipronged approach consisting of collaboration and data sharing of patient and staff rates with the LDOs and SDOs data managers to allow staff to spend more time performing patient care; encouraging organizations to expand their in-center access to the vaccines; providing continuous, consistent, reliably sourced messaging (i.e. CDC, public and state health departments) about vaccine benefits, eligibility, access, "How-To's" for nurses and PCTs to listen to patient concerns and effectively address their concerns; clinic coaching calls when needed.

In addition, we convened a Philadelphia county vaccine coalition to address patient and staff barriers specific to the population in this urban county. Success in Philadelphia was mixed; patient primary vaccination rate underperformed the Network's while the staff rate outperformed the Network (75%, 88% respectively). Multiple education materials were produced, some being low health literacy, using county-level data. Fifty percent of the materials were peer-to-peer messages developed by a patient coalition member. Other materials supported the primary driver of success for their primary rate. The primary driver was the CMS interim final rule requiring COVID-19 vaccinations for workers in most health care settings, including hospitals and health systems, which participate in the Medicare and Medicaid programs. This ruling is commonly known as the Federal Mandate. The coalition will continue this work in Option Year1 focusing on booster acceptance. They will also expand their education and awareness outreach to patients and staff through social media.

Identified Best Practices: A best practice was to work with the organizations' data management team leader instead of the clinic administrators in order to reach a larger number of clinics and have effective strategies identified by and implemented from an organizational level. We could not have accomplished this on our own. Best practices for the clinics included bringing community resources to the clinic (i.e. pharmacies and local hospitals) to administer the vaccine when their organization was unable/unwilling to provide in-center access.

Identified Barriers: The pandemic brought with it many barriers to vaccine acceptance, including misinformation predominantly spread by social media and a healthcare staffing crisis bolstered by large corporations such as Walmart and Amazon offering pay structures higher than current PCT hourly wages and hospitals offering huge sign on bonuses, upwards of \$20,000, to lure nurses away from the dialysis clinics. Misinformation was absorbed and spread not only by non-professionals but also the nurses and technicians throughout the healthcare industry. In addition to the vaccine hesitancy, a new barrier called vaccine fatigue was born and contributed to the poor acceptance of boosters by both staff and patients. Administering the vaccines to patients and staff was only half of the struggle. The other half was documenting its administration in the appropriate place(s) to be captured by NHSN. The staffing crisis pushed this requirement down their priority list; "Get shots in the arms of every American" was the priority and data entry could wait. This is an understandable attitude given the severity of the staffing shortage but this task still needed to be done. We worked hard to emphasize the need to enter the data into the appropriate place in order for their successes to be captured, recognized by CMS and provide an accurate picture of the dialysis population's risk for COVID-19 and to combat misinformation.

Patient Influenza Vaccinations

Ensure 85% of dialysis patients receive an influenza vaccination

- **Baseline:** 0%
- **Measure Goal:** 85%
- **Outcome:** 79.1%

Results: Results were below expectations. Historically, patients have received the seasonal influenza vaccine for many years with little resistance, but this performance period reflects a more robust and unexpected resistance due to the effects of the COVID-19 pandemic, vaccine fatigue and misinformation prevalent on social media platforms leading to mistrust of government entities and healthcare providers.

Interventions: We planned for the clinics to use the Institute for Healthcare Improvement's

(IHI) Model for Improvement; the Plan-Do-Study-Act (PDSA) cycle. This quality improvement methodology includes a root cause analysis (RCA) activity followed by iterative steps of making a plan to effect change, implementing the plan followed by analysis of the data and finally determining if the plan should be Adopted, Adapted or Abandoned. This process is repeated until target goals of change are attained.

We supported the PDSA process through distribution of various patient education materials addressing national, state and facility identified barriers. All materials such as fact and FAQ sheets were from reliable sources (i.e. Departments of Health in Pennsylvania and Delaware and the Centers for Disease Control and Infection (CDC). They addressed topics such as the benefits of vaccination, safe co-administration with the COVID-19 vaccine and how to identify misinformation. Staff education materials were distributed Network wide including the CDC's Advisory Committee of Immunization Practices (ACIP) recommendations for 2021-2022. We learned clinics in the vicinity of any Wellspan Health Community were provided information on how and where to obtain a free flu vaccine voucher and disseminated this information. We provided limited individual clinic coaching so as not to be a burden on an already thinly stretched staff.

Identified Best Practices: All clinics were already implementing the best practices of having onsite access to the vaccine and a strong recommendation from the patient's physician.

Identified Barriers: The COVID-19 pandemic staffing shortage negatively impacted the capacity to administer vaccine, to document the administration of vaccine in the appropriate data system i.e. EMRs, EQRS and the willingness of patients to accept this well-established, safe vaccine. This response has sprung from misinformation about the COVID-19 vaccine and concerns about co-administration with the flu vaccine. The predominant source of misinformation was, and is, social media and the public's willingness to believe information from unreliable sources rather than the longstanding sage healthcare organizations such as the CDC, NIH and WHO whose currency is evidence-based guidelines.

Patient Pneumococcal Vaccination & Staff Influenza Vaccination

Pneumococcal: Due to contract goal adjustments, the Network worked toward the goals of this quality improvement activity but was not evaluated on results.

Staff Influenza Vaccination: Ensure a minimum of 90% of dialysis facility staff receive an influenza vaccination

- **Baseline:** 0%
- **Measure Goal:** 90%
- **Outcome:** 38.96%

Results: Results were surprisingly below expectations for both of these metrics. Historically, patients have received the pneumococcal vaccine(s) and staff the influenza vaccine, for many years with little resistance. This performance period reflects a more robust and unexpected resistance.

Interventions: In the early months of the QIA we reached out to all clinics reporting they did not have both of these vaccine in-center as documented in NHSN. These clinics were contacted by phone and we learned that all had incorrectly documented in NHSN. One clinic's medical

director chose to not have a standing order for any vaccines preferring to personally evaluate each patient each year.

Identified Best Practices: All clinics were already implementing the best practices of having onsite access to the vaccine and a strong recommendation from the patient’s physician.

Identified Barriers: The hesitancy of patients and staff to accept the COVID-19 vaccine has bled over into outright resistance to receive other well-established and safe vaccines such as these. And COVID-19 pandemic staffing shortage negatively impacted the capacity to administer vaccines, to document the administration of these vaccines in the appropriate data system i.e. EMRs, EQRS, or NHSN. This response has sprung from misinformation about the COVID-19 vaccine, its purpose, benefits and side effects and added concerns about co-administration with the flu vaccine and pneumonia vaccines. The predominant source of misinformation was, and is, social media and the public’s willingness to believe information from unreliable sources rather than the longstanding sage healthcare organizations such as the CDC, NIH and WHO whose currency is evidence-based guidelines. Another influencing factor could have been the low rate of efficacy of the 2021-2022 flu formulation.

Figure 18 – Percent of Patients Receiving an Influenza Vaccination, July 2021 – April 2022

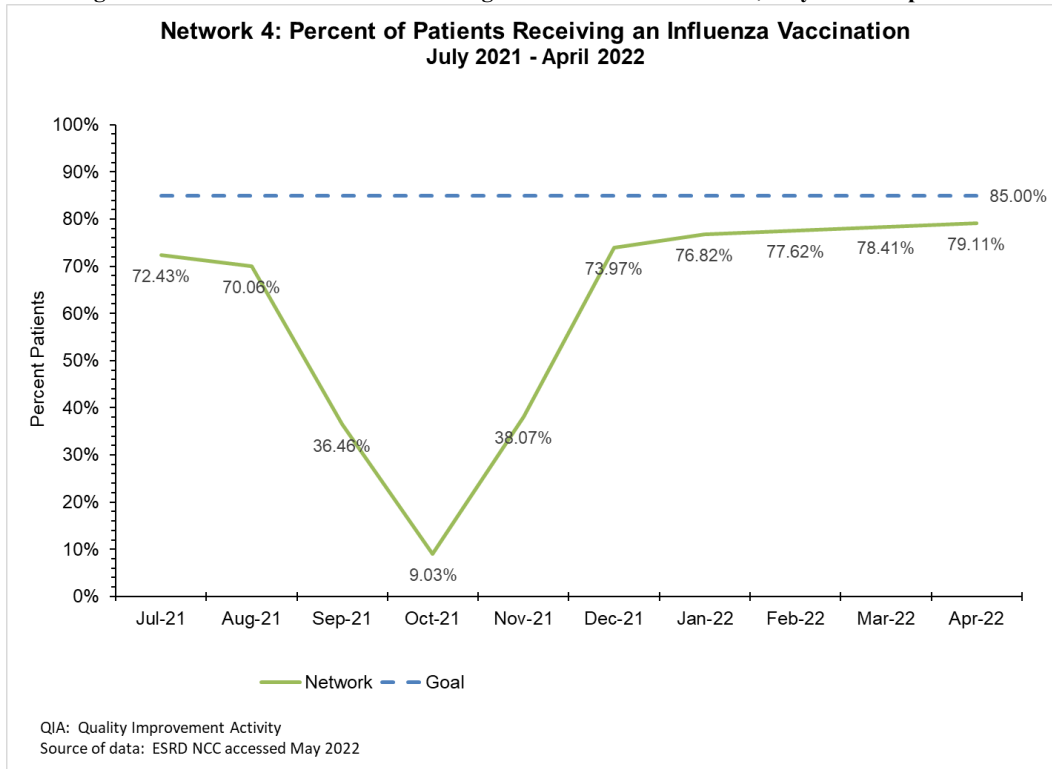


Figure 19 – COVID Vaccination Rate (Dialysis Patients)

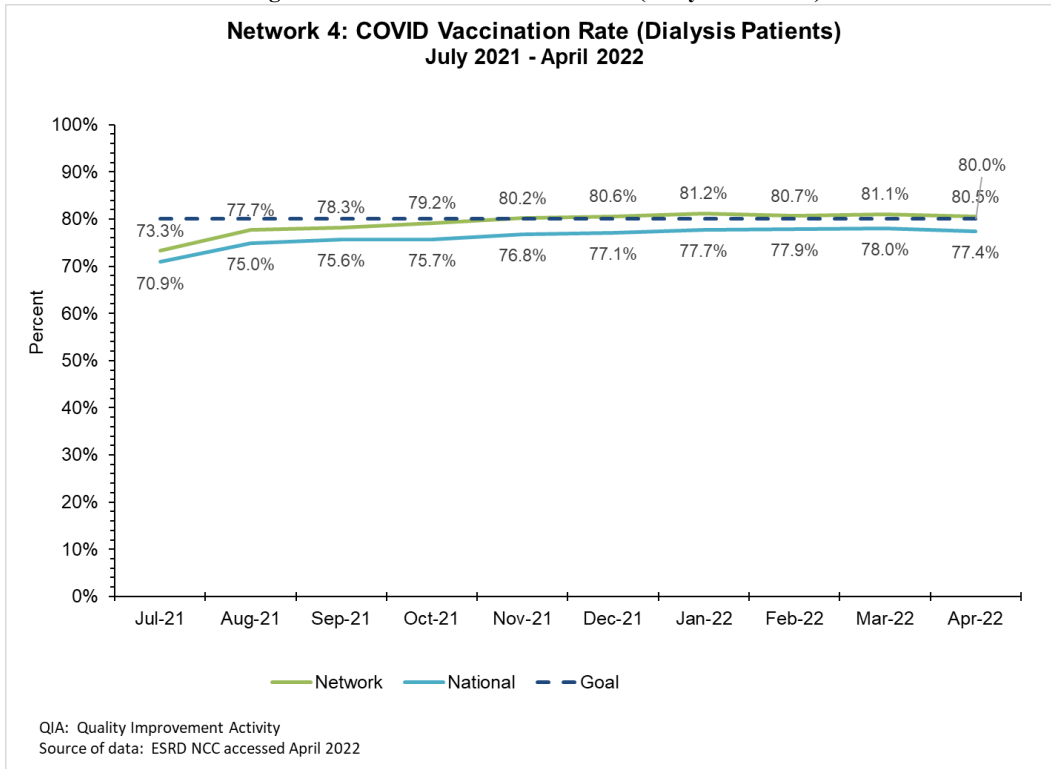


Figure 20 – Percent of Fully Vaccinated Dialysis Patients Receiving COVID Booster

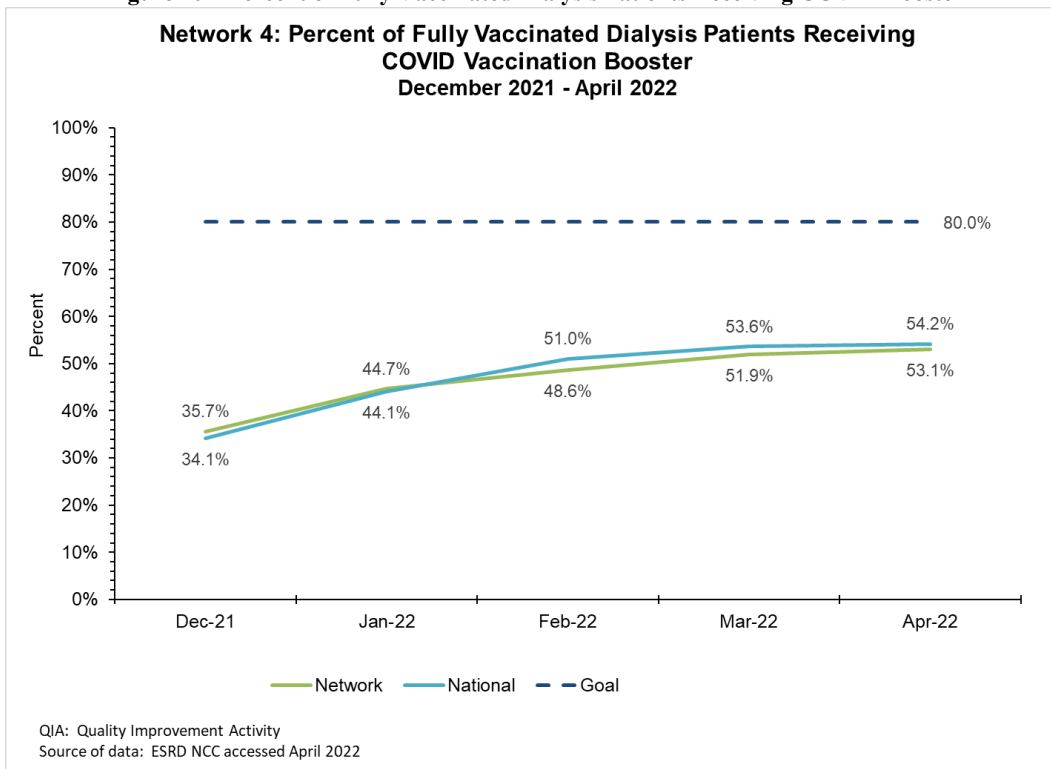


Figure 21 – COVID Vaccination Rate (Dialysis Facility Staff)

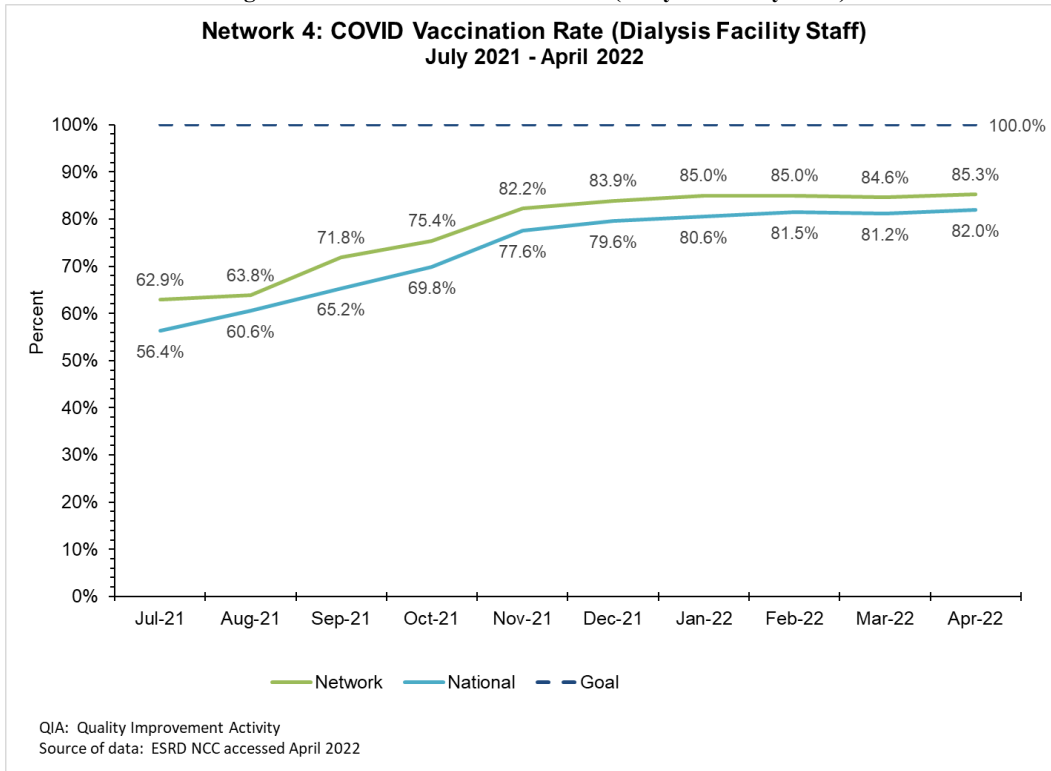


Figure 22 – Percent of Fully Vaccinated Dialysis Facility Staff Receiving COVID Booster

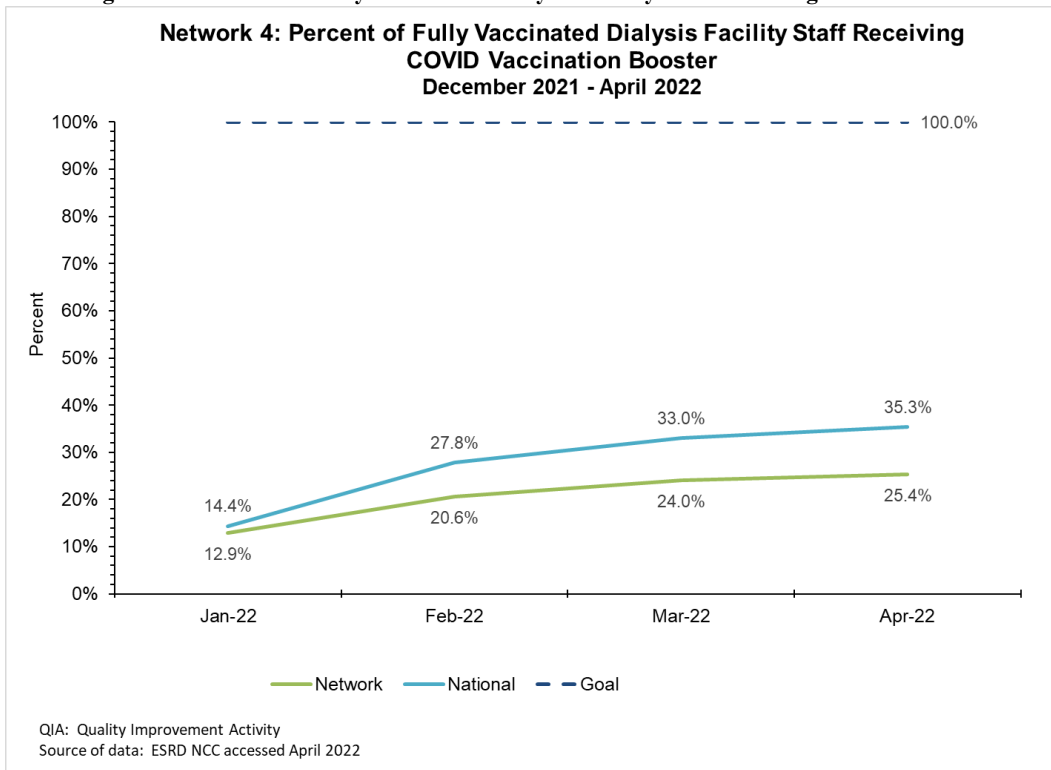


Figure 23 – ESRD Patients Receiving Pneumococcal Conjugate Vaccination (PCV-13), cumulative

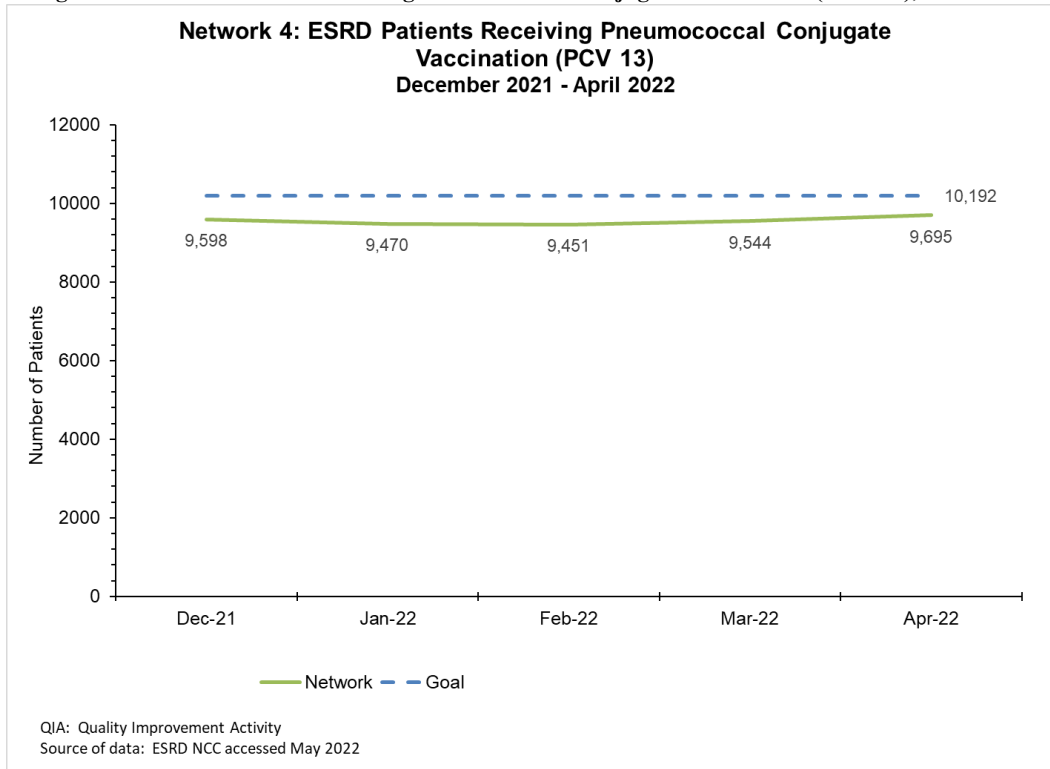
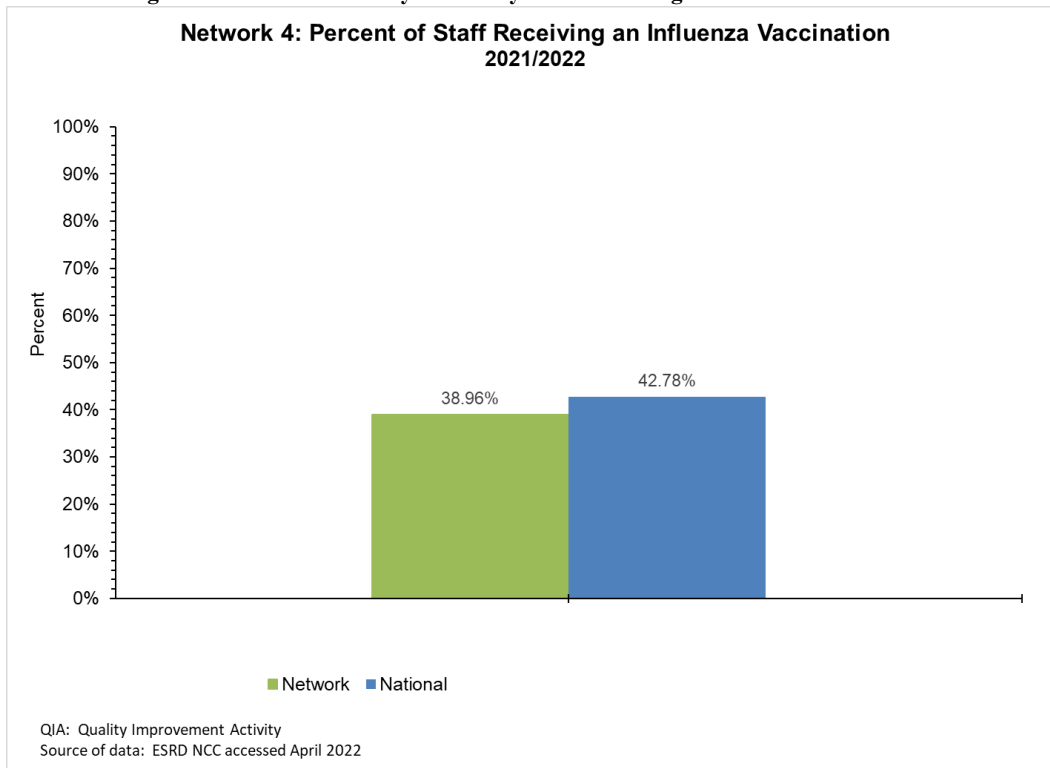


Figure 24 – Percent of Dialysis Facility Staff Receiving an Influenza Vaccination



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

Admission Data entered within 5 Days

Goal of QIA

Achieve a 2% increase in the rate of patient admission records from dialysis facilities entered within five business days from the baseline to the end of the base period.

Results

As seen in Figure 25, at the conclusion of the project, admission records entered within 5 days was at 69.1% which was below the goal of 73.1%

Identified Barriers

EQRS

- Dialysis facilities and ESRD Networks receiving errors when trying to admit patients to EQRS
- Inability to admit patients returning to dialysis after a failed transplant
- More “possible duplicate patients” due to change in policy in EQRS where a Medicare Beneficiary Identifier is required during admission process if one already exists in the patient record (previously in CROWNWeb “NA” could be selected and the admission would be completed)
- Tickets opened with the helpdesk were often not resolved within the 5 day timeframe
- Delay in clinical data submission led to patient admissions being missed (regular monthly data submissions often identify missing patient admissions; the delay has left many patient admissions not being identified for several months)
- Patients with no admission information in EQRS, making it difficult to follow up with the facility that should have entered the admission

Electronic Data Interface (EDI) Submitters

- One EDI only submits data weekly, often missing 5 day cutoff
- EDIs have never focused on timely patient admissions
- EDIs educate their facilities not to manually enter patients as it affects future patient mapping
- Lack of communication from EDIs with the Networks to assist in admission process

Facility Level

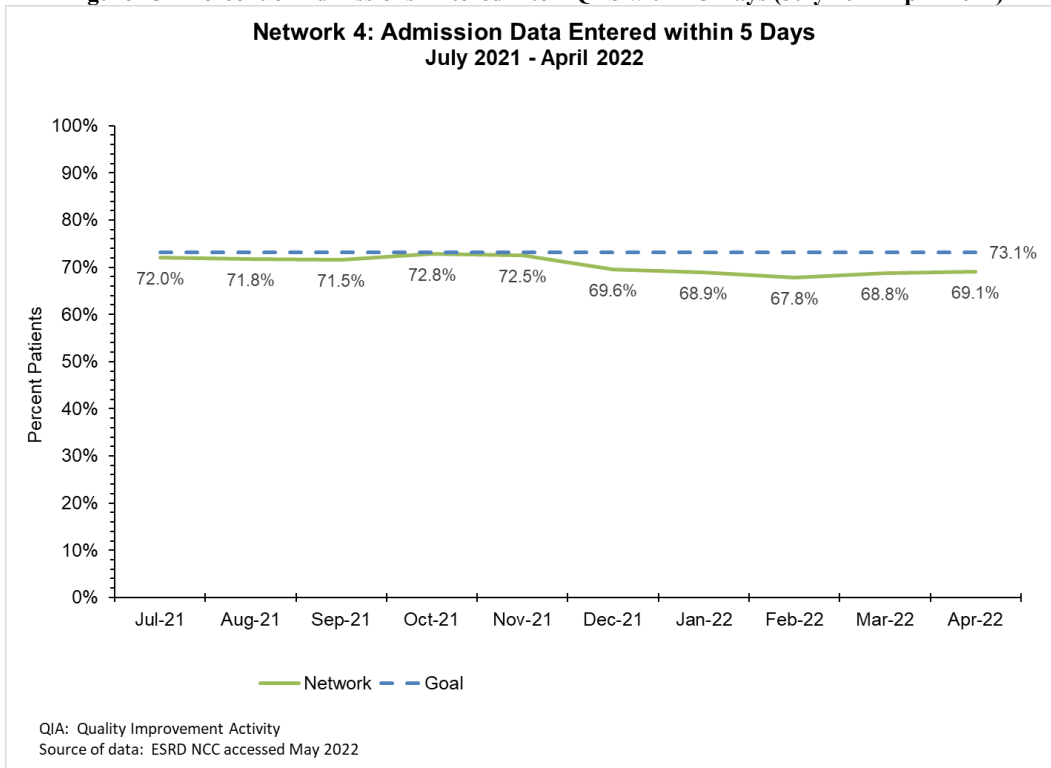
- Staff Turnover/Staff pulled into different roles due to COVID
- Lack of an ability to view patient roster in EQRS to identify missing admissions
- EDI facilities relying solely on batch for patient admissions
- Unreliability of reports in EQRS

Mitigation Efforts

- The ESRD Network Data Managers met with the EDIs on several occasions to discuss specific barriers preventing timely submission.
- Large Dialysis Organization (LDO)-specific EQRS educational links were sent to facilities

- We developed an EQRS Monthly Checklist and a caseload form to track patient activity which were shared via email with our facility data contacts. The monthly checklist was also posted on our website to be accessed by facilities.
- On October 25, 2021 we identified low performers and notified them via email.
- We created a PowerPoint presentation with instructions for running reports in EQRS to capture missing patient admissions. These instructions were shared with all of our facilities via email.

Figure 25 – Percent of Admissions Entered into EQRS within 5 Days (July 2021-April 2022)



CMS 2728 Forms submitted within 45 Days

Goal of QIA

Achieve a 2% increase in the rate of initial CMS-2728 forms submitted from dialysis facilities within 45 days from the baseline to the end of the base period.

Results

As seen in Figure 26, at the conclusion of the project, admission records entered within 5 days was at 78.1% which was below the goal of 79.8%

Identified Barriers

EQRS

- Facility Dashboard bugs
- EQRS allowing multiple New ESRD admissions often triggering forms that are not needed
- Shell records for patients with missing admission information were being created in EQRS

EDI Submitters

- One EDI batches 2728 forms that, in some instances, are overwriting submitted forms, changing data and reverting previously submitted forms back to saved status
- No emphasis placed on forms timeliness
- Incorrect batch admission reasons do not properly trigger need for a form

Facility Level

- Nephrologists not coming in regularly to sign forms
- Patients refusing to sign forms
- Incorrect admission reasons not triggering need for 2728
- No labs available within the applicable data range
- Breakdown in communication with other facilities where forms may not have been signed by the patient before transferring out to another facility
- Patients hospitalized and unable to sign forms
- Admissions from foreign visitors that treat briefly; often forms are not completed within that brief time and when patient leaves there is no way of obtaining a patient signature
- Staff Turnover/Staff pulled into different roles due to COVID

Mitigation Efforts

- Our Regional Data Manager worked with the Data Manager Timeliness subgroup and EDIs to discuss ways to meet the data quality goals
- On June 24, 2021 we presented the Data Quality project to all of our facilities during our Kickoff meeting
- On August 18, 2021 we sent an email to all dialysis facility administrators, clinic managers and EQRS data contacts explaining the parameters of the data quality project
- On September 9, 2021 we sent emails to facilities providing them with their current rates in the three areas of the Data Quality project
- We began sending reports to all dialysis facility Data Contacts containing the EQRS IDs of patients with CMS forms in missing/saved status

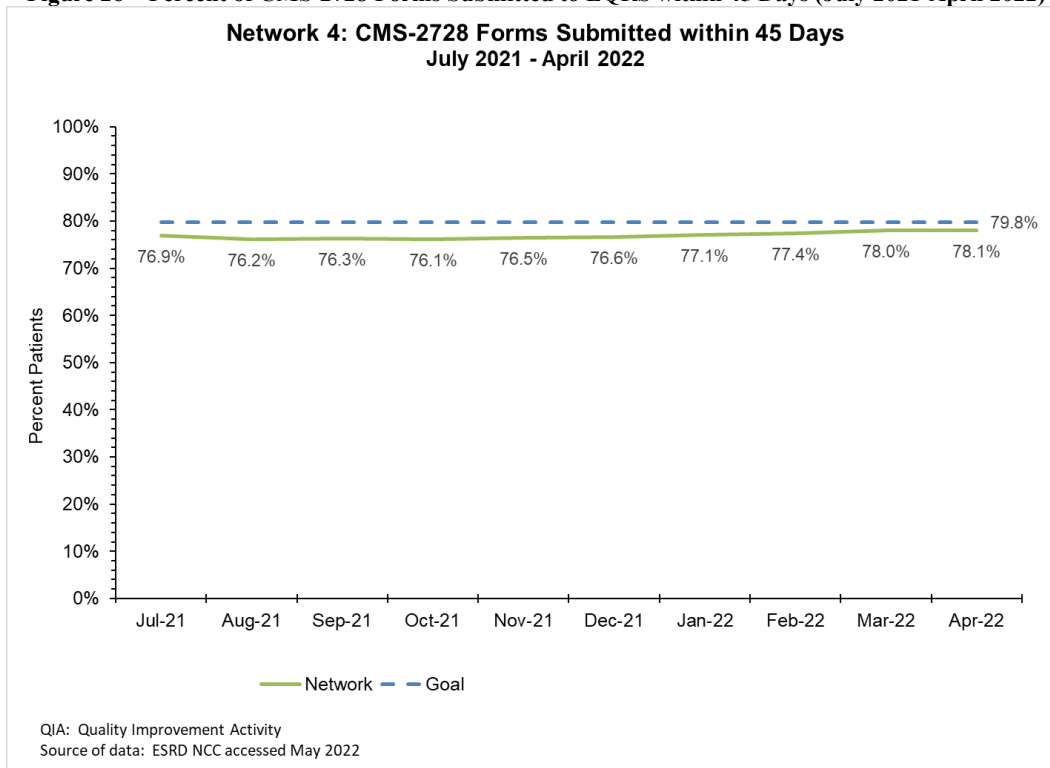
Education

- We developed an EQRS Monthly Checklist and FAQ for the CMS 2728 (patient and facility versions) which were posted to the data section of our website. The link was shared via email with all of our facilities' data contacts.
- We developed the 2728 patient version to specifically address patients' refusal to sign the form
- Facilities were reminded that these forms are essential in getting patients their ESRD benefits
- We educated facilities on correct admission reasons and made them aware that these reasons were updated in their EMRs as well as EQRS

Technical Assistance

- We made recommendations to facilities to involve their medical directors in getting nephrologists to sign forms in a timely manner
- We advised facilities to reach out to the patient's next of kin for assistance in obtaining a patient signature or the signature of the Power of Attorney and offering to send the form to them for signature with a self-addressed stamped envelope to return the signed forms
- We discussed the importance of having a backup person to assist with EQRS data entry and offered to provide training to new staff

Figure 26 – Percent of CMS-2728 Forms Submitted to EQRS within 45 Days (July 2021-April 2022)



CMS 2746 Forms submitted within 14 Days of Death

Goal of QIA

Achieve a 2% increase in the rate of CMS-2746 forms submitted from dialysis facilities within 14 days of the date of death from the baseline to the end of the base period.

Results

As seen in Figure 27, at the conclusion of the project, admission records entered within 5 days was at 59.9% which was below the goal of 63.8%

Identified Barriers

EQRS

- Patient page edit checks do not allow cause of death to be added (issues with duplicate Medicare statuses, effective dates)
- Disappearing Dates of Death (DOD)s, Cause of Death (COD)s and discharges; These cause the dashboard to report missing 2746 forms that have already been submitted
- Facility Dashboard bugs
- Issue that may still be impacting 2746 submissions rates using the 12 month look back: There were several months after EQRS went live that facilities could not enter 2746 forms due to duplicate Medicare statuses that can no longer be fixed by Network staff members

Facility Level

- Facilities are not informed that a patient is deceased
- Hospitals are claiming HIPAA as a reason not to provide COD
- Facilities are awaiting correct causes of death from physician or hospital instead of just using “unknown”
- Some facilities are not following patients who discontinue dialysis
- Staff Turnover/Staff pulled into different roles due to COVID

Mitigation Efforts

- The Network Data Managers sought guidance from CMS regarding using Unknown as a cause of death in order to submit 2746s on time. Facilities had reported to us that much of the delay in submitting 2746s could be attributed to their difficulty in obtaining the patient’s cause of death from the hospitals

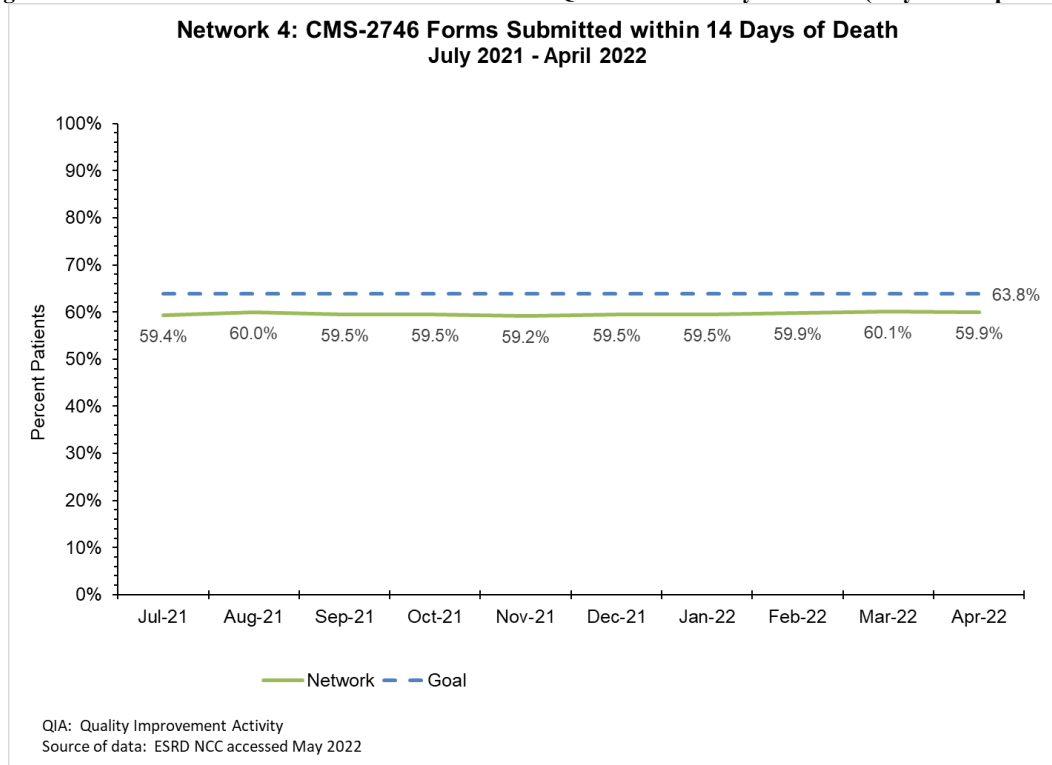
Education

- We developed an EQRS Monthly Checklist and FAQ for the CMS 2746 form which was posted to the data section of our website. The link was shared via email with all of our facilities’ data contacts
- LDO-specific EQRS educational links were sent to facilities
- We provided education to facilities regarding proper follow-up with patients who have discontinued dialysis

Technical Assistance

- Encouraged our facilities to contact the supervisors of the medical records departments in local hospitals to see what can be done to facilitate sharing of information including using hospital medical release forms
- Recommended having a backup person to assist with EQRS data entry and offered to provide training to new staff
- Encouraged facility staff to stay in communication with patient families after a patient discontinued dialysis
- Began sending missing/saved forms emails to facilities

Figure 27 – Percent of CMS-2746 Forms Submitted to EQRS within 14 Days of Death (July 2021-April 2022)



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

Our efforts to achieve these goals was greatly assisted by the development and implementation of an internal Data Dashboard. In prior years the target facilities were stagnant throughout the performance period making it difficult to reach a broader range of clinics in which to provide technical assistance. The Dashboard was designed to easily identify where in the performance quartile each facility was; from the highest performers in Tier 1 to the lowest performers in Tier 4. This tool enabled a leaner process to identify the initial target facilities and update the target facility with each new data set provided thus creating a ‘rolling roster.’ The rolling roster allowed more timely technical assistance to more clinics based on current needs and barriers.

Goal of QIA: To achieve a 2% decrease in national hospital admissions, emergency department (ED) visits and 30-day unplanned readmissions from the Primary Diagnosis Categories (Figure 26) based on Medicare Claims data by the end of the base year performance period. The goal for COVID-19 hospitalizations was to achieve a 25% decrease in the number of patients with a Medicare FFS payer source from 6/1/2021 through 4/30/2022 compared to 6/1/2020 through 4/30/2021 based on Medicare Claims data.

Results: We exceeded the goals in all four metrics. There was to be a special focus on patients with the comorbidities of diabetes, obesity and hypertension.

Interventions: Prior to the implementation of the Dashboard tool we developed a baseline Current Practice Survey to identify the initial group of high and low performers for all metrics. We analyzed the responses and gleaned best practices which were then shared Network wide. Education and tools from reliable sources addressing identified gaps were distributed including the development and distribution of the QIRN4 Hospital Discharge Checklist. This checklist is unique because it includes best practices from the Current Practice Survey. We also developed the QIRN4 Hospitalization QIA Toolkit which married barriers identified by our Advisory Committee with tools and strategies; this too was distributed Network wide.

There was weekly tracking of COVID-19 cases in each state during the Delta and the Omicron variant surges. Facilities with ‘upticks’ in cases each week were added as target clinics and we responded with 1:1 coaching calls. During these calls we screen for gaps in infection control practices, insufficient PPE supplies and root causes of the upticks in cases looking for actionable patterns such as a high number of unvaccinated patients and/or staff and patients’ personal practices of avoiding crowds, wearing masks and social distancing. Education for staff and patients was provided as needed.

Claims data was analyzed for the frequency of admissions, 30-day readmission and ED visits for the 26 Primary Diagnoses (Figure 26). The top three were hyperkalemia, sepsis, hypertension and fluid overload for the 29 clinics in the initial target group. We focused our educational materials on these three topics for both staff and patients.

We assessed clinic managers’ understanding of social determinants of health (SDOH) and if they used a tool to screen for this. Most clinics we surveyed did not have a sound understanding of, or a screening tool for SDOH. We did learn of a clinic who was currently addressing the SDOH – access to food. This

clinic has been running a food pantry stocked by staff and community members for the past several years. This practice was identified as a relatively easy way for some clinics to begin addressing this SDOH in some of their communities. This was the only clinic in the Network we were aware of addressing any SDOH on a consistent basis so the idea was sent to all clinics with encouragement to evaluate if it could be implemented in their facility. Their story was highlighted in our Network newsletter.

Best Practices: Best practices included screening for depression after each hospitalization and ED visit, pre-hospital discharge collaboration with hospital social workers to develop and implement an effective discharge plan, encouraging medical providers to prescribe or refer to PCPs or health systems to prescribe monoclonal antibodies, supplementing hospital discharge diagnosis education for dialysis and non-dialysis related diagnoses, updating the medical records with additional comorbidities and new or updated treatment orders, among others. These best practices were distributed Network wide.

Barriers: The Hospital Advisory Committee identified the following most common barriers: noncompliance with dialysis treatments/diet/fluid/meds; admissions/readmissions for non-dialysis related comorbidities; poor transition of care- patient is unstable at first treatment post hospital discharge; lack of attending post-hospital appointments; COVID-19 admissions and ED visits- not vaccinated; mental health – depression. Coaching calls with clinics supported all of the Advisory Committee’s identified barriers except for depression. While the clinics agreed depression was common in the ESRD population, they rarely screened for this outside of the annual requirement previous set before this contract period.

Figure 26: Specified Primary Diagnosis Categories

<p><u>Anemia Management:</u></p> <ul style="list-style-type: none"> • D649 Anemia unspecified <p><u>Blood Pressure Management:</u></p> <ul style="list-style-type: none"> • I120 Hypertensive chronic kidney disease stage 5 or end stage renal disease • I161 Hypertensive Emergency • I169 Hypertensive Crisis, Unspecified <p><u>Cardiac-related:</u></p> <ul style="list-style-type: none"> • I214 Non-ST elevation (N STEMI) myocardial infarction • I2510 Atherosclerosis heart disease of native coronary artery without angina pectoris • R079 Chest pain, unspecified <p><u>Endocrine-related:</u></p> <ul style="list-style-type: none"> • E162 Hypoglycemia, unspecified • E1110 Diabetes Type 2 with ketoacidosis without coma • E1122 Diabetes type 2 with diabetic chronic kidney disease <p><u>Fluid Balance-related:</u></p> <ul style="list-style-type: none"> • E8770 Fluid overload unspecified • E8779 Other fluid overload • J810 Acute pulmonary edema 	<p><u>Infection-related:</u></p> <ul style="list-style-type: none"> • A419 Sepsis, unspecified organism • A4101 Sepsis due to Methicillin Susceptible Staphylococcus aureus • A4102 Sepsis due to Methicillin Resistant Staphylococcus aureus • A4150 Gram-negative sepsis, unspecified • A4181 Sepsis due to Enterococcus • T8571 Infection and inflammatory reaction due to peritoneal dialysis catheter • T80211 Bloodstream infection due to central venous catheter <p><u>Mineral Metabolism:</u></p> <ul style="list-style-type: none"> • E871 Hypo-osmolality and hyponatremia • E875 Hyperkalemia • E876 Hypokalemia <p><u>Vascular-related:</u></p> <ul style="list-style-type: none"> • T82838 Hemorrhage due to vascular prosthetic devices, implants and grafts • T82858 Stenosis of other vascular prosthetic devices, implants and grafts • T82868 Thrombosis due to vascular prosthetic devices, implants and grafts
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Figure 27 – Rate of ESRD-Related Hospital Admissions per 100 Patient Months (August 2021-April 2022)

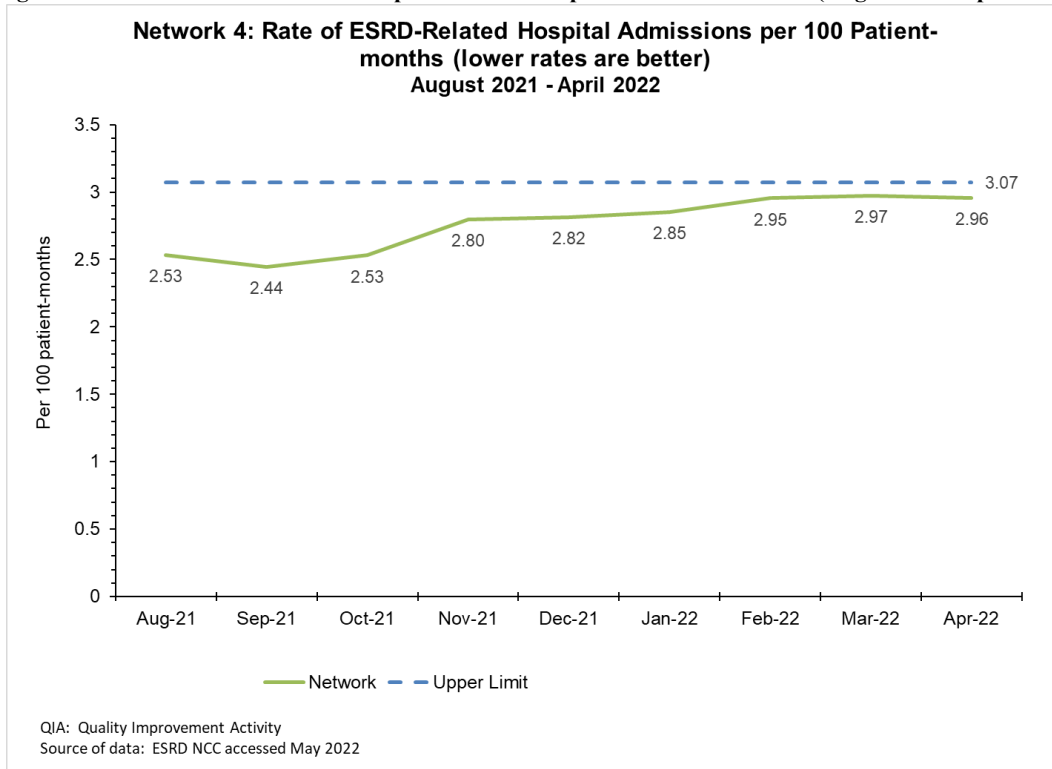


Figure 28 – Outpatient Emergency Department Visits per 100 Patient Months (August 2021-April 2022)

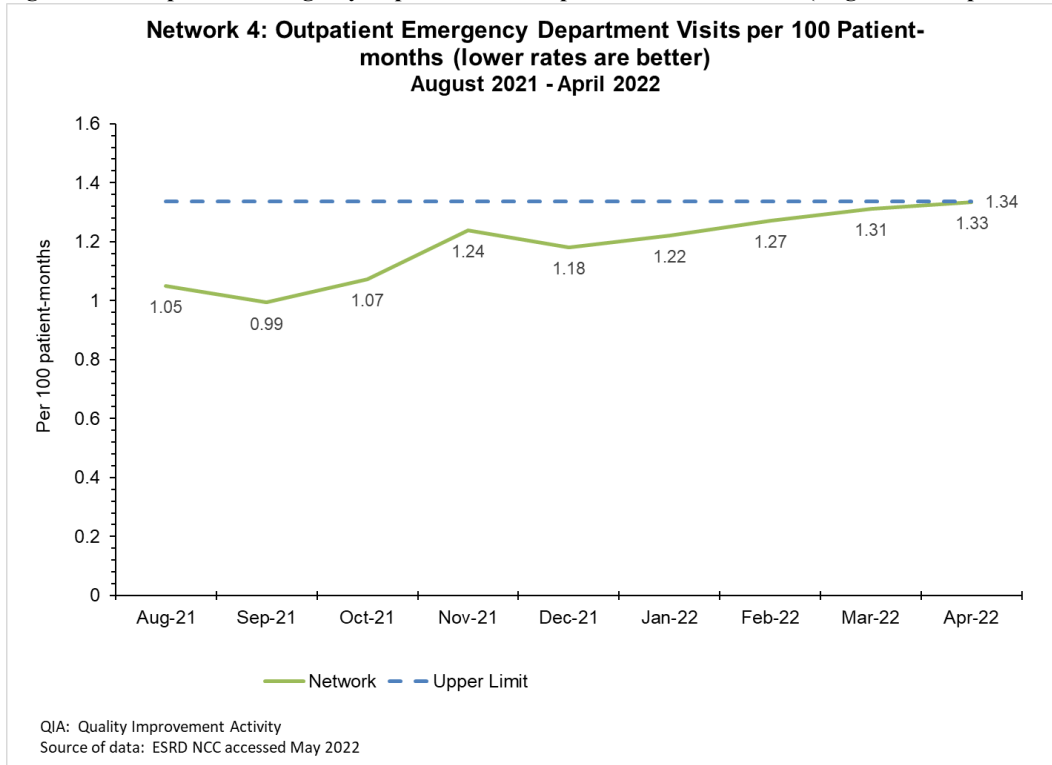


Figure 29 – Hospital 30-Day Unplanned Readmissions (as % of Hospitalizations) (August 2021-April 2022)

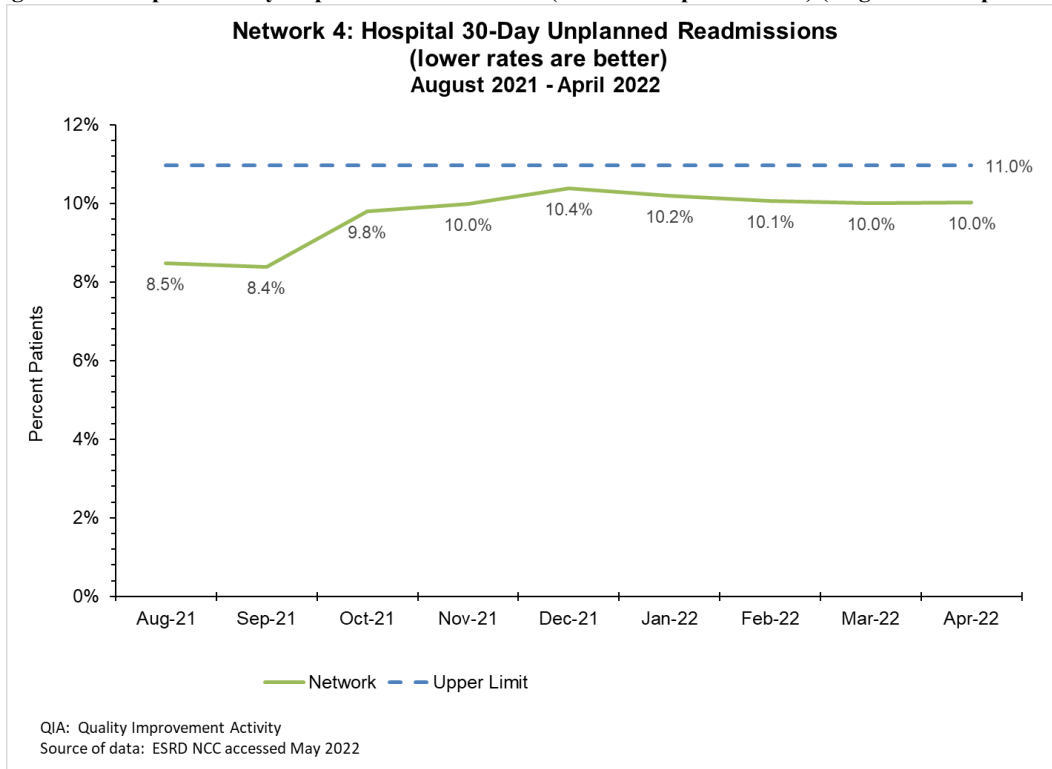
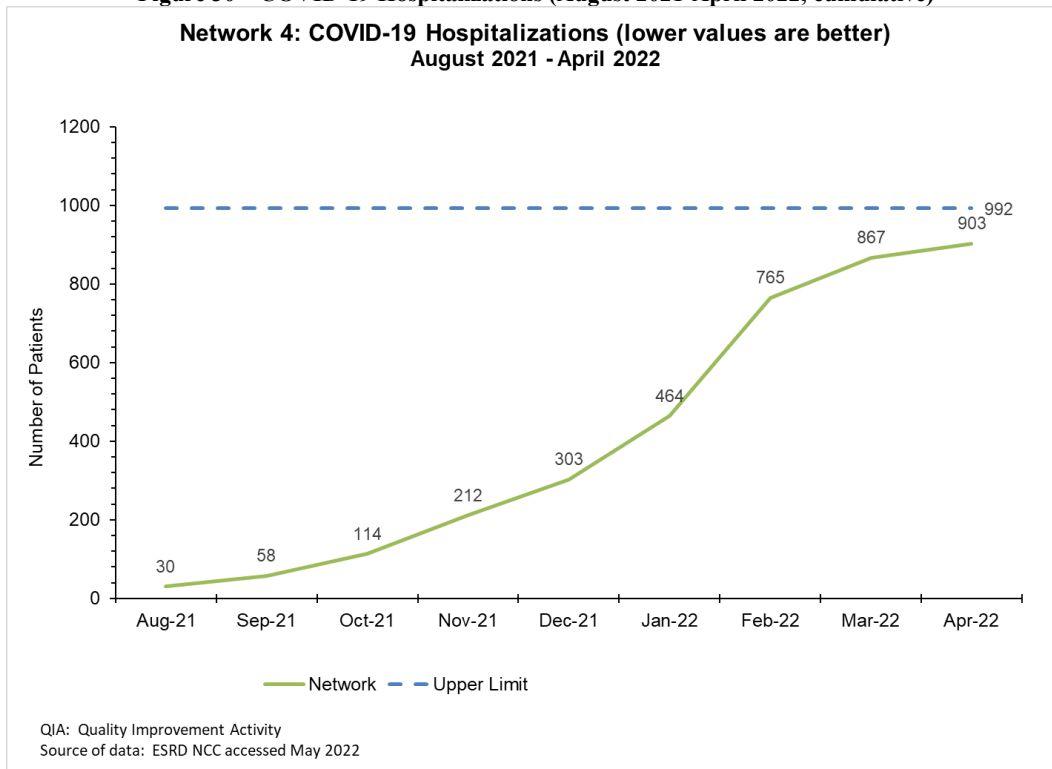


Figure 30 – COVID-19 Hospitalizations (August 2021-April 2022, cumulative)



Depression June–April 2022

Due to contract goal adjustments, the Network worked toward the goals of this quality improvement activity but was not evaluated on results.

Network Goal

Increase the percentage of patients accurately identified as having depression.

Increase the percentage of patients identified as having depression who are treated by a mental health professional.

Project Participants

Low performing dialysis providers that participated in other 2021/2022 Network projects—specifically those projects focused on increasing transplant and home dialysis, and reducing hospitalization readmission—were targeted for behavioral health screening and treatment interventions.

Interventions

We developed and disseminated a patient-centered document, *Finding the Words*, to help patients identify and share with providers their feelings and symptoms of mental/behavioral health issues.

We leveraged 1:1 grievance calls to identify areas for improvement regarding behavioral and mental health outcomes.

We collaborated with transplant centers within the Network service area to discuss upstream ideas for addressing behavioral health concerns that could pose a delay to being waitlisted.

We disseminated resources and strategies for behavioral health screening and treatment to include the Boris L. Henson Foundation (up to five free telehealth therapy treatments), Primary Care Behavioral Health Model, materials to improve awareness of Seasonal Affective Disorder (SAD) and its relationship to depression, and the BIPOC Mental Health Month Toolkit.

We developed and disseminated the Mindful Pathways Cheat Sheet, which supports the identification, accurate documentation, and increase in QIP score.

Results

The Depression Feature was not available in EQRS during the performance period, therefore data is not available.

Nursing Home June-April 2022

Due to contract goal adjustments, the Network worked toward the goals of this quality improvement activity but was not evaluated on results.

Goal of QIA: Achieve a 2% decrease (less 0.17% for each month that the nursing home patient feature is unavailable) in the rate of dialysis patients receiving dialysis at nursing homes that receive a blood transfusion from the baseline to the end of the base period.

Achieve a 4% decrease (less 0.33% for each month that the nursing home feature is unavailable) in the hemodialysis catheter infection rate, in dialysis patients receiving home dialysis within nursing homes from baseline to the end of the base period.

Achieve a 2% decrease (less 0.17% for each month that the nursing home feature is unavailable) in incidents of peritonitis in dialysis patients receiving home dialysis within nursing homes from baseline to the end of the base period.

Results: The following figures show that providers in the Network 4 service area met these goals. No nursing home patients were utilizing peritoneal dialysis during the project period.

Interventions: We deployed a multi-pronged partnership approach that included Advisory Committee, Community Coalition, and facility-level technical assistance. Our Advisory Committee met to discuss barriers and strategies at the beginning of the contract. We provided focus assistance for several low-performing facilities. We used the Institute for Healthcare (IHI) Model for Improvement methodology, including the use of root cause analysis (RCA), development of a facility-specific quality improvement plan, and use of Plan-Do-Study-Act (PDSA) cycle(s) to test change improvement. As targeted facilities submitted their monthly progress reports, facilities were expected to make changes to their proposed interventions if necessary until the completion of the project. As a result of PDSA feedback, we developed an educational brochure on preventing peritonitis and deployed available educational materials.

Identified Best Practices: There were two main nursing home dialysis providers in the Network 4 service area. We will continue to deploy educational materials aimed at nursing home staff.

Identified Barriers: In addition to the main barrier—the COVID-19 pandemic—other barriers were the lack of nursing home staff not allowing dialysis implementation in the nursing home and the need to provide educational support because of continuous staff turnover. In addition, the lack of data presented challenges for focus intervention. Social determinants of health assessment (SDOH) showed that health literacy was an all-around barrier.

Figure 31 – Rate of Blood Transfusions in ESRD Patients Receiving Dialysis in Nursing Homes

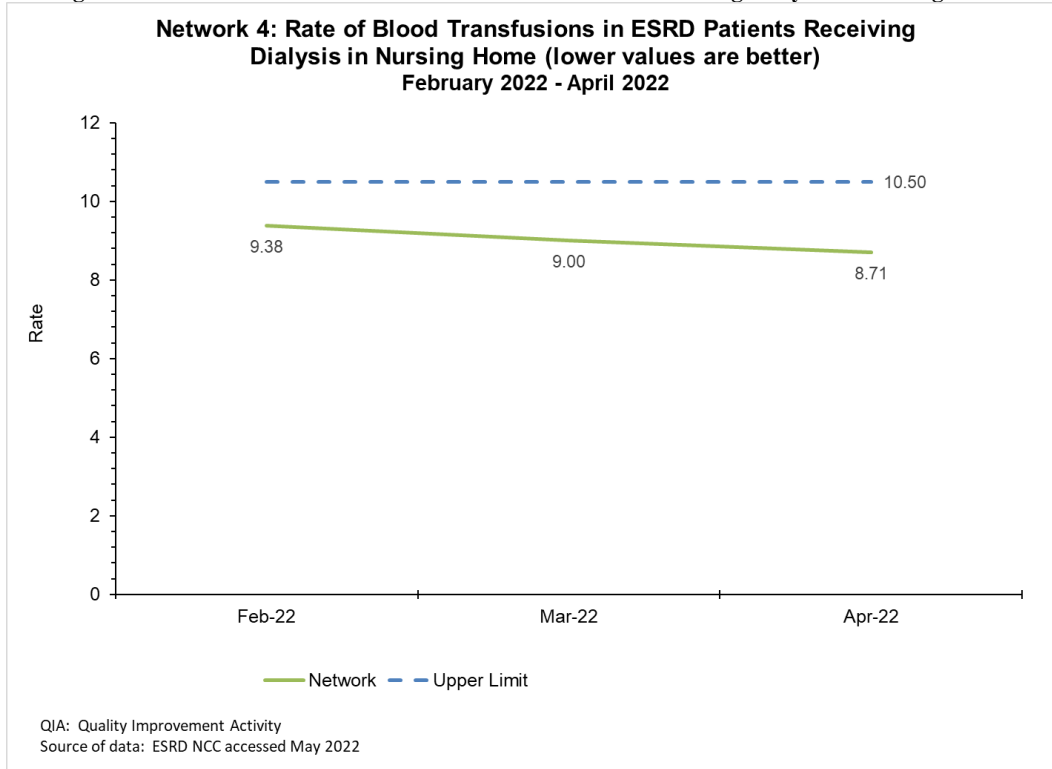


Figure 32 – Hemodialysis Catheter Infections in Home Dialysis Patients within Nursing Homes

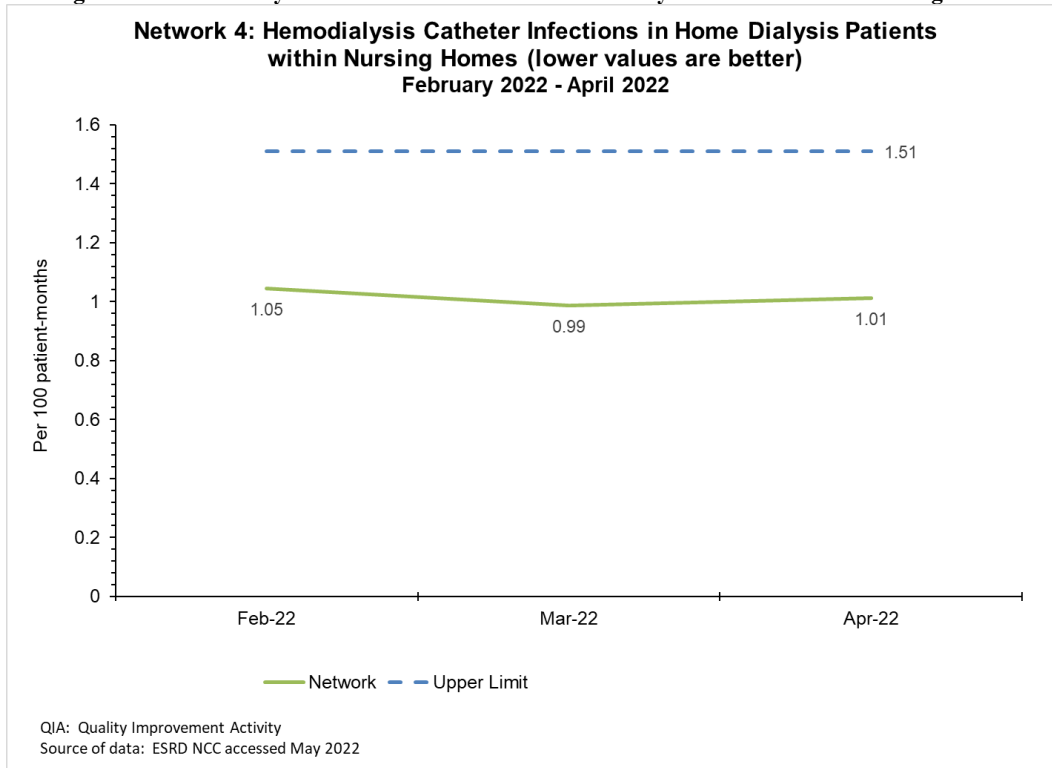
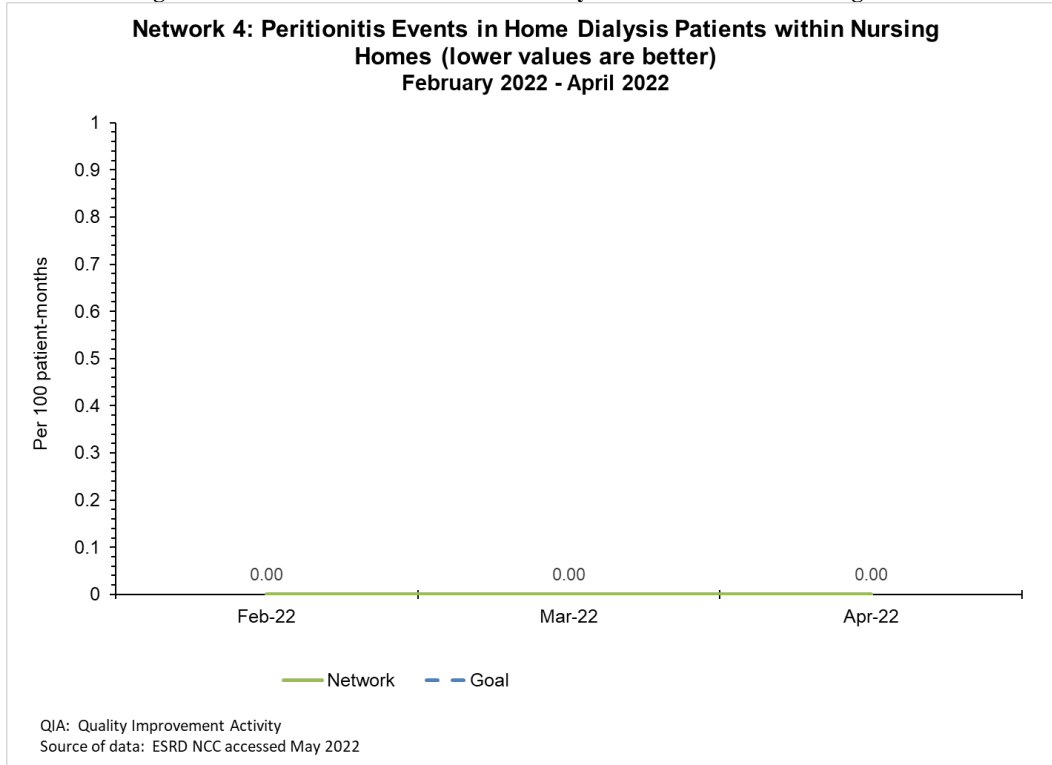


Figure 33 – Peritonitis Events in Home Dialysis Patients within Nursing Homes
Network 4: Peritonitis Events in Home Dialysis Patients within Nursing Homes (lower values are better)
February 2022 - April 2022



Telemedicine June-April 2022

Due to contract goal adjustments, the Network worked toward the goals of this quality improvement activity but was not evaluated on results.

Goal of QIA: Achieve a 2% increase in the number of rural ESRD patients using telemedicine to access a home modality from baseline to the end of the base period.

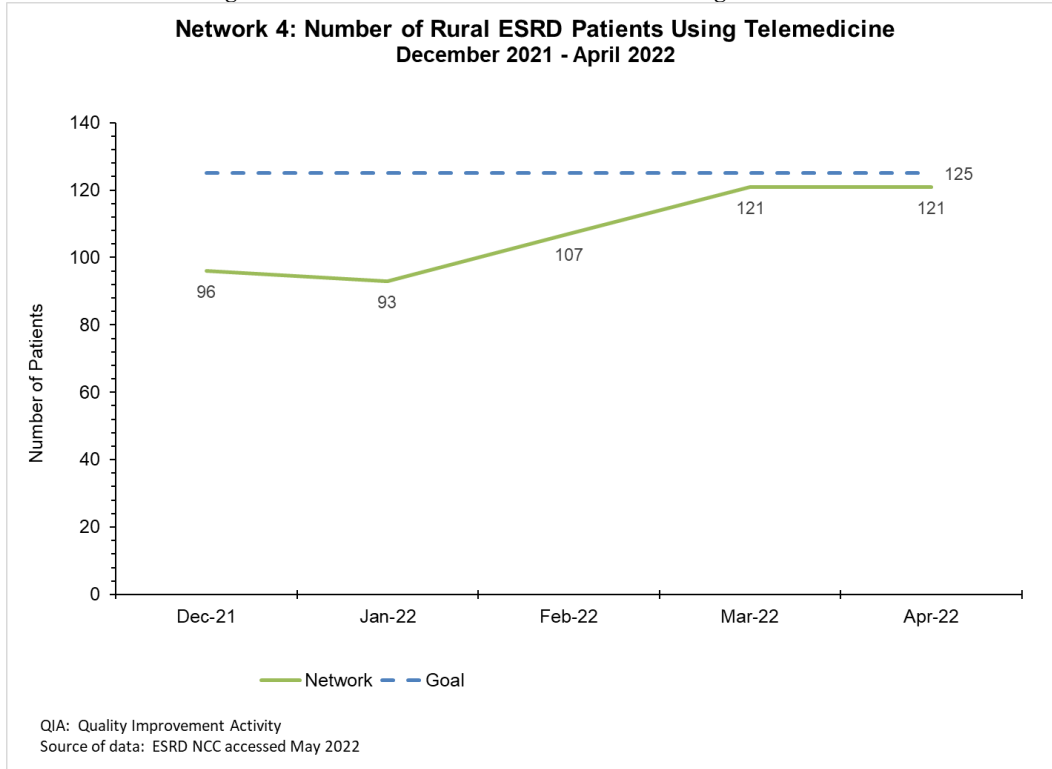
Results: As shown in the following figure, providers in the Network 4 service area narrowly missed this goal.

Interventions: We deployed a multi-pronged partnership approach that included Advisory Committee, Community Coalition, and facility-level technical assistance. Our Advisory Committee met to discuss barriers and strategies at the beginning of the contract. We provided focus assistance for several low-performing facilities. We used the Institute for Healthcare (IHI) Model for Improvement methodology, including the use of root cause analysis (RCA), development of a facility-specific quality improvement plan, and use of Plan-Do-Study-Act (PDSA) cycle(s) to test change improvement. As targeted facilities submitted their monthly progress reports, facilities were expected to make changes to their proposed interventions if necessary until the completion of the project. As a result of PDSA feedback, we disseminated telehealth educational materials.

Identified Best Practices: We did not need to develop new telehealth materials since numerous telehealth materials were available for patient education. We will continue to utilize these resources in the next project period.

Identified Barriers: Barriers were the lack of patient interest and patients prefer meeting in person. In addition, the lack of data presented challenges for focus intervention. Social determinants of health assessment (SDOH) showed that health literacy was an all-around barrier.

Figure 34 – Number of Rural ESRD Patients Using Telemedicine



ESRD Network Recommendations

Facilities that Consistently Failed to Cooperate with Network Goals

Due to staffing shortages causing facility management to frequently need to provide direct patient care and other stressors caused by the COVID-19 pandemic, we found it particularly difficult in 2021 to engage with facility staff and convince them that some of our initiatives were worth paying attention to. However, all facilities in the Network 4 geographic area eventually cooperated with Network goals and participated in our quality improvement interventions when requested.

Recommendations for Sanctions

We did not recommend sanctions for any facilities in 2021.

Recommendations to CMS for Additional Services or Facilities

We did not recommend any additional services or facilities in 2021. The facilities and services available to patients in the Network 4 geographic area are well distributed and are readily accessible to patients.



ESRD Network COVID-19 Emergency Preparedness Intervention

Since the CDC confirmed the first COVID-19 case in the United States on January 2020, the country as a whole has experienced multiple waves of the COVID-19 pandemic, including those driven by new variants. In December 2020 the FDA had authorized emergency use of two mRNA COVID-19 vaccines, the Pfizer-BioNTech and the Moderna COVID-19 vaccines. Then by early 2021 a third vaccine, the Janssen - Johnson & Johnson, had been added to the arsenal of COVID-19 vaccines that would combat the pandemic. Dialysis facility staff were included in the first phase of COVID-19 vaccine release for healthcare workers, and dialysis patients followed in the second phased release of the vaccines.

In 2021, our efforts shifted to increasing awareness, education and promotion of the COVID-19 vaccines. We continued utilizing KCER's National Emergency Situational Status Report (ESSR) and the CDC's NHSN data to conduct analysis of new COVID-19 cases and identify hotspots throughout our Network service areas. Using this information, our team provided targeted one to one technical assistance to dialysis centers with new and/or increasing COVID-19 cases. Via this technical assistance our staff were able to address emerging issues at the dialysis centers, identify if providers were applying interventions equivalent to or more stringent than the CDC's recommendations, detect nursing homes/long term care facilities who were experiencing influx of COVID-19 cases, address barriers as well as successes, identify access to COVID-19 vaccines for staff and patients, and provide individualized support.

As providers and patients' needs and questions evolve regarding the COVID-19's variants, vaccines, required boosters, masking mandates, and added guidance we implemented an effective and timely plan to disseminate tools and resources. We sustained the practice of providing educational information, support and guidance to all dialysis providers and their patients, regardless of influx in COVID-19 cases, through our QIRN4 Weekly: COVID-19 Resources & Memos / Upcoming Webinars / In Case You Missed It emails. In addition to email, newsletter and social media communications, our staff sent "Breaking News" as needed to relay pertinent time sensitive materials and information.

Sustained partnership with community stakeholders was essential to our ongoing efforts. Therefore, we continued engagement with the Delaware Healthcare Preparedness Coalition (DHPC) and the Pennsylvania's Disability Integration Task Force, which addressed COVID-19 conditions, actions, needs (current and anticipated) and status reports from state and county level agencies. In addition, the regularly scheduled KCER calls were an essential vehicle to identify issues and obtain answers from attendees such as CDC, CMS, ASPR, ASN, and dialysis corporate leadership. This allowed us to gather best practices and disseminate them throughout the Network area.

ESRD Network Significant Emergency Preparedness Intervention

We understand how impending events such as winter storms, hurricanes, severe weather, civil unrest, etc. may influence patients, staff and dialysis facility operations. As a result we maintained close communication with dialysis providers before and after each event to ensure continuity of facility operations and care of all patients. The first step in our communication process is to send situational awareness messages to all providers in the expected impacted region reporting of the event and sharing resources to help them stay informed and alert. Providers in our regions are very diligent in reporting and communicating their facility status and needs.

Timeline of Weather/Natural Events Impacting the Network 4 area

January – February 2021

Winter Storm

We submitted situational awareness email to all PA and DE dialysis providers on Friday 1/29 regarding the impending storm to impact the state between Sunday 1/31 into Tuesday 2/2. The governor of PA declared state of emergency. The majority of PA dialysis providers impacted by the storm implemented their contingency plans to provide patients' treatment on Sunday 1/31 and closed on Monday 2/1. A few providers who opened Monday 2/1, reported delayed opening and/or closure on Tuesday 2/2 with all providers returning to full/normal operations by Wednesday 2/3.

Winter Storm

Another winter storm impacted PA between 2/18 – 2/19. For much of the state, precipitation was as a wintry mix of sleet and snow (between 1" – 12") and plain rain. We sent situational awareness message to all PA/DE providers on Tuesday 2/16. Dialysis providers implemented their contingency plans to adjust patients' treatments and modified operating schedules (closed and or delayed openings). There was no severe impact from this storm. By Saturday 2/20 all providers were back to normal operations.

July 2021

Tropical Storm Elsa

The National Hurricane Center issued a tropical-storm watch for the entire Delaware coast. All Delaware counties were expected to be impacted by the storm, with Sussex County experiencing tropical storm-force winds on Thursday evening (7/8). Other than the expected 1 to 3 inches of rain and some strong winds, the storm passed by DE overnight leaving little impact.

September 2021

Hurricane Ida

The remnants of Hurricane Ida brought heavy rain, flooding, and tornadoes from the Central Appalachians through the Mid-Atlantic. Most providers in PA/DE who communicated emergency event reported delayed opening on Thursday (9/2). Patient treatments were adjusted. Some facilities reported being closed due to flooding in/round the area and lack of access to transportation. Patients were contacted and rerouted to receive treatments. All providers, resumed normal operations between Friday/Saturday (9/3 – 9/4).

Appendix

Acronym List

This appendix contains a link to a list of acronyms 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.

<https://esrdnetworks.org/education/>

Additional Acronym and Glossary Resources

Fresenius Glossary

<https://www.freseniuskidneycare.com/glossary>

National Center for Biotechnology Information Acronyms and Abbreviations

<http://www.ncbi.nlm.nih.gov/books/NBK84563/>

Renal Support Network

<http://www.rsnhope.org/programs/kidneytimes-library/article-index/renal-acronyms/>