

COVID-19 and Elder Health Inequity in Dialysis

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The coronavirus disease 2019 (COVID-19) pandemic has gripped the nation with fear, confusion, and a loss of normalcy.¹ The pandemic has exposed major flaws in our nation's health care, notably institutional silos leading

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to operational inefficiencies and poor collaboration.² The resulting health inequities affect our most vulnerable patients with end-stage kidney disease (ESKD), particularly older individuals in long-term care (LTC). These themes frame the articles by Verma et al³ and Liu et al⁴ in this issue of *Kidney Medicine*.

Verma et al³ review the priorities of dialysis facilities during the pandemic: preventing transmission between patients, protecting health care workers, and meeting new infrastructure demands created by COVID-19. These goals align with recommendations made by the American Society of Nephrology and the Centers for Disease Control and Prevention COVID-19 response team.^{3,5,6} Liu et al⁴ share their account of the increased challenges created by COVID-19 for older dialysis patients residing in LTC facilities, known colloquially as nursing homes. Patients with ESKD in LTC have suffered disproportionately during the pandemic, including the first reported US COVID-19 outbreak and fatality.^{4,5}

Why highlight the ESKD population in LTC? There are a myriad of systemic factors complicating the COVID-19 nursing home situation that shed light on the greater societal problem of elder health inequity.⁷ As of early May 2020, more than 31% of US LTC facilities reported cases of COVID-19 and 42% of overall state-level deaths were elders in LTC.⁸ Larger facilities, urban location, and greater percentage of African American residents were associated with higher probability of COVID-19, reinforcing social demographics and proximity as important factors for transmission.⁸ A history of infection control violations or 5-star rating did not predict the likelihood of COVID-19 in LTC facilities, suggesting that the pandemic has created a novel infection control threat for nursing homes.⁸

As the pandemic surfaced, dialysis facilities rapidly implemented new infection control protocols to screen, triage, and cohort patients based on symptoms and history of exposure to COVID-19. This involved major changes in daily operations of dialysis facilities to meet new distancing and personal protective equipment requirements.⁹ Lack of enough isolation rooms forced the creation of dedicated treatment shifts (and in some instances entire facilities) to separate persons under investigation and known cases of COVID-19 from the general dialysis population.

However, the safety precautions that dialysis facilities implement cannot be maintained reliably for many patients in LTC. Efforts to control COVID-19 may fail due to obstacles faced in LTC that cannot be overcome in the short term.⁸ Maintaining 6-foot boundaries is nearly impossible in living quarters in which rooms and bathrooms are often shared and distancing efforts are hampered by space constraints.³ Many LTC residents are nonambulatory and rely on frequent and close hands-on human assistance, increasing the risk for person-to-person transmission.³ Using hospitals as safety valves for persons under investigation or COVID-19-positive patients who cannot be accommodated in LTC is neither a practical nor desirable public health solution.⁵

LTC facilities have been the target of much public scorn for their care during the pandemic but in many respects were “sitting ducks” for COVID-19.^{8,10} Deficiencies in staff training, personal protective equipment shortages, inadequate space for distancing, and inability to control resident behavior all magnified the problem.⁸ Lack of reliable access to diagnostic testing and timely result turnaround enhanced spread by asymptomatic LTC patients and workers.⁸

Conversely, dialysis facilities were better able to deploy resources and protocols at a systems level. One crucial advantage for dialysis facilities was a centralized control structure under the leadership of nephrologists, nursing, and senior management. This enabled dialysis organizations to create and deploy COVID-19 playbooks and support services rapidly on a national level. A highly fragmented LTC industry, in comparison, lacked this level of coordinated leadership and ability to mobilize resources at scale.

COVID-19 has exposed widespread long-standing health inequity in elder care in the United States.¹⁰ Nursing homes experience understaffing, heavy workloads, low wages, high employee turnover, and a punitive work environment.^{10,11} Much of the transmission occurring in LTC is traceable to facility workers.^{8,11} Restrictions to visitors and family shift the brunt of care exclusively to nursing home staff, increasing the burden of responsibility and burnout.^{10,11} The negative emotional impact on patients also affects their caregivers and erodes morale. LTC workers may be especially susceptible to these stressors owing to lower socioeconomic status, multiple caregiving responsibilities at home, and fears of wage losses due to illness.¹¹ Low living wages means that many LTC workers hold multiple jobs, increasing the risk for transmission to other settings. Pandemic-related effects on child care, closing of schools, community resources, the economic recession, and shelter-in-place orders are secondary factors

that further threaten staff resiliency.² Staff engagement is critical to infection control, and these adverse workplace conditions make it more difficult for LTC facilities to enforce safe behaviors.^{6,11}

The importance of reliable COVID-19 contact tracing and communication is inarguable.^{3,4} Dialysis facilities need a reliable way to identify new cases of COVID-19 in LTC facilities in the community. However, implementing better communication between dialysis and LTC facilities is no easy task. Efforts to improve care coordination are easily thwarted by lack of staff continuity, resource availability, and barriers to interoperability and data sharing between dialysis facilities and nursing homes. Liu et al⁴ allude to new incentives for better communication arising from the Advancing American Kidney Health executive order. However, integrated care agreements are time consuming and complex, require considerable contractual effort, and are not possible or practical for many situations. Although payment model reform is necessary, funding alone will not fix the problem.¹⁰

One innovative approach that has helped identify high-risk individuals during the pandemic is the Connected Community Care (CCC) model. The CCC model includes community-based organizations such as social service providers, faith-based organizations, civic entities, safety-net programs, transportation services, community education groups, and philanthropic agencies.¹² These community-based organizations are connected with hospital and health care systems, clinical practices, and ancillary medical services, creating a comprehensive network to serve social and health needs.¹² Participation is voluntary and differs from other integrated care networks because members do not enter into risk-sharing agreements and fund their own participation.¹²

The CCC model uses a common electronic information exchange designed to document the social determinants of health status of high-risk individuals. This exchange can be used to alert and share information about COVID-19 cases with network members.¹² One CCC in Dallas, TX, constructed geocoded heat maps to identify community cases down to the neighborhood/block level.¹² The potential of this approach is obvious. If local dialysis and LTC facilities joined a CCC model, they could share COVID-19 tracing data with each other as part of a network of community organizations. This could bypass the existing hurdle of multiple dialysis and LTC facilities attempting to share information across incompatible data platforms. Centralized infection control specialists could actively monitor community COVID-19 heat maps for multiple dialysis facilities belonging to the same organization and direct appropriate inquiries and interventions with LTC facilities.

This strategy is not fanciful. The Israeli Ministry of Health implemented a similar strategy for surveillance and prevention of COVID-19 in nursing homes and assisted living facilities.¹³ A real-time dashboard with heat maps

was created to trace cases in LTC facilities and track the spread of COVID-19 at sites across Israel.¹³ This information was used to direct testing and coordinate interventions between LTC facilities and hospitals. In particular, the dashboard improved the transparency of communication and helped LTC facilities and hospitals collaborate to avoid overwhelming inpatient capacity.¹³ Whereas this approach to mitigate COVID-19 in LTC may be effective, it still does not address the root causes of why the pandemic has so tragically affected nursing homes.

Long-standing infrastructure deficiencies, long-term underfunding, marginalization of the old, and lack of public prioritization have finally caught up to LTC.^{8,10,11} Changes in health care with the shift to post-acute care at home have reduced occupancy, forcing nursing homes to rely on smaller margins from Medicaid. Most nursing homes, already ill equipped to manage the complex social and medical issues of residents, have shown little resilience against the pandemic.¹¹ LTC facilities are under-resourced, overworked, underappreciated, and in many cases underled.¹¹ Expecting COVID-19 outcomes to change in LTC without significant leadership and policy change at a national scale is unrealistic. For all the challenges we have faced in achieving dialysis patient safety, it is ironic that elder patients appear to be safer in dialysis facilities undergoing treatment than when they are at home in LTC. There is a dire need to address an obsolete and inadequate LTC infrastructure that simply does not provide safe living space for many elders during this pandemic. We need better societal awareness and advocacy for the crisis in elder care, including a strategy to address critical LTC workforce issues.^{8,10} With the dangers posed by the COVID-19 pandemic to patients with ESKD, nephrologists need to add our voices to demand policy reform and health equity for all elder patients in LTC.

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