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The COVID-19 Pandemic Converges With Kidney Policy Transformation: Implications for CKD Population Health

Sri Lekha Tummalapalli, Neil Warnock, and Mallika L. Mendu

The coronavirus disease 2019 (COVID-19) pandemic has illustrated the vulnerability of patients with chronic kidney disease (CKD) to poor and inequitable clinical outcomes during health care crises.¹ Persons with CKD are at increased risk for hospital admissions and critical illness due to COVID-19.² Disadvantaged populations, including Black and Hispanic individuals and those with low socioeconomic status, are at disproportionate risk for both kidney disease³ and acquiring COVID-19. For example, in a cohort of patients in Louisiana, Black patients were more likely to have CKD and be hospitalized and die from COVID-19.⁴

These disparities stem from social determinants of health, including community context and access to a healthy lifestyle (contributing to CKD), household crowding and inability to work from home (precipitating COVID-19), and structural racism in access to economic opportunity. Furthermore, individuals hospitalized with COVID-19 experience high rates of acute kidney injury requiring dialysis, which may result in eventual residual CKD, potentially exacerbating existing disparities.

COVID-19 has necessitated dramatic care delivery and health care policy changes at a national and global level. Concurrently, we are witnessing the Advancing American Kidney Health (AAKH) Initiative unfold, the most pivotal kidney health policy since the Medicare End-Stage Renal Disease entitlement of 1972.⁵ The AAKH Executive Order, signed in July 2019, announced a sweeping array of nephrology initiatives, including new payment models, investments in technology and innovation, and a focus on delaying CKD progression and increasing the use of home dialysis to support improved quality of life.

In this editorial, we outline COVID-19–related payment and regulatory changes and their implications for CKD care delivery and the AAKH Initiative. We then recommend actions for health systems and national professional organizations to achieve optimal

equitable CKD population health in the context of COVID-19 and kidney policy transformation (Table 1).

Quality Measurement in CKD

Early in the COVID-19 crisis, the Centers for Medicare & Medicaid Services (CMS) announced a broad set of flexibilities and waivers of quality reporting requirements.⁶ Financial penalties were waived for physician practices not submitting Merit-Based Incentive Payment System (MIPS) data and for many other CMS quality programs. This “regulatory relief” has had a positive reception given costs associated with quality reporting,⁷ administrative burden, and uncertainty regarding whether some quality measures meaningfully improve care. Others have argued that given substantial quality-of-care gaps in CKD awareness, goal-directed medical therapy, and transition to kidney replacement therapy (KRT), well-designed quality, value, and population health programs are needed to make dramatic necessary improvements in kidney care delivery.⁸ The question remains: how should quality programs for kidney care be reimaged amid the COVID-19 crisis?

Several guiding principles can advance quality programs in nephrology. First, implementing more CKD-specific, nephrology-oriented, and patient-centered measures can shift quality efforts away from solely dialysis-focused measures and enable quality measurement to drive improvements in kidney care.⁸ The new Kidney Health Evaluation Measure is being incorporated into the Healthcare Effectiveness Data and Information Set for CKD detection in patients with diabetes.⁹ Other quality measures, including a standardized mortality ratio, evidence of delayed progression to KRT need, and home dialysis and transplantation rates, are currently under development.¹⁰ In light of the economic impact of COVID-19 on physician practices and hospitals reliant on fee-for-service payments, there will likely be a shift

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Policy Forum highlights aspects of nephrology relating to payment and social policy, legislation, regulation, demographics, politics, and ethics, contextualizing these issues as they relate to the lives and practices of members of the kidney community, including providers, payers, and patients.

Table 1. CKD Population Health in the COVID-19 Era

Aim	Entity	Recommendation
Refine quality measurement in CKD	National nephrology organizations, quality metric organizations, and patient advocacy groups ^a	<ul style="list-style-type: none"> Continue to develop CKD-specific patient-centered measures that expand beyond dialysis-focused measures
	State and federal government and payors	<ul style="list-style-type: none"> Create a Nephrology MIPS Value Pathway Use randomization or staggered implementation for evidence-based policy generation
Create a national CKD quality collaborative	National professional organizations and funding agencies	<ul style="list-style-type: none"> Develop content and materials for best practice dissemination Invest in programmatic support for nephrology practices and health systems to engage in quality improvement
Invest in data management for CKD	Nephrology practices	<ul style="list-style-type: none"> Proactively engage in panel management
	Nephrology practices, health systems, and payors	<ul style="list-style-type: none"> Engage with health systems leadership to develop CKD registries
Expand telehealth and address the digital divide	Nephrology practices and health systems	<ul style="list-style-type: none"> Engage in telephone-based strategies (not dependent on broadband access), including telephone calls, mobile applications, and text messaging
	Local, state, and federal governments	<ul style="list-style-type: none"> Invest in infrastructure that expands broadband internet access

Abbreviations: CKD, chronic kidney disease; COVID-19, coronavirus disease 2019; MIPS, Merit-Based Incentive Payment System.

^aIncluding the American Society of Nephrology, National Kidney Foundation, Renal Physicians Association, National Quality Forum, National Committee for Quality Assurance, and the Agency for Healthcare Research and Quality.

toward more value-based care in the coming decade, and these new CKD quality measures will be needed to monitor the effectiveness of care being delivered.

Second, creating a Nephrology MIPS Value Pathway, a more streamlined iteration of the MIPS program, would standardize a set of quality measures that nephrology practices report, allowing for cross-regional comparisons. As a final consideration, it is often challenging to evaluate the effectiveness of quality programs because they are often implemented uniformly across the nation, amid other concurrently changing policies. Advocating for CMS to re-introduce quality programs differentially across the

country, using randomization or staggered implementation, would allow researchers to better evaluate the impact of programs on the quality, utilization, and equity in care delivery and lead to evidence-based policy generation.

Establishing a National CKD Quality Collaborative

Before the pandemic, the US health care system lacked the infrastructure and incentives to ensure effective, coordinated, patient-centered care for CKD. Evidence-based population health tools, including CKD registries,¹¹ e-consultation, and panel management,¹² can facilitate a proactive approach to CKD care and risk stratification, particularly in the context of COVID-19. However, population health strategies for CKD are incompletely implemented due to limited time, resources, and/or local expertise, as well as financial disincentives for CKD care compared with KRT care.¹³ Capitated payments for CKD care in the upcoming Kidney Care Choices model provide built-in reimbursement for CKD population health strategies, but these payment changes are limited to participants in that model.¹⁴

Accordingly, we call for the establishment of a national CKD Quality Collaborative to provide content and programmatic support for nephrology practices and health systems engaging in CKD quality efforts. For example, the American Heart Association's "Get with the Guidelines" program partners with hospitals to implement guidelines through consultation, webinars, and workshops and has demonstrated substantial improvements in process measures of care and reductions in length of stay and readmissions.¹⁵ A national CKD Quality Collaborative would cultivate clinical champions, support improvement, and provide best practices for rapid-cycle implementation and evaluation through pragmatic trials. Funding for such a program is a key constraint and would require investments from national professional societies and/or funding agencies. Establishing a national CKD Quality Collaborative aligns with the first goal of the AAKH Initiative to decrease the incidence of kidney failure.

Data Management for CKD

During the COVID-19 pandemic, there has been limited national surveillance of CKD care parameters due to fragmented data sources and barriers to obtaining real-time data. Concurrently, outpatient visit volumes dramatically decreased, with a nearly 40% cumulative visit deficit between March and June 2020.¹⁶ For patients with late-stage CKD whose transplant evaluations, modality education, and access placements have been delayed due to COVID-19, there is an immediate need to identify and address gaps in care to avoid long-term consequences. It is unknown whether delays in care during this period led to an increase in "crash-start" or unplanned dialysis initiations, which are associated with higher mortality. Furthermore, close monitoring of late-stage CKD is crucial to facilitate transitions to home dialysis, in line with AAKH Initiative goals, because evidence indicates that if hemodialysis is the initial

modality, rates of switching to peritoneal dialysis are exceedingly low after 1 month.¹⁷ In sum, continued comprehensive late-stage CKD care during COVID-19, amid an increased use of telehealth, is central to the second AAKH Initiative goal of increasing home dialysis initiation.⁵

Telehealth and the Digital Divide

CKD care delivery dramatically changed during the pandemic, with >50% of ambulatory visits initially shifting to telehealth in many health systems and nephrology practices.¹⁸ In March 2020, CMS expanded access to telehealth by lifting originating site restrictions, broadening eligible providers, and waiving several other requirements,¹⁹ which has had several implications for nephrology care delivery, as previously described.^{20,21} As a result, the “digital divide” of lower access to internet-based technology among rural, elderly, Black and/or Hispanic, and low socioeconomic status individuals has been accentuated during the pandemic.²² Older and disadvantaged populations are less likely to have computer or broadband internet access and also more likely to have CKD, creating challenges for nephrologists and health systems to deliver high-quality care in the context of COVID-19. The internet has been foundational to receiving COVID-19–related information and accessing health care. As a result, it is necessary to consider creative solutions to ameliorate the effects of the digital divide on existing chronic disease inequities.

As a temporary solution, CMS instituted that reimbursement for telephone-only visits would have parity with video/audio visits retroactive to March 1, 2020,²³ and professional organizations are advocating for these changes to become permanent.²⁴ Longer-term national, regional, and state solutions are also needed to address the digital divide. On August 3, 2020, an Executive Order on Improving Rural Health and Telehealth Access was signed, which specified infrastructure and technology improvements, funding for preventive care, and increased rural access to health care.²⁵

Health systems caring for CKD populations also have a role. Smartphone technology may bridge digital gaps because smartphone ownership is high even in individuals without computer or broadband internet access.²⁶ Text messaging may be a promising tool and needs further study in persons with CKD.²⁷ An ongoing randomized clinical trial of patients with CKD is examining the effectiveness of telephone-based self-management, including low-literacy educational materials and telephone health coaching.²⁸ Particularly in the context of COVID-19, digital solutions for patient engagement are essential elements in a comprehensive CKD population health strategy.

In summary, COVID-19 has highlighted the vulnerability of patients with CKD to worse inequitable clinical outcomes and necessitated fundamental changes to our health systems at a historic juncture in kidney health policy. The COVID-19 pandemic has shown us how rapidly health systems can mobilize toward a singular

mission. The AAKH Initiative aims to achieve laudable goals of reducing the incidence of kidney failure, increasing rates of home dialysis use and kidney transplantation, and fundamentally transforming how kidney care is delivered. The convergence of these events has profound implications for patients with kidney disease, and this is the time for bold kidney care innovation at a population level. There is great urgency to implement and evaluate population health approaches to reconceptualize CKD care and fulfill the goals of the AAKH Initiative in the setting of the COVID-19 pandemic.

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