

The Role of Health Insurers in Chronic Kidney Disease-Related Disparities

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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Introduction

The United States is a world leader in health technology and medical care, but “ranks near last in preventable deaths among developed nations” (Nolte & McKee, 2008, cited in Nicholas et al., 2015, p. 2). Despite the vast array of resources available, accessible healthcare remains an enormous challenge in the United States. Healthcare stakeholders, such as insurers, hospitals, and medical companies, tend to operate the healthcare market as a profitable business rather than a service industry. Of Americans most greatly impacted by inaccessible healthcare are those from already vulnerable populations, such as minorities and lower socioeconomic status groups. Specifically, the lack of preventative medicine is extremely consequential for the development and progression of chronic kidney disease in these vulnerable populations.

The renal system consists of two kidneys and the urinary tract. The kidneys conduct the removal of waste products and excess water from the blood, which are released from the body through the urinary tract. Each kidney contains approximately one million glomeruli, which are specialized bundles of capillaries that serve as primary facilitators in the filtration process (Pollak et al., 2014, p. 1461). The glomerular filtration rate measures how effectively the kidneys are filtering waste products and excess water from the blood for clearance. Chronic kidney disease is defined as the presence of kidney damage for an extended period. This damage is classified as end-stage renal disease (ESRD) when a glomerular filtration rate less than 60 ml/min persists beyond three months (Vaidya & Aeddula, 2022, p. 1).

Several treatment methods exist to manage the progression of ESRD. Approximately 71% of patients receiving treatment for ESRD undergo hemodialysis or peritoneal dialysis and 29% are recipients of transplantation (Gupta, 2021, p. 72). Hemodialysis is a time-consuming demand, as treatment occurs three times a week for roughly three to five hours a session. Fatigue

and discomfort are persistent symptoms leading up to and after sessions. At-home hemodialysis or peritoneal dialysis allows patients to receive treatment from the comfort of their homes but requires a support system and environment capable of operating the dialysis machine safely. Transplantation is accessible to those who meet extensive criteria and overcome the extensive waitlist due to national organ shortages. Further, transplantation requires a lifelong commitment to immunosuppression management to prevent graft-rejection and subsequent failure. Despite the existence of several management methods, the lifestyle of individuals with this chronic condition is greatly altered from limited employment opportunities, relationship strain, financial stressors, and other important sectors of life. Thus, it is critical that we identify sources that contribute to or advance kidney disease progression prior to the disease reaching its end-stage.

A comparative analysis between United States and United Kingdom healthcare systems prompts curiosity about the role that gaps in insurance coverage have in chronic kidney disease outcomes. In the United States, funding responsibilities are shared between the government and private sector, leaving a proportion of the population underinsured. The health insurance system in the United Kingdom, the National Health Service (NHS), is entirely funded by taxpayers and covers all citizens (Jacob, 2023). While there are pros and cons to both systems, the lack of consistency in United States health insurance welcomes variation in coverage.

In this paper, I seek to analyze the role of health insurers in the United States have in exacerbating the racial and socioeconomic disparities in chronic kidney disease progression. I argue that health insurers are a primary contributor to worsening disparities in chronic kidney disease through their lack of preventable care resources for low-income earners. Specifically, low-income earners with health insurance tend to rely on government-funded programs, which lack lifestyle benefits, set geographical limitations, and make routine care less achievable.

Affordable care can delay or prevent the progression of chronic kidney disease to its end-stage, which is critical to protect vulnerable populations from the burden of this disease.

Literature Review

People from lower socioeconomic backgrounds and Black people are disproportionately impacted by chronic kidney disease. A study conducted in Sheffield, UK validates the relationship between socioeconomic status (SES) and severity of chronic kidney disease through a retrospective, cross-sectional analysis involving 1657 patients. The author explains that “SES on its own does not affect kidney function or link directly with onset of CKD, but the associated biologic exposures would explain fully or in part its relationship with CKD.” (Bello et al., 2008, 1320). The biologic exposures mentioned refer to a variety of social determinants of health that play a major role in disease development for poorer populations. A lack of access to nutritious food, unhealthy lifestyle habits, and housing instability are factors that expose poorer populations to more physical and environmental stressors that worsen general health and can lead to disease development. In addition to lower socioeconomic groups, minority groups are also significantly impacted by chronic kidney disease. For example, Black people make up only about 13% of the total United States population but they account for 30% of the people with end-stage renal disease (United States Renal Data System, 2022). In an equitable society, one would expect the percentage of a particular group impacted by a given disease to be representative of the percentage of that group in the population of interest. In this case, Black people are impacted by ESRD at a rate *over double* the proportion of Black people in the United States. There is likely a financial component at play that impacts minorities and lower income groups similarly. Acknowledging generational and current forms of discrimination that impact education or

employment opportunities may enable people in the United States to conceptualize the systemic economic barriers that impact minority groups uniquely.

Management for chronic kidney disease takes a toll on its beneficiaries due to the monopoly insurance companies have created in the healthcare space. One expense review of Medicare recognizes chronic kidney disease as both an expensive disease and a public health burden. Specifically, the study reports the following:

“Non-dialysis CKD patients account for 18.2% of total Medicare expenditures, which is approximately \$45.5 billion [9]. CKD patients incur approximately \$22,348/person/year in medical expenditures... three times as much as non-CKD patients [9]. ESRD... costs about \$34.3 billion [9], with an annual growth of 6–12% [10]” (Ozieh et al., 2017, p. 1).

This nationally represented study identifies CKD as the most important cost-driver in the US population, relative to the covariates examined. Medicare is federally funded, apart from a small amount of state funding, meaning it is primarily supported by general revenue, payroll tax revenue, and premiums from beneficiaries. A report from the American Medical Association claims that this is because large health-insurers have “created virtual monopolies that limit consumer choice, do not offer savings on premiums, and give doctors little or no bargaining power” (Tanne, 2006, p. 992). Experts such as James Rohack from the American Medical Association’s board explain that the historically high profit margins are not accompanied by an increase in benefits for patients (Tanne, 2006, p. 992). As such, costs for care continue to grow, but patients do not benefit from expanded coverage. The loss in value of care due to growing healthcare monopolies makes health insurers less appealing and less affordable to their consumers. Moreover, two large health insurers, WellPoint and UnitedHealth Group, “now

control a third of the US health insurance market and cover 61 million US citizens” (Tanne, 2006, p. 992). Tanne explains that as this trend continues, larger health plans hold all the power in the market. This enables these providers to set prices when purchasing health care for those that they insure at competitive price points, proving difficult for others to compete. As a result, many Americans do not have access to affordable healthcare.

The rise in health coverage expenses has left Americans uninsured, many of which are racial and ethnic minorities and/or have low incomes. In 2001, there were approximately 42 million Americans who lacked health insurance coverage according to the Kaiser Commission on Medicaid and the Uninsured (Goody et al., 2002, p.1). By 2006, 18% of nonelderly Americans (46 million out of 260 million) had no health insurance (Hoffman & Paradise, 2008, p. 149). The early 2000’s demonstrates significant growth of the uninsured population. As this population reached 18%, it became more critical than ever for affordable access to care. Of the uninsured population, “racial and ethnic minorities, largely because they are more likely to have low incomes, disproportionately make up America's uninsured—just over half of the uninsured in 2006” (Kaiser Commission on Medicaid and the Uninsured, 2007, cited in Hoffman & Paradise, 2008, p. 149). As mentioned before, the intersectionality of racial and ethnic minorities and low incomes poses an enormous disadvantage for these groups to receive high-quality and affordable healthcare. Further, the same group that is disproportionately impacted by chronic kidney disease is impacted most by unaffordable health insurance and subsequent lack of access to care. The uninsured, minorities, and low to middle income earners demonstrate “lower total healthcare expenditures which could reflect barriers in access to care which can culminate in delayed access to care, complications and accelerated cost of healthcare for CKD” (Ozieh et al., 2017, p. 8). These groups tend to be less likely to schedule primary care appointments or visit the

medical professionals with frequency, with the hesitation likely attributed to unanticipated costs that arise post-visit. This is especially consequential for chronic kidney disease because progression from acute to end-stage disease state greatly increases the severity and permanence of the corresponding management. While still in the acute kidney injury stage, individuals have a chance to receive care temporarily in the hopes of restoring kidney function. However, delaying access to care until the disease has surpassed the acute stage and reached end-stage kidney disease results in a lifelong commitment to dialysis treatment or transplantation. Patients without insurance or who receive baseline government insurance with no additional benefits suffer as later detection directly influences duration of care and subsequent health outcomes.

There is a strong correlation between socioeconomic status and worsened health outcomes or quality of care. Focusing on aging in the United States, “lower SES is associated with reduced access to care, poorer health outcomes, and increased mortality and morbidity as individuals age (9–18)” (McMaughan et al., 2020, p. 2). In this study, lower socioeconomic status is directly correlated with worsened health outcomes and shortened lifespan. As the average lifespan in the United States continues to grow, the number of individuals older than 65 years old also grows, along with the need to expand Medicare funding. According to the Institute of Medicine, gaps in coverage can account for an estimated 18,000 lives lost annually. Uninsured patients are less likely to seek out needed care due to expenses, resulting in a lack of routine care. These patients are also “more likely to report poorer quality care, and chronic conditions are less likely to be properly managed” (Collins et al., 2006, cited in Davis, 2007, p. 346). Along with poorer quality of care, problems with insurance coverage contribute to many deaths each year. Deaths that are attributed to gaps in coverage are largely considered preventable as the knowledge and ability to treat the patient exist, but the financial support does not. More recent

efforts intended and partially succeed in closing the gaps in coverage for previously uninsured individuals. Since the Affordable Care Act (ACT) of 2010, many individuals gained access to government-funded health insurance. Specifically, “As of early 2016, about 20 million more individuals have health insurance compared with 3 years ago, just prior to the implementation of the law’s major provisions” (Kominski et al., 2017, p. 489). The act to make healthcare more affordable through increased subsidies has resulted in many uninsured patients with lower incomes becoming the primary beneficiaries of federally funded care. However, limitations in care prior to disease development and outside the walls of medical facilities remain inadequate.

Framework

Variations in quality of care and health outcomes are not always obvious. In fact, I argue that health insurers often use language that disguises the groups in which they serve. Max Liboiron’s paper, “There’s no such thing as We,” will serve as the framework to assess this misleading inclusivity when addressing a limited portion of the population. Through this chapter in *Discard Studies*, Liboiron expresses that universalism, often invoked by the word ‘We’, eliminates and controls certain aspects of difference. Specifically, he explains that people or groups uphold dominant power dynamics by shifting blame from producers to consumers. One interesting example that Liboiron uses to make this point is the plastic industry. Liboiron claims that plastic production groups, including extractors, primary manufactures, and primary consumers, have their own systems with “interlocking parts that create plastic packaging and other plastic items... long before consumers get to the grocery store” (Liboiron, 2020, p. 102). Addressing people as one global group distributes an unreasonable amount of blame to the consumers and fails to recognize that systems are far more complex. Rather, groups contribute

differently and uniquely to a given problem, such as irresponsible manufacturing practices by plastic production companies and consumers purchasing what is made available to them. Similarly, there are many cases where beneficiaries of health insurance companies may experience the negative repercussions of their health outcomes. Assumptions that all who do not maintain healthy lifestyle habits, fail to attend medical appointments frequently, or cannot pay for out-of-network care are at fault for deprioritizing their health are not only wrong, but harmful. Different racial and socioeconomic groups are uniquely impacted by environmental and economic factors that hinder their ability to access healthcare equally. Thus, these generalizations remove blame from healthcare stakeholders who do not adequately accommodate for the unique needs of groups in which they serve.

Methods

Despite the widespread acknowledgement of chronic kidney disease-related disparities and recent efforts to expand insurance coverage to previously uninsured groups, the following question arose: Why are individuals from vulnerable populations *still* experiencing accelerated kidney disease progression and subsequent negative health outcomes? To understand the reason behind this persistent disparity, I focused on what is hindering disease *prevention*, rather than what goes wrong once an individual has already developed CKD. Background research supports that several social determinants of health are at play in enhancing disease progression. Thus, I compiled secondary sources to investigate the correlation between the type of health insurance different groups depend on and the unmet needs of food insecurity, transportation, and network-limitations that influence health outcomes for individuals with kidney injury. This prompted a subsequent review of government-funded health insurance priorities, as Medicaid and Affordable

Care Act plans are the primary insurers for lower-income groups. Beyond environmental factors, I sought to investigate the role of for-profit competitors in the hemodialysis market by reviewing maps of hemodialysis units along with the corresponding network for the region. I examined the geographical limitations posed by network accessibility driven by for-profit competitors. Thus, I was able to better understand what insurance companies lack in preventative healthcare and the geographic and economic limitations that are worsened by for-profit competitors.

Analysis

Health insurers generally fail to address food insecurity that contributes to otherwise preventable health outcomes related to chronic kidney disease. First, insurers have previously overlooked nutrition as medicine. In the list of Medicaid Mandatory Benefits, there is no mention of reimbursement for nutritious foods or accessibility to a healthy diet (Medicaid, 2024). While programs do exist to fund food stamps or provide assistance to the medically vulnerable populations, these programs are insufficient and local efforts tend to be most impactful. Health insurers provide reimbursement for care within their network, which is a positive step for individuals who were previously uninsured. However, care in the form of medical treatment implies that a problem already exists, making this a reactive response. A more proactive approach can reduce the risk of lower income populations developing chronic health conditions to begin with. One study finds that “food insecurity is associated with multiple risk factors for hypertension, such as unhealthy diets, physical inactivity, and overweight/obesity” (Ing et al., 2023, p. 2). This study cites food insecurity as a key social determinant of health, as financially or environmentally driven inaccessibility to nutritious food greatly impacts future health outcomes. Moreover, the link between food insecurity and hypertension is of great interest for

chronic kidney disease development. According to the National Kidney Foundation, “high blood pressure can constrict and narrow the blood vessels in your kidneys, which reduces blood flow and stops the kidneys from working well” (National Kidney Foundation, 2023). This causes the kidneys to filter less efficiently and the body to retain fluid. The extra fluid in the blood vessels increases blood pressure even more and can cause greater damage to the kidneys. For this reason, hypertension is a leading cause of kidney failure. This series of health complications begins with proper nutrition, an expense that lower-income groups cannot afford, and health insurers do not prioritize until it presents in the form of hypertension or chronic kidney disease.

Health insurers establish networks with geographical limitations that hinder routine healthcare. These large spans without access to affordable coverage are frequently referred to as healthcare or medical deserts. One study produced the following definition for medical deserts, highlighting criteria essential to healthcare accessibility:

“Medical deserts are areas where population healthcare needs are unmet partially or totally due to lack of adequate access or improper quality of healthcare services caused by (i) insufficient human resources in health or (ii) facilities, (iii) long waiting times, (iv) disproportionate high costs of services or (v) other socio-cultural barriers” (Brînzac et al., 2023, p. 785).

A socio-cultural barrier not outlined above includes insurance-driven network limits. Specifically, the resources and facilities may exist, but out-of-network expenses are what can drive care to be so inaccessible in areas that already lack an adequate number of providers for the population. The term out-of-network refers to a particular provider who does not fall in the patient’s insurance network for reimbursement. This is a challenge for areas with limited access to care as providers not in the desired network “generally impose a higher deductible and out-of-

pocket limit (or even no upper limit) when patients obtain care from an out-of-network provider” (Health Insurance Glossary, 2022). Network limitations and subsequent cost inflation for low-income individuals make care in medically underserved areas even more difficult. To overcome this challenge, many individuals are left with the option to travel to a medical facility that provides care covered by their insurer.

Health insurers inadequately provide transportation for vulnerable groups to receive care. Specifically, “A lack of reliable transportation recently kept nearly 6% of U.S. adults from medical appointments... those in low-income households and many people of color among the groups who most experienced a dearth in access” (Johnson, 2024). This is relevant to chronic kidney disease as dialysis treatment can occur on average three times a week, in clinic.

Individuals who seek medical attention are unable to travel with frequency for care, which increases the impact that coinciding health issues like hypertension may have in worsening kidney injury. Moreover, when an individual cannot easily or affordably reach medical facilities, the risk of kidney injury progressing to end-stage renal disease is great. Despite recent efforts to make healthcare more accessible to low-income people, the improved coverage for care cannot support vulnerable groups if transportation to medical facilities remains inadequate.

Socioeconomic disparities present in chronic kidney disease are worsened by for-profit competitors in the hemodialysis market. Government-funded health insurers are financially limited partially due to large dialysis organizations (LDOs) who dominate the hemodialysis market space. Two companies, Fresenius and Davita, are partners who “control about 75% of the outpatient dialysis market [and] charge high prices to MA [Medicare Advantage] plans” (Marr et al., 2023, p. 1036). This market share can hinder Medicare Advantage plans from forming adequate networks without including Fresenius and Davita facilities (Marr et al., 2023, p. 1036).

Mergers in the healthcare space allow larger companies to dominate the market, set prices, and drive out competitors. This is an especially important problem for low-income patients with chronic kidney disease as LDOs can make dialysis financially inaccessible. An article in *Scientific American* explains that private insurance companies “must negotiate payments with for-profit dialysis centers, and research has suggested that the centers have an edge in those negotiations — one they use to jack up prices” (Arnold & Price, 2024). These inflated prices per treatment are “roughly four times Medicare’s fixed costs,” making profits from private insurers who are supported by their beneficiaries. Thus, the for-profit hemodialysis market values profiteering, which potentially incentivizes the prioritization of privately insured individuals to maximize their margins. Publicly funded health insurers have financial limitations as there are many Americans dependent on support for a vast array of health conditions. It is for-profit treatment companies who dominate the marketplace who worsen the affordability of hemodialysis treatment for patients battling chronic kidney disease.

The expansion of health insurance coverage for medical costs incurred by low-income and minority groups demonstrates an important, but insufficient attempt to make healthcare accessible to all American citizens. As outlined by Liboiron, universalism in the form of discarding differences can be quite harmful. Efforts to improve accessibility must acknowledge the complex array of situations that complicate the individual experience outside of the hospital walls. These experiences include, but are not limited to, the availability of nutritious food, the transportation to the medical facility, and the providers based on geographic location. Thus, the socioeconomic and racial disparities present in chronic kidney disease remain until insurers successfully expand coverage for experiences unique to these groups.

Conclusion

Health insurers play a critical role in exacerbating chronic kidney disease disparities through the lack of preventative healthcare. Moreover, insurers fail to adequately address social determinants of health, such as food insecurity and transportation needs, that demonstrate a strong association with health outcomes. Despite the lack of widespread solutions to these health barriers for low-income populations, government-funded health insurers are not solely to blame for this disparity. Rather, health insurers compete in a much larger system, including for-profit competitors who dominate the hemodialysis market. Thus, the limitations of government-funded health insurers are worsened by the environment in which they exist; one that enables profiteers to establish a competitive price point and geographical dominance.

Acknowledging disparities in CKD and understanding the complex array of stakeholders who fuel CKD-related disparities are the first steps toward making meaningful change. This research pinpoints health insurers as a key contributor to the problem. However, it is not as simple as placing blame for those who fuel shortcomings in affordable and preventative medical care. The United States capitalistic economy enables profiteering in the healthcare space, allowing the formation of monopolies that drive out accessible care. It is critical that we, as a society, understand that while vulnerable populations experience the negative effects of profiteering in the healthcare market, numerous healthcare stakeholders benefit from this. My intention is that this research prompts a multifaceted approach to policy reform in the healthcare space, a greater understanding of societal values in the United States, and questions of morality regarding which markets are appropriate for companies to generate margins.

Continued efforts to take a proactive approach to healthcare include initiatives to allow Medicaid reimbursement for food. An article by the *Wall Street Journal* reports that the Biden

administration has begun to approve state requests for the use of Medicaid money for groceries (Armour & Peterson, 2023). By treating food as medicine, the intention is to delay or prevent disease progression for low-income individuals who cannot independently afford a nutritious diet. This may lead to a reduction in medical visits, allowing geographic limitations to routine care to become a rather secondary problem. Whether this initiative pans out successfully depends on the Biden administration's economic efficiency and effective implementation, this effort is well-intentioned and may be a step toward reducing disparities in chronic kidney disease.

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