Kidney Community
Emergency Response

END STAGE RENAL DISEASE COMMUNITY COVID-19 AFTER-ACTION REPORT AND IMPROVEMENT PLAN

November 3, 2020

Table of Contents

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Introduction

The End Stage Renal Disease (ESRD) stakeholder community, like the broader healthcare industry, has been faced with an unprecedented challenge in the COVID-19 pandemic. This after-action report and improvement plan identifies, assesses, and documents operations of the ESRD community, including KCER, through the event to date. It examines key issue areas, challenges, and best practices.

This report and improvement plan is intended to inform both overall emergency and disaster response for future events and on-going coordination for the COVID-19 pandemic.

Evaluation Overview

The analysis in this report was performed using a four-pronged evaluation approach. This involved virtual "hotwash" discussion sessions with stakeholder small groups, web-based surveys, calls with stakeholders, and document review of KCER Coordination Calls and other materials.

Data for this report and improvement plan were collected from six (6) hotwash sessions, six (6) online surveys, direct emails from stakeholders, and one direct interview with an ESRD Network.

Stakeholder groups included the 18 ESRD Networks, large dialysis providers (LDOs), small and independent providers (SDOs), federal agencies, professional associations, and the Kidney Community Emergency Response (KCER) program team. Feedback from stakeholders was supplemented by a review of KCER Coordination Call summaries and select notes shared from additional ESRD stakeholder calls.

Data and findings are organized around four (4) core capabilities:

1. **Situational Assessment**: This core capability describes activities of ESRD stakeholders that supported collective situational awareness related to the pandemic and the ability of all partners to analyze and determine proper courses of action in response to the situation.

2. **Operational Communication**: This core capability describes data and information sharing processes among ESRD stakeholders. It is differentiated from the situational assessment capability in that it is not solely focused on tracking the pandemic but on sharing information on response activities and status among the ESRD community.

3. **Operational Coordination**: This core capability describes the ESRD stakeholder community's activities to maintain operations and continue dialysis care throughout the COVID-19 pandemic. These activities may have included needs assessments, requests for information and assistance, and asset management between providers, Networks, and other partners.

4. **Logistics and Supply Chain Management**: This core capability describes coordination of providers and Networks with appropriate supply chains for critical supplies, such as personal protective equipment (PPE), to maintain operations and fulfill additional resource requests.

The evaluation effort was anchored by analysis around these four capabilities. The evaluation team developed stakeholder subgroup-specific objectives to further shape findings. Appendix A: Stakeholder Subgroup Objectives contains the full list of subgroup objectives.

ESRD Community COVID-19 Response Summary

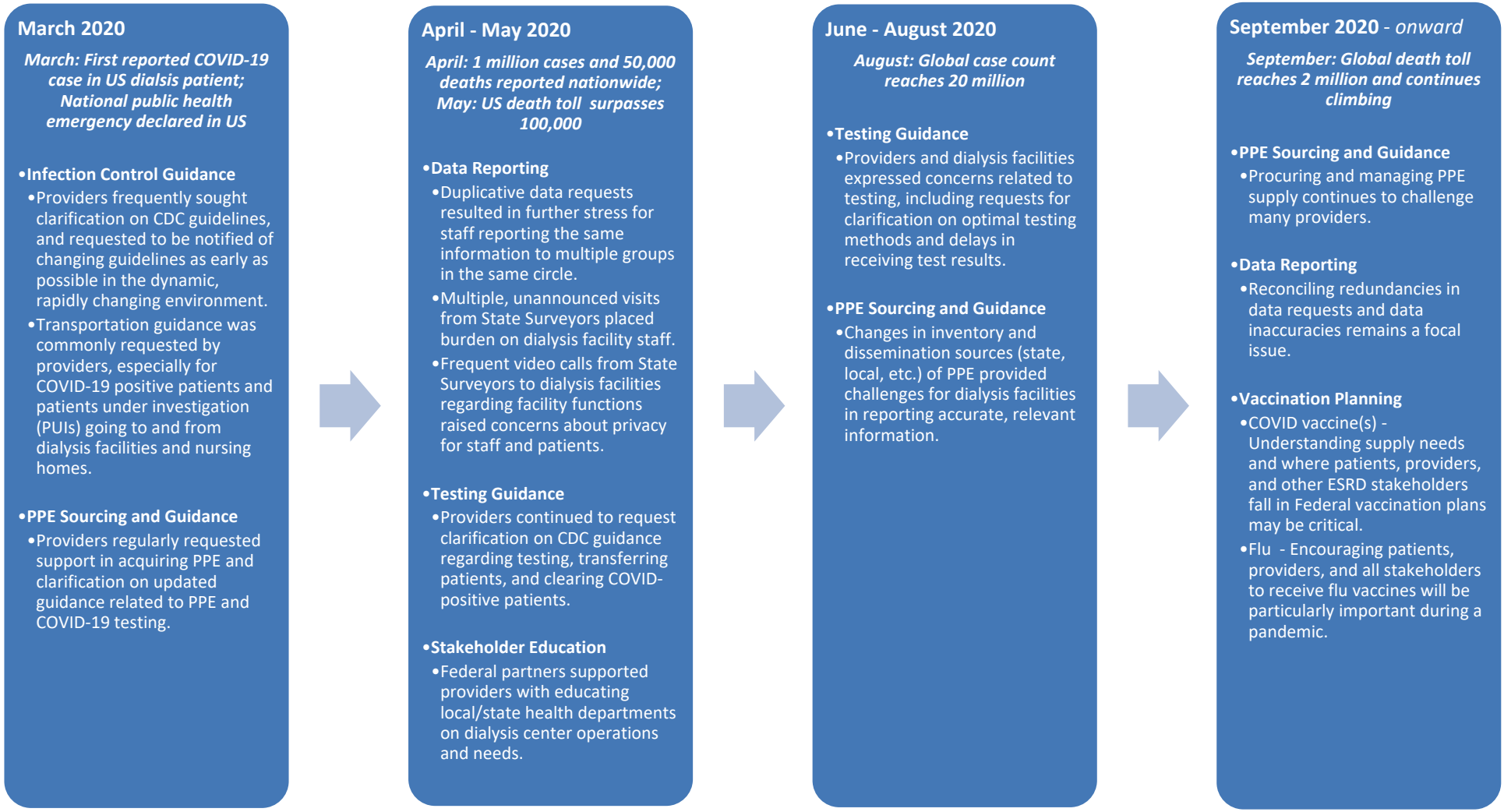
The Centers for Disease Control and Prevention (CDC) confirmed the first COVID-19 case in the United States on January 20, 2020, and the spread of this infectious respiratory disease caused by the SARS-CoV-2 virus was characterized as a pandemic by the World Health Organization (WHO) on March 11, 2020. This disease outbreak has accordingly impacted society at large and has been considered a particular threat to outpatient care settings in the US, such as dialysis clinics.

According to the CDC, the ESRD status of dialysis patients is a top vulnerability indicative of increased risk for severe illness from COVID-19. The dialysis providers, ESRD National Coordinating Center (NCC) and the ESRD Networks, federal public health agencies, professional associations, and the KCER program responsible for managing dialysis care during disasters faced a unique call to action and stepped up to respond. The following page contains a chronological summary of key issues faced in the COVID-19 response by the ESRD stakeholder community to date.

Chronology of Key Issues

The following timeline chronicles primary issues and coordination efforts of the ESRD stakeholder community as the pandemic progressed domestically. Issues were informed by recurring challenges and themes in KCER Coordination Call summaries. This timeline is intended to serve as a high-level overview of the focus areas as the response progressed. It should not be considered a comprehensive list of challenges faced by the ESRD stakeholder community.

Figure 1. *Evolution of key issues in the COVID-19 response for ESRD stakeholders.*



Analysis of Core Capabilities

The following is a list of the key strengths and areas of opportunity found in the analysis of each core capability. In-depth analysis and proposed corrective actions may be found in subsequent sections.

Situational Assessment:

Major Strengths

1. **Leveraging public sector partnerships**: Establishing new partnerships and leveraging existing relationships with healthcare coalitions, emergency management, public health partners enabled stakeholders to receive necessary situational updates.
2. **Consolidating and packaging information**: Stakeholders benefited from the consolidation of expansive (and evolving) amounts of information from multiple sources through newsletters and/or email updates.
3. **Sharing best practices through KCER calls**: Leveraging and sharing situation updates from stakeholders in early impact and/or particularly hard-hit regions, including ESRD Network 16 and Network 2-3, helped inform future response efforts.

Areas of Opportunity

1. **Evaluating response plans to account, to the extent possible, for ongoing, widespread, and complex societal impacts**: The ESRD community reported gaps in contingency plans for the range of unprecedented needs of staff, patients, and stakeholders. As the pandemic is ongoing and epidemiological evidence and data are becoming more accessible, there is an opportunity to adjust plans and procedures as well as forecast needs based on likely scenarios.
2. **Methods for reconciling local, state, and federal guidance and information in a highly dynamic environment**: Ongoing management of evolving federal guidance and scientific information on the virus and disease, in accordance with state and local guidance, is a noted strain on the ESRD community.
3. **Awareness of ancillary and external health care facility status**: Improved situational awareness on skilled nursing facilities, hospitals, and home dialysis needs is a reported need from ESRD stakeholders.
4. **Tracking fraud in contact tracing and PPE sourcing**: Tracking fraud attempts facing the dialysis industry may improve the readiness of providers to appropriately respond to and mitigate against potential fraud attacks.

Operational Communications:

Major Strengths

1. **Agility of KCER communication mechanisms to meet COVID-19 needs**: Management of requests for information or assistance (RFI/RFAs) during KCER calls and summaries of issues in call notes are critical mechanisms used by stakeholders to share updates and track issues.

2. **Agile and widespread participation in Emergency Situational Status Reporting (ESSR)**: Flexibility and widespread participation of providers, KCER, and ESRD Networks in responding to extensive and dynamic data requests from the federal government was a notable benefit to situational awareness.
3. **Patient communication methods**: Introducing flexible and innovative patient communications strategies, primarily among Networks, helped stakeholders manage communications with patients.
4. ***Best practice* – Innovative communication mechanisms**: Standing up new communication channels such as dashboards, Smartsheets, landing webpages, and/or newsletters helped manage unanticipated communications needs of the COVID-19 response.
5. ***Best practice* – ESRD National Coordinating Center (NCC) data management**: KCER data management for ESSRs benefited from the involvement of and support from the NCC data team.

Areas of Opportunity

1. **Data reporting and management**: The scope and scale of the COVID-19 pandemic and the need for aggressive case surveillance created an unprecedented burden on ESRD stakeholders, and a myriad of unexpected challenges for each group.
2. **Facility surveying awareness and protocols**: Increased communication between providers, Networks, and CMS and state survey agencies may increase alignment between surveyor regulation and federal COVID-19 guidelines and allow surveyors to track the development of new provider operating procedures and feedback on survey burden and impacts to patient care.
3. ***Potential threat* - Managing patient resistance to new protocols**: Improving communications to patients on new protocols may support cooperation with safety measures and mitigate against resistance, hesitancy, and fear.

Operational Coordination:

Major Strengths

1. **Innovative infection control procedures**: Management of operational transitions needed for infection control resulted in the implementation of several best practices, including isolation clinics coordinated across providers.
2. **Innovative partnerships**: Innovate coordination mechanisms and partnerships with external partners, such as emergency management and public health agencies, helped support response to regional issues.
3. **Unprecedented collaboration to create resources**: Collaboration across providers and Networks led to the creation of needed guidance and educational materials for stakeholders.
4. ***Best practice* - "Acute transportation conduit system"**: Establishing ad hoc transportation management system(s) and coordination mechanisms may reduce transportation coordination challenges.

5. ***Best practice* – Ad hoc coordination for care transitions**: Introducing new coordination practices for transitions of care between facilities may prevent breaches in infection control procedures.

Areas of Opportunity

1. **Strengthening relationships with supporting healthcare facilities**: Improved coordination with nursing home and hospital groups/associations on a range of dialysis care issues is a need consistently reported by stakeholders.
2. **Transportation**: The coordination of transportation needs for dialysis patients seeking treatment and sometimes navigating multiple healthcare facilities was impacted by a few key challenges. See additional details in the in-depth analysis section.
3. **Coordination between federal surveillance and federal support**: An opportunity exists for clear coordination between COVID-19 case reporting and management of support requests and needs.
4. ***Recommendation* – Regular sharing of contact lists**: ESRD community stakeholders may benefit from KCER regularly sharing contact lists with all stakeholders.

Logistics and Supply Chain Management:

Major Strengths

1. **Establishing ESRD stakeholder guidance for PPE optimization**: Networks and providers leveraged public health guidance to create guidance on optimizing usage of personal protective equipment (PPE) in response to widespread PPE supply limitations, with the support of KCER in sharing of such guidance.

Areas of Opportunity

1. **Improved coordination across ESRD stakeholders for PPE management**: ESRD stakeholders reported several coordination barriers in procuring and managing PPE supply. See additional details in the in-depth analysis section.
2. ***Potential threat* – Influenza vaccination coordination**: There may be an upcoming need for coordination of COVID-19 and flu vaccination supplies for the ESRD community.

In-depth analysis

This section contains all strengths and areas of opportunity identified by the evaluation team, a brief explanation of each finding, and proposed corrective actions to resolve issue areas.

Please note the corrective actions proposed in this report are recommendations of the evaluation team based on the analysis of each area of opportunity and feedback from stakeholders only. The proposed actions do *not* represent mandates or any other required procedures. Stakeholders are encouraged to use these corrective actions to guide future hazards planning and ongoing coordination during the COVID-19 response, as the proposed corrective actions in this report are recommendations only and not subject to enforcement.

Core capability 1: Situational assessment

Description: This core capability describes activities of ESRD stakeholders that supported collective situational awareness related to the pandemic and the ability of all partners to analyze and determine proper courses of action in response to the situation.

Strengths

1. **Leveraging public sector partnerships:** Establishing new partnerships and leveraging existing relationships with healthcare coalitions, emergency management, public health partners enabled stakeholders to receive necessary situational updates.

   Analysis: Providers and ESRD Networks benefited from strategic relationships with federal public health partners through KCER, including relationships with and information from CDC, the US Department of Health & Human Services/Office of the Assistant Secretary for Preparedness and Response (HHS/ASPR), and the Centers for Medicare & Medicaid Services (CMS). Providers noted benefits from the presence of and regular briefings from the CDC during KCER coordination calls. Beyond established relationships with federal agencies, relationships with local and state-level public health and emergency management partners supported ESRD stakeholders in tracking key issues such as patient transportation and personal protective equipment (PPE) usage guidance.

2. **Consolidating and packaging information**: Stakeholders benefited from the consolidation of expansive (and evolving) amounts of information from multiple sources through newsletters and/or email updates.

   Analysis: A best practice implemented by KCER, ESRD Networks, and association partners was the consolidation of expansive updates, particularly information from federal agencies, into appropriate media such as:

   - ESRD Network to provider newsletters
   - American Society of Nephrology (ASN) webinars and updates about regulatory waivers

- National Renal Administrators Association (NRAA) meetings
- KCER email updates on information from CDC, HHS/ASPR, and association partners

3. **Sharing best practices through KCER calls**: Leveraging and sharing situation updates from stakeholders in early impact and/or particularly hard-hit regions, including ESRD Network 16 and Network 2-3, helped inform future response efforts.

   Analysis: Several providers, particularly independent/small providers, indicated the utility of updates from west coast providers, particularly North West Kidney Centers, and later, New York region providers and ESRD Networks, for their own situational awareness on likely impacts from the pandemic. Early nationwide coordination calls gave the ESRD community improved situational awareness and an opportunity to 'get ahead' of pandemic planning in some issue areas. Stakeholders were able to anticipate likely challenges with infection control procedures, PPE optimization and procurement best practices, and COVID-19 transportation safety challenges.

Areas of Opportunity

1. **Evaluating response plans to account, to the extent possible, for ongoing, widespread, and complex societal impacts**: The ESRD community reported gaps in contingency plans for the range of unprecedented needs of staff, patients, and stakeholders. As the pandemic is ongoing and epidemiological evidence and data are becoming more accessible, there is an opportunity to adjust plans and procedures as well as forecast needs based on likely scenarios.

   Analysis: There were reported gaps in preparedness planning for whole-of-society disruptions that impacted operations beyond the expected adjustment to dialysis care and response coordination, e.g. widespread teleworking, disruptions to childcare services (and the associated burden on staff with children), and school closures. Stakeholders noted challenges adjusting for staff absenteeism and strain due to new family caregiver responsibilities given widespread social distancing mandates and teleworking requirements. Additionally, pandemic planning did not always account for the personal limitations staff faced in shifting to an acceptable teleworking environment, given a myriad of individual technical barriers at home. Increased situational awareness of personal staff teleworking capabilities and likely impacts on their personal lives in a pandemic stands to improve pandemic planning. Stakeholders reported challenges in pandemic planning and response were also due to their dependence on verified scientific information and public health guidance, which may both be subject to delays and unanticipated developments during a pandemic.

   N.B. Response planning includes codifying the level of responsibility organizations take in supporting staff through these societal disruptions.

   Proposed corrective action: (1) Update ESRD stakeholder pandemic response plans (particularly ESRD Network pandemic annexes, including any Clinical Standards of Care or other recommendations for providers) with targeted protocols to respond to complex

disruptions in continuity of society, such as childcare service disruptions, school closures, widespread teleworking. (2) Consider adjusting thresholds for KCER coordination calls to promote an even earlier ESRD community response and proactive situational awareness for all stakeholders.

2. **Methods for reconciling local, state, and federal guidance and information in a highly dynamic environment:** Ongoing management of evolving federal guidance and scientific information on the virus and disease, in accordance with state and local guidance, is a noted strain on the ESRD community.

   Analysis: Many stakeholders cited maintaining situational awareness of infection control best practices, regulations, and national response plans, as a primary challenge of the COVID-19 response. Stakeholders cited challenges with reconciling federal guidance with that of evolving state and local guidance. While all regions did not face uniform issues, there were consistent reports, from providers especially, of challenges reconciling guidance received from state and/or local public health departments with the guidance received from federal agencies, such as the CDC and/or CMS. Of note were perceived discrepancies in guidance related to screening processes, COVID-19 testing requirements, and the discontinuance of COVID-19 positive status (i.e. using test-based versus time-based strategies to discontinue a COVID-19 positive status within the staff and/or patients.)

   Proposed corrective actions: (1) Involve public health associations representing state and local level authorities to improve alignment between state, local, and federal guidance (e.g. the National Association of County and City Health Officials [NACCHO] and the Association of State and Territorial Health Officials [ASTHO]); (2) Establish a single ESRD community dashboard to track guidance.

3. **Awareness of ancillary and external health care facility status**: Improved situational awareness on skilled nursing facilities, hospitals, and home dialysis needs is a reported need from ESRD stakeholders.

   Analysis: Challenges with tracking skilled nursing facility status were consistently reported by ESRD Networks and providers as a major issue throughout the response. The notable issue areas impacted by nursing home status include tracking their ability to accept COVID-19 positive dialysis patients and managing transportation needs when transferring patients between facilities. There were issues with identifying and understanding home dialysis needs early on to improve home dialysis support. Providers also flagged the need to track unexpected requests from hospitals, such as PPE for contracting staff supporting dialysis patients.

   Proposed corrective action: Involve nursing home associations, home care associations, hospital associations, and quality improvement organizations (QIOs) working with long term care facilities in KCER communications and coordination mechanisms.

4. **Tracking fraud in contact tracing and PPE sourcing**: Tracking fraud attempts facing the

dialysis industry may improve the readiness of providers to appropriately respond to and mitigate against potential fraud attacks.

Analysis: Improved resources for identifying fraudulent and malicious behaviors harming providers within PPE procurement, such as the identification of illegitimate PPE vendors and price gouging attempts, would improve mitigation against such issues. This was a well-documented and widespread challenge within and outside of healthcare but proved particularly challenging in the ESRD community where dialysis treatment is critical and routinely scheduled and patients are already high risk. Additionally, improved ESRD community tracking of common fraud threats, such as contact tracing scams, could enable providers to create universally acceptable strategies to protect their data privacy.

Proposed corrective actions: (1) Providers may consider requesting or collaborating on uniform guidance to identify and respond to fraud attempts, with guidance and input from relevant Federal authorities and working groups (e.g. Federal Bureau of Investigation [FBI], the Food and Drug Administration [FDA].) (2) KCER and networks may consider increasing targeted information and resourced shared with provider organizations during calls and within existing communications channels on fraud attacks.

Core capability 2: Operational communications

Description: This core capability describes data and information sharing processes among ESRD stakeholders. It is differentiated from the situational assessment capability in that it is not solely focused on tracking the pandemic but on sharing information on response activities and status among the ESRD community.

Strengths

1. **Agility of KCER communication mechanisms to meet COVID-19 needs**: Management of requests for information or assistance (RFI/RFAs) during KCER calls and summaries of issues in call notes are critical mechanisms used by stakeholders to share updates and track issues.

   Analysis: KCER calls were consistently noted to be well managed and useful for a variety of communications needs such as tracking support requests and sharing status and concern areas. Out of all communication mechanisms commonly used by ESRD stakeholders, KCER calls were most often cited in survey responses as useful for addressing communication and information-sharing challenges. Independent providers and other stakeholders new to KCER, such as provider groups not typically impacted by natural hazards, especially noted the calls were an invaluable tool to collaborate with other providers and avoid siloed decision-making in an uncertain situation.

2. **Agile and widespread participation in Emergency Situational Status Reporting (ESSR)**: Flexibility and widespread participation of providers, KCER, and ESRD Networks in responding to extensive and dynamic data requests from the federal government was a notable benefit to situational awareness.

Analysis: While areas of opportunity related to reporting were identified (see Areas of Opportunity section), there has been a high rate of participation (over 7,450 out of 7,716 facilities, as of September 24) in ESSRs. Providers were flexible in providing new types of information as the specific data requests changed throughout the response. This signaled a commitment to data integrity and the flexibility and earnestness of ESRD community stakeholders to improve situational awareness as best they could.

3. **Patient communication methods**: Introducing flexible and innovative patient communications strategies, primarily among Networks, helped stakeholders manage communications with patients.

   Analysis: The following practices were shared from Networks and a few providers, that allowed these groups to keep patients abreast of important (and changing) safety protocols, identify patient needs and concerns, and track overall patient status:

   - Patient helplines and hotlines were helpful tools to identify and support patient concerns. Some ESRD Networks implemented new helpline guides to increase the effectiveness of patient support. Other notable efforts included ad hoc management of staff to cover 24-hour hotlines and virtual hotline management tools.
   - Mass texting services, particularly the *Text-Em-All* mass text messaging and automated calling service, was used to efficiently keep patients abreast of safety protocols and other updates.
   - COVID-19 specific webpages, such as the IPRO ESRD Network COVID-19 Patient Resources Site, were established by many providers and networks as an easy-to-access tool for patients to track information on their dialysis treatment during COVID-19.
   - Patient portals and Google groups were used by a few ESRD Networks to improve consistent and virtual interaction with patients.

4. ***Best practice*** **- Innovative communication mechanisms**: Standing up new communication channels such as dashboards, Smartsheets, landing webpages, and/or newsletters helped manage unanticipated communications needs of the COVID-19 response.

   Analysis: Outside of the KCER calls, the following newly established systems, implemented for ESRD Networks and providers' internal coordination needs, helped stakeholders manage the deluge of information needs unique to the COVID response:

   Interactive mechanisms for stakeholders to track dynamic information and status changes:

   - Use of online dashboards such as BaseCamp and Caspio kept broad stakeholder groups abreast of needs and support requests.
   - Including mapping software, such as Tableau, into regional information-sharing mechanisms, helped promote easy interpretation and issue tracking.

- An app established by one provider group helps manage the screening of patients and staff and the related symptom tracking.
- Leveraging non-KCER coordination calls, such as Network calls and separate task force calls, maintains communications among Networks and providers in support of regional level issues and other specific issues like isolation clinic management.

Ad hoc informational sources:

- Establishment of new weekly newsletters across many Networks supported providers tracking the regional level response.
- Creation of COVID-19 specific webpages by KCER, ESRD NCC, providers, and ESRD Networks, allowed a range of stakeholders, in addition to patients, to access recent updates and critical information on dialysis care.

5. ***Best practice – ESRD National Coordinating Center (NCC) data management***: KCER data management for ESSRs benefited from the involvement of the NCC data team.

   Analysis: The unique surveillance needs of the COVID-19 response, including nationwide data and infectious case and mortality counting, exceeded facility operational status reporting from specific regions that are standard during smaller-scale natural disasters. This difference and increased data management burden required and benefited from the strong technical support from statisticians contracted through the ESRD National Coordinating Center.

Areas of Opportunity

1. **Data reporting and management**: The scope and scale of the COVID-19 pandemic and the need for aggressive case surveillance created an unprecedented burden on ESRD stakeholders and a myriad of unexpected challenges for each group.

   Analysis: There are persistent challenges impacting the ability of providers to complete data reports, benefit from data reporting, and provide true value to those (federal partners and Networks) making these data requests. Challenges identified by and/or impacting each stakeholder group include:

   - **Networks** reported challenges with reconciling inaccuracies and incomplete data reporting from providers (e.g. ensuring accuracy given data is entirely self-reported); incomplete reporting of mortality rates from providers and discrepancies on determining cause of death; and improving direct lines of data sharing between Networks and providers, without overburdening providers managing federal data requests.
   - **Providers** reported challenges with managing redundancy in reporting requests (duplicate data requests of providers from Networks and CMS); navigating restrictions about data sharing that limit potential coordination with emergency management and public health partners; management of data reports needed for

overlapping events (e.g. burdensome data reporting during hurricane and wildfire seasons); reconciling data with patient lists and/or using patient identification systems to avoid duplicate case counts, and; managing lags in federal guidance for key issues areas such as strategies to discontinue COVID-19 positive status.

- **Federal Partners** reported challenges with burdens placed on providers and other data reporters due to evolving federal data requirements; limited involvement of CDC in providing their expertise and logistical support on early surveillance efforts, prior to the introduction of National Healthcare Safety Network (NHSN) modules; improved transparency about rationale for data requests; and establishing clear data definitions and protocols sooner in the response**.**
- **KCER** reported challenges with managing limitations in existing data reporting systems (e.g. updating and adjusting ESSR reports to meet unique COVID-19 needs such as case counting and mortality rate and fully establishing newer technologies or automatic systems for data reporting); coordinating with federal partners to establish clear data definitions and protocols sooner; and navigating codified data sharing protocols that limit the ability to establish a picture of dialysis status for all ESRD stakeholders at the national/local/regional level and improve bidirectional information sharing, instead of data flow just from providers up to federal partners.

Proposed corrective actions: (1) Reconcile data reporting redundancies between ESRD Networks and federal agencies by mapping out current requirements and reporting frequencies; (2) Update standard data reporting structures to be more easily adapted for the data needs of a range of hazards, especially disease outbreaks; (3) Incorporate patient identification methods (e.g. use of unique patient identifiers [UPIs]) into COVID-19 case and PUI reporting to improve accuracy of case counts; (4) Consider requesting incident case reports versus cumulative cases in data reporting protocols to improve clarity in data requests; (4) Update data sharing protocols to encourage lateral coordination efforts and situational awareness of external stakeholders; (5) Integrate use of existing online administrative systems and/or electronic medical records (EMRs) used by providers into data reporting protocols to streamline reporting across stakeholders within and outside of the ESRD community.

2. **Facility surveying awareness and protocols:** Increased communication between providers, Networks, and CMS and state survey agencies may increase alignment between surveyor regulation and federal COVID-19 guidelines and allow surveyors to track the development of new provider operating procedures and feedback on survey burden and impacts to patient care.

   Analysis: Providers consistently reported ongoing challenges managing the needs coming from surveyors, in particular the need to dedicate staff time to hosting site visits, while the heightened pandemic-era clinical workload already keeps staff stretched thin. There were many reports of conflict between COVID-19 public health regulations and the criteria used by surveyors when evaluating sites. Moreover, providers did not see intrinsic value in the

surveys as they did not seemingly result in any support from federal partners for identified challenges. More communication on surveying issues among involved partners would likely help resolve these conflicts and misunderstandings.

Proposed corrective actions: Integrate state-level surveying representatives and CMS-licensed Accrediting Organizations (AOs) into standard KCER communication channels.

3. ***Potential threat - Managing patient resistance to new protocols***: Improving communications to patients on new protocols may support cooperation with safety measures and mitigate against resistance, hesitancy, and fear.

   Analysis: Some providers and ESRD Networks flagged issues with uncooperative patients, indicating the need for educational tools and resources to better explain COVID-19 protocols, how patients are being kept safe, and what cooperation providers need from patients to keep other patients and staff safe. For example, providers noted challenges encouraging patients to share COVID-19 status after seeking independent testing, for the benefit of the providers' situational awareness and isolation protocols. These patient safety communication needs may be of particular concern during any upcoming COVID-19 vaccination campaigns needed in dialysis facilities.

   Proposed corrective actions: Leverage patient-education resources developed by KCER, federal agencies, Networks, and other partners to conduct educational campaigns for patients on safety practices.

Core capability 3: Operational coordination

Description: This core capability describes the ESRD stakeholder community's activities to maintain operations and continue dialysis care throughout the COVID-19 pandemic. These activities may have included needs assessments, requests for information and assistance, and asset management between providers, Networks, and other partners.

Strengths

1. **Innovative infection control procedures**: Management of operational transitions needed for infection control resulted in the implementation of several best practices, including isolation clinics coordinated across providers.

   Analysis: Across the board, providers reported several effective strategies for implementing (1) new standards of care at the clinical level and (2) safety procedures at the corporate level to keep staff and patients safe including:

   - Coordination of isolation clinics across providers improved management and care for COVID-19 positive patients and reduced transportation challenges by streamlining needs across provider groups and reducing COVID-19 positive facilities.
   - Implementation of infection control procedures within facilities, such as cohorting patients and establishing new patient care procedures, was effective.

- *Best practice*: Some providers and Networks noted the transition to teleworking environment allowed for a seamless implementation of virtual care visits for home care patients.

2. **Innovative partnerships:** Innovate coordination mechanisms and partnerships with external partners, such as emergency management and public health agencies, helped support response to regional issues.

   Analysis: Several groups reported the establishment of new external coordination mechanisms to manage specific or regional issues that did not require national coordination through KCER. Federal partners flagged a key practice of including state-level partners on status updates for local level coordination to avoid breakdowns in communications.

   - Standing up ad hoc task forces and coordination groups across stakeholders, including providers, Networks, emergency management groups, health departments, helped meet unprecedented and persistent coordination needs, such as the creation of new guidance resources for dialysis care in a pandemic and the management of patient care transitions between health care provider groups.

   - Liaising with state-level public authorities, including public transit authorities and state Medicaid/Medicare agencies, helped providers manage unique transportation needs.

3. **Unprecedented collaboration to create resources**: Collaboration across providers and Networks led to the creation of needed guidance and educational materials for stakeholders.

   Analysis: Stakeholders, especially providers, collaborated to support each other's operational needs. These efforts included:

   - Creating materials to educate emergency management partners on the criticality of dialysis treatment,

   - Jointly developing and sharing transportation guidance for COVID-19 positive patients, patients under investigation (PUIs), and general dialysis transportation during COVID-19, and

   - Establishing and sharing best practices across the field for COVID-19 screening and infection control procedures within clinics.

4. ***Best practice- "Acute transportation conduit system"***: Establishing ad hoc transportation management system(s) and coordination mechanisms may reduce transportation coordination challenges.

   Analysis: A notable best practice for transportation coordination is the virtual platform for management of transportation requests, transportation needs tracking, and identification and mapping of transportation partners and assets managed by Network 9.

5. ***Best practice – Ad hoc coordination for care transitions***: Introducing new coordination practices for transitions of care between facilities may prevent breaches in infection control procedures.

   Analysis: Of note, Network 9 established a "Call Ahead Culture" to open lines of communication when transferring patients between dialysis facilities and their hospital and nursing home partners, which helped prevent possible COVID-19 exposures. Other groups created patient information forms to share between healthcare providers.

Areas of Opportunity

1. **Strengthening relationships with supporting healthcare facilities**: Improved coordination with nursing home and hospital groups/associations on a range of dialysis care issues is a need consistently reported by stakeholders.

   Analysis: In addition to the need for better situational awareness on these facilities' status, there is a notable opportunity for increased coordination between these groups and ESRD stakeholders to address various challenges including:

   - Sharing or better delegating management of transportation responsibility among these facilities could be reducing the burden of transportation challenges on the ESRD community.
   - Communication of COVID-19 testing results and patient COVID-19 or PUI status among nursing homes, hospitals, as well as US Department of Veterans Affairs (VA) outpatient facilities, would improve COVID-19 case surveillance for ESRD stakeholders.
   - Managing or establishing ***common*** protocols for patient infection control across healthcare facility types would reduce discrepancies in protocols to which patients are exposed.
   - Coordination with independent facilities, and others less familiar with KCER and ESRD Network structure, could be improved to help these groups transition into the KCER community and benefit from involvement.
   - Creating new relationships with emergency management and public health partners, such as Emergency Support Function partners, where applicable, could support a range of public health coordination needs. While the CMS Final Rule eliminates the need to document coordination with certain public health and emergency management agencies, this coordination may still be considered a best practice to resolve and track coordination challenges between healthcare facilities.

   Proposed corrective actions: (1) Involve nursing home associations, home care associations, hospital associations, and quality improvement organizations (QIOs) working with long term care facilities in KCER communications and coordination mechanisms. (2) Promote use of common patient management systems used by nursing homes such as EMRs and/or Quality Assurance and Performance Improvement (QAPI) systems. (3) Leverage Networks' roles in providing education and supporting coordination of care

between nursing homes and dialysis facilities.

2. **Transportation:** The coordination of transportation needs for dialysis patients seeking treatment and sometimes navigating multiple healthcare facilities was impacted by a few key challenges.

   Analysis: Transportation is an expected focus area for dialysis emergency response, but the COVID-19 pandemic has underscored some universal challenges including:

   - Improved engagement with transportation partners is needed to respond to transportation needs more efficiently. This may include involvement in response planning and/or integration of transportation more broadly into standard services of dialysis providers.
   - Common guidance, particularly at a national/federal level, on protocols for transporting COVID positive patient and general infection control procedures in vehicles, would reduce possible exposure risks and improve safety. Guidance for financial assistance for patients outside of Medicare/Medicaid eligibility could reduce financial burden on providers managing socioeconomically diverse patients. Effective strategies to respond to refusal from patients to utilize transportation resources and from transportation providers refusing to support transportation, due to concerns about COVID-19 exposure, could reduce unnecessary transportation barriers.
   - Determining ownership of resolving transportation management issues between stakeholders would improve efficiency of resolving transportation requests. This is of note when providers are transportation nursing home residents needing transportation to treatment.

   Proposed corrective actions: (1) Support establishment of federal or national guidance for dialysis transportation; (2) Involve potential transportation partners in regular KCER coordination; (3) Leverage non-dialysis specific federal transportation guidance and regional contact lists from the Federal Transit Administration (FTA). (4) Recommend or support the establishment of transportation waivers for dialysis companies to manage transportation internally; (5) Consider recommending federal mandates for Medicare/Medicaid transportation providers to transport dialysis patients; (6) Explore means of incentivization for state and local transportation providers servicing dialysis patients across state lines.

3. **Coordination between federal surveillance and federal support**: An opportunity exists for clear coordination between COVID-19 case reporting and management of support requests and needs.

   Analysis: Both providers and federal partners recognize the need for a clearer connection between the time investment of providers completing data reports and the value provided by federal partners analyzing these reports, through technical support and/or tangible resources such as PPE, testing supplies, waivers, and/or funding.

Proposed corrective action: Explore means of incentivization for providers completing data reporting requests.

4. **Recommendation – Regular sharing of contact lists:** ESRD community stakeholders may benefit from KCER regularly sharing contact lists with all stakeholders.

   Analysis: Some providers noted they would benefit from KCER more widely or regularly sharing contact lists per organization to enhance coordination outside of calls.

   Proposed corrective action: KCER to share ESRD contact lists quarterly, at least, or on an ad hoc basis as needed.

Core capability 4: Logistics and supply chain management

Description: This core capability describes coordination of providers and Networks with appropriate supply chains for critical supplies, such as personal protective equipment (PPE), to maintain operations and fulfill additional resource requests.

Strengths

1. **Establishing ESRD stakeholder guidance for PPE optimization**: Networks and providers leveraged public health guidance to create guidance on optimizing usage of personal protective equipment (PPE) in response to widespread PPE supply limitations, with the support of KCER in sharing of such guidance.

   Analysis: Recognizing the limitations in PPE supply availability, Networks and providers reported managing these shortages by creating guidelines that were shared broadly with ESRD stakeholders, in adherence with mandated federal protocols, on ways to safely reduce PPE burn rates in their clinics. One Network's guidance was incorporated into ESRD NCC resources.

Areas of Opportunity

1. **Improved coordination across ESRD stakeholders for PPE management:** ESRD stakeholders reported several coordination barriers in procuring and managing PPE supply.

   Analysis: One of the hallmark challenges of the COVID-19 pandemic, especially for dialysis providers, is the combination of a widespread surge in need for PPE in facilities and a strain on the national PPE supply due to the universality of this need in healthcare settings. Key issue areas identified by ESRD stakeholders include:

   - **National coordination of PPE procurement**: Lack of national or ESRD community-wide coordination mechanisms to support PPE procurement and resupplying, compounded with unclear ownership of PPE support from public sector partners created burden on providers seeking PPE. A coordination mechanism at the national level was reported to be needed by providers struggling to identify verified PPE sources.

- **PPE procurement and management in small/independent facilities**: General management of PPE needs from smaller organizations with fewer resources and/or experience with emergency management has been a challenge. These facilities, and the Networks supporting them, reported challenges with procuring and managing deliveries of relatively small-scale orders due to minimum purchasing created limitations, varying familiarity with inventory management, and challenges with identifying new suppliers.
- **Management of unprecedented PPE needs**: Providers reported needing flexible strategies and assets to manage their own PPE supplies and respond to PPE requests from other health care providers and partners. This is of note for providers needing to provide PPE to transportation companies and hospital contract staff when transferring patients between facilities.

Proposed corrective action: (1) Amplify existing PPE sourcing resources from supply chain components (e.g. ProjectN95) (2) Explore options for collaborative or group purchasing within Networks, or review existing group purchasing structures among providers. (3) Promote and share federal guidance from the National Institute for Occupational Safety and Health (NIOSH) on identifying trusted suppliers and certified equipment. (4) Small and independent facilities may consider incorporating back-up PPE suppliers in their supply chain planning for emergencies.

2. ***Potential threat – Influenza vaccination coordination***: There may be an upcoming need for coordination of COVID-19 and flu vaccination supplies for the ESRD community.

   Analysis: While only flagged by few groups, the need to manage a potential COVID-19 vaccine and the ongoing COVID-19 response, while managing supply of flu vaccination could be a major logistical challenge for the 2020–2021 flu season.

   Proposed corrective actions: (1) Closely track federal guidance on COVID-19 vaccination such as the CDC COVID-19 Vaccine Playbook, the National Academies Framework for Equitable Allocation of COVID-19 Vaccine, and all future guidance; (2) Establish national dialysis industry guidance for future management of flu and COVID-19 vaccines.

Proposed Corrective Actions

The following table lists all proposed corrective actions included in the evaluation.

Please note the corrective actions proposed in this report (and included in the below table) are recommendations of the evaluation team based on the analysis of each area of opportunity and feedback from stakeholders only. The proposed actions do *not* represent mandates or any other required procedures. Stakeholders are encouraged to use these corrective actions to guide future hazards planning and ongoing coordination during the COVID-19 response, as the proposed corrective actions in this report are recommendations only and not subject to enforcement.

Table 1. *Proposed corrective actions*

Core Capabilities	Area of Opportunity	Proposed Corrective Action	Primary Stakeholder Group	Proposed Action Timeline
Situational assessment	(1) Evaluating response plans to account for ongoing, widespread, and complex societal impacts	(1a) Update ESRD Network stakeholder pandemic response plans (particularly ESRD Network pandemic annexes, including any Clinical Standards of Care or other recommendations for providers) with targeted protocols to respond to complex disruptions in continuity of society, such as childcare service disruptions, school closures, widespread teleworking (1b) Consider adjusting thresholds for KCER coordination calls to promote an even earlier ESRD community response and proactive situational awareness for all stakeholders	KCER/CMS, ESRD Networks, Providers (implementation)	Q1/Q2 2021

Situational assessment	(2) Methods for reconciling local, state, and federal guidance and information in a highly dynamic environment	(2a) Involve public health associations representing state and local level authorities to improve alignment between state, local, and federal guidance (e.g. the National Association of County and City Health Officials [NACCHO] and the Association of State and Territorial Health Officials [ASTHO]) (2b) Establish a single ESRD community *dashboard* to track guidance	KCER/CMS	During ongoing 2020 COVID-19 response
Situational assessment	(3) Awareness of ancillary and external health care facility status	(3) Involve nursing home associations, home care associations, hospital associations, and quality improvement organizations (QIOs) working with long term care facilities in KCER communications and coordination mechanisms	KCER/CMS	During ongoing 2020 COVID-19 response
Situational assessment	(4) Tracking fraud in contact tracing and PPE sourcing	(4a) Providers may consider requesting or collaborating on uniform guidance to identify and respond to fraud attempts, with guidance and input from relevant Federal authorities and working groups (e.g. Federal Bureau of Investigation [FBI], the Food and Drug Administration [FDA].) (4b) KCER and Networks may consider increasing targeted information and resourced shared with provider organizations during calls and within existing communications channels on fraud attacks	KCER/CMS; ESRD Networks; Providers	During ongoing 2020 COVID-19 response

Operational Communications	(1) Data reporting and management	(1a) Reconcile data reporting redundancies between ESRD Networks and federal agencies by mapping out current requirements and reporting frequencies (KCER/CMS) (1b) Update standard data reporting structures to be more easily adapted for the data needs of a range of hazards, especially disease outbreaks (KCER/CMS) (1c) Incorporate patient identification methods (e.g. use of unique patient identifiers [UPIs]) into COVID-19 case and PUI reporting to improve accuracy of case counts (Providers) (1d) Consider requesting incident case reports versus cumulative cases in data reporting protocols to improve clarity in data requests (KCER/CMS) (1e) Update data sharing protocols to encourage lateral coordination efforts and situational awareness of external stakeholders (KCER/CMS) (1f) Integrate use of existing online administrative systems and/or electronic medical records (EMRs) used by providers into data reporting protocols to streamline reporting across stakeholders within and outside of the ESRD community (KCER/CMS)	All stakeholders (KCER/CMS, ESRD Networks, Providers, Partners/Associations)	(1a) During ongoing 2020 COVID-19 response (1b) Q2/Q3 2021 (1c) During ongoing 2020 COVID-19 response (1d) During ongoing 2020 COVID-19 response (1e) Q2/Q3 2021 (1f) Q2/Q3 2021
Operational Communications	(2) Facility surveying awareness and protocols	(2) Integrate state-level surveying representatives and CMS-licensed Accrediting Organizations (AOs) into standard KCER communication channels	KCER/CMS	During ongoing 2020 COVID-19 response

Operational Communications	*(3) Potential threat - managing patient resistance to safety protocols*	*(3) Leverage patient-education resources developed by KCER, federal agencies, Networks, and other partners to conduct educational campaigns for patients on safety practices*	*ESRD Networks; Providers*	*During ongoing 2020 COVID-19 response*
Operational Coordination	(1) Strengthening relationships with supporting healthcare facilities	(1a) Involve nursing home associations, home care associations, hospital associations, and quality improvement organizations (QIOs) working with long term care facilities in KCER communications and coordination mechanisms (1b) Promote use of common patient management systems used by nursing homes such as EMRs and/or Quality Assurance and Performance Improvement (QAPI) systems (1c) Leverage Networks' roles in providing education and supporting coordination of care between nursing homes and dialysis facilities	KCER/CMS; ESRD Networks	(1a) During ongoing 2020 COVID-19 response (1b) Q2/Q3 2021 (1c) During ongoing 2020 COVID-19 response

Operational Coordination	(2) Management of a range of unprecedented transportation challenges	(2a) Support establishment of federal or national guidance for dialysis transportation (KCER/CMS) (2b) Involve potential transportation partners in regular KCER coordination (KCER/CMS) (2c) Leverage non-dialysis specific federal transportation guidance and regional contact lists from the Federal Transit Administration (ESRD Networks, Providers, Partners) (2d) Recommend or support the establishment of transportation waivers for dialysis companies to manage transportation internally (KCER/CMS) (2e) Consider recommending federal mandates for Medicare/Medicaid transportation providers to transport dialysis patients (KCER/CMS) (2f) Explore means of incentivization for state and local transportation providers servicing dialysis patients across state lines (KCER/CMS)	All stakeholders (KCER/CMS, ESRD Networks, Providers, Partners/Associations)	(2a) During ongoing 2020 COVID-19 response (2b) Q1/Q2 2021 (2c) During ongoing 2020 COVID-19 response (2d) Q1/Q2 2021 (2e) Q1/Q2 2021 (2f) Q1/Q2 2021
Operational Coordination	(3) Coordination between federal surveillance and federal support	(3) Explore means of incentivization for providers completing data reporting requests	Federal partners	During ongoing 2020 COVID-19 response
Operational Coordination	*(4) Recommendation – Regular sharing of contact lists*	*(4) KCER to share ESRD contact lists quarterly, at least, or on an ad hoc basis as needed*	*KCER*	*During ongoing 2020 COVID-19 response*

Logistics and Supply Chain Management	(1) Improved coordination across ESRD stakeholders for PPE management	(1a) Amplify existing PPE sourcing resources from supply chain components (e.g. ProjectN95) (1b) Explore options for collaborative or group purchasing within Networks, or review existing group purchasing structures among providers (1c) Promote and share federal guidance from the National Institute for Occupational Safety and Health (NIOSH) on identifying trusted suppliers and certified equipment (1d) Small and independent facilities may consider incorporating back-up PPE suppliers in their supply chain planning for emergencies	All stakeholders (KCER/CMS, ESRD Networks, Providers, Partners/Associations)	(1a) During ongoing 2020 COVID-19 response (1b) Q1/Q2 2021 (1c) During ongoing 2020 COVID-19 response (1d) Q1/Q2 2021
Logistics and Supply Chain Management	*(2) Potential threat - Influenza and COVID-19 vaccination supply coordination*	*(2a) Closely track federal guidance on COVID-19 vaccination such as the CDC COVID-19 Vaccine Playbook, the National Academies Framework for Equitable Allocation of COVID-19 Vaccine, and all future guidance* *(2b) Establish national dialysis industry guidance for future management of flu and COVID-19 vaccines*	*All stakeholders (KCER/CMS, ESRD Networks, Providers, Partners/Associations)*	*During ongoing 2020 COVID-19 response*

Appendix A. Stakeholder Subgroup Objectives

The following objectives were defined by the evaluation team prior to beginning evaluation, to guide analysis of each subgroups' contributions to the ESRD community COVID-19 response. These objectives do not represent or inform mandates but rather allowed the evaluation team to guide their review of each stakeholder group's feedback throughout the evaluation process.

Figure 2. Stakeholder subgroup objectives

Stakeholder Subgroup	Objective	Aligned Core Capabilities
ESRD Networks	Maintain continuity of Network operations and activities, particularly in coordination with KCER	Operational coordination; Operational communications
	Protect the health and wellness of essential staff	Operational coordination; Operational communications; Situational assessment
	Provide facilities and stakeholders with non-clinical support (staffing, logistics, surveillance, etc.)	Situational assessment; Logistics and supply chain management
Provider Organizations	Identify and respond to disruptions in continuity of care and safety in facilities	Operational coordination, Operational communications; Logistics and supply chain management
	Effectively and efficiently share information and data between providers, KCER, and ESRD community, and glean feedback on any perceived challenges and proposed solutions	Situational assessment, Operational communication
KCER	Facilitate data and information sharing between dialysis provider organizations, ESRD Networks, and federal agencies in the ESRD stakeholder community	Operational communications, operational coordination
	Provide situational awareness and pandemic surveillance processes for the ESRD stakeholder community (through meetings, situation reports, and email alerts)	Situational assessment, operational communications
	Support the capacity of the ESRD stakeholder community to coordinate and respond to threats on the dialysis community though asset/resource coordination, as appropriate	Operational coordination
Federal partners	Provide relevant situational updates and share operational guidance	Situational assessment, operational communications
	Manage federal resource requests and asset coordination	Operational coordination