# *Medicare for All, One Organ at a Time:*

## How Disease Entitlement Can Work for Diabetes

Eli Richman

While Richard Nixon may not spring to mind as a Medicare for All pioneer, his groundbreaking healthcare innovation that expanded Medicare entitlement for renal disease, regardless of a patient's age, demonstrates a viable path for expanding Medicare coverage today. This highly successful program provided dialysis or transplantation to over one million patients with kidney disease and became known as "socialized medicine for an organ." In addition to extending patients' lives, the program proved that Medicare can be structured to cover people with specific diagnoses, not just those in distinct age groups. This paper argues that the United States could use the same model to expand Medicare coverage to other expensive diseases, particularly diabetes. Not only would this ease diabetics' financial burden, it would also reduce costs for private insurance companies, potentially allowing them to offer less expensive plans than are currently available. This paper demonstrates the need for such a program by examining the high cost of diabetes treatment and provides a cost estimate for such a program. The paper concludes that diabetes entitlement is a viable option for expanding Medicare and improving the US healthcare system.

## BACKGROUND

Most Americans know Medicare as the country's single-payer health insurance program for the elderly (people 65 years or older). The program is sometimes referred to as the "gold standard" for American insurance coverage because of its low premiums, moderately high physician reimbursements, wide provider networks, and high popularity (AOTA 2019). In contrast, the United States' other government payer network, Medicaid, designed for low-income individuals, has much lower physician reimbursements, which results in fewer offices accepting these patients (Ubel 2013). The smaller physician network has sometimes led public health advocates to view Medicaid less favorably than Medicare (Tallon 1990), but it is quite popular with the public at large (KFF 2017). Both programs are viewed more favorably than private insurance bought on the individual market, which can have extremely high premiums (CMS 2019) and increasingly high deductibles (Inserro 2018b). While employer-provided health insurance is much more popular than that found on the individual market, it also relies heavily on large contributions from the employers themselves (KFF 2019b).

Private insurance companies have significantly higher premiums and deductibles than Medicare because, in addition to lacking federal funding, these companies have far less bargaining power over healthcare prices. While private insurance companies have some ability to negotiate with healthcare providers, for the most part they are not able to set their own prices. If a hospital bills a patient's insurance for setting a broken leg, for example, the insurance company can haggle over the hospital's quote, but in the end, the insurance company must pay an agreed-upon price. If the insurance company pays less, the hospital could simply refuse to take that insurance anymore—there are plenty of other insurers willing to take their place. Medicare is different. Since it covers so many patients, Medicare administrators can tell providers what they are willing to pay, and thus receive lower prices (Abelson 2019). Providers are free to refuse Medicare coverage, and some do. However, refusing Medicare means turning away a huge cohort of patients: everyone over 65. Therefore, most providers accept Medicare's negotiated rates (Boccuti et al. 2015).

This immense bargaining power stems from the power of a monopsony: when a market has many sellers (healthcare providers), but only one or few buyers. In a market with a monopsony, the seller must choose between taking the buyer's price and dropping out of the market. This creates some deadweight loss (Block & Barnett 2009), but also shifts costs from the buyer (insurance companies and health plans) to the seller (healthcare providers). This dynamic enables the Center for Medicare and Medicaid Services (CMS) to work out a payment schedule every year, which sets specific prices Medicare will pay for any given procedure (AAFP 2019). If a procedure isn't on the fee schedule, then Medicare does not cover it (O'Brien 2018; Medicare 2019). Many Medicare enrollees buy private supplemental plans to cover such procedures. These plans can cover a wide range of benefits, but some procedures, such as those not recognized by the medical community like colonics or aromatherapy, are not covered by any insurance and can only be paid for out-of-pocket (Ochalla 2018).

Two treatments that basic Medicare does cover, importantly, are dialysis and kidney transplants, both for end-stage renal disease. Many people with this disease are under 65, however, a group not initially eligible for Medicare (USRDS 2012). Dialysis has been prohibitively expensive since the treatment became available, and patients (and their insurance

providers) have historically been unable to afford it (Rettig 1991). Younger people with kidney illnesses were often bankrupted by their diseases and eventually died impoverished. As Eggers (2000, 55) explains, "In the 1960s, it was not uncommon for hospitals that had dialysis machines to appoint special committees to review applicants for dialysis and decide who should receive treatment, the others were left to die of renal failure."

In the 1970s, Congress addressed the issue by making anyone with end-stage renal disease eligible for Medicare, regardless of their age. President Richard Nixon signed the change into law under the Social Security Amendments of 1972, just before his reelection (Rettig 1991). Since that time, over one million patients have received dialysis or transplantation through the Medicare program (Eggers 2000).

Although universal healthcare advocates frequently pointed to kidney entitlement as a model for future healthcare reform—often referring to it as "socialized medicine for an organ" (NPR 2010)—the concept was rarely brought up again after the Nixon era. Conservatives have become less interested in expanding public healthcare coverage since then, and Medicare for All advocates are not usually looking to Richard Nixon for inspiration. Nevertheless, the model is still perfectly viable and there is no reason to abandon the idea. In fact, it could be employed to tackle some of the biggest sources of healthcare costs in the United States today. In this paper, I will explore the cost of Medicare coverage for another critical organ at the center of an ongoing American health crisis: the pancreas.

## PROBLEM IDENTIFICATION

Diabetes affects over 24 million people in the United States, some of whom do not know they have it (American Diabetes Association 2018). Furthermore, approximately 84 million Americans have prediabetes, of whom 90 percent are unaware of the condition (CDC 2019). However, these numbers do not fully encapsulate the cost the disease imposes on the US healthcare system. Figure 1 indicates the amount paid to the US healthcare system in 2017 by disease. These figures capture all payments made to healthcare providers from Medicare, Medicaid, private insurance, out-of-pocket, or elsewhere.

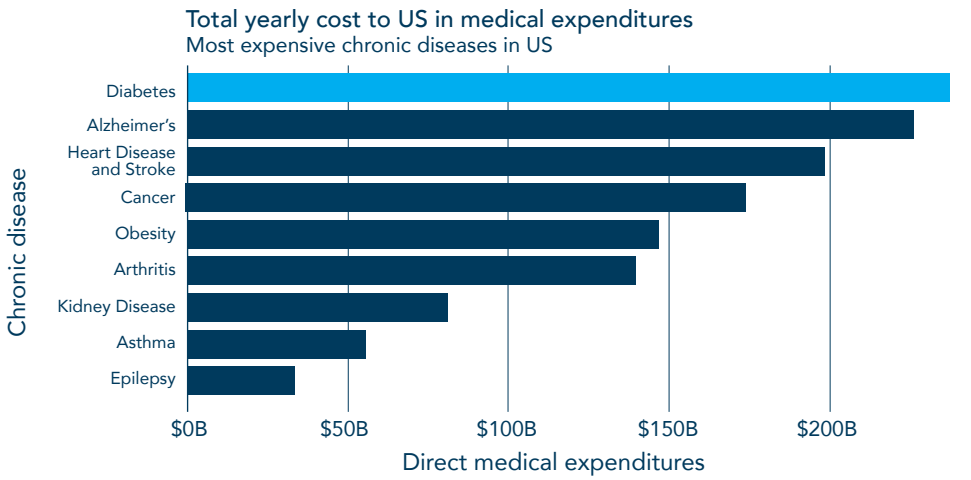


*Figure 1. Author's visualization based on: American Diabetes Association 2018; CDC Foundation 2015; CDC, n.d; Kirson et al. 2016; Inserro 2018a; Golestaneh et al. 2017; CDC 2018*

Diabetes-related medical expenditures total over $200 billion per year in the US, which takes a toll on more than just the patients directly affected. The huge costs of chronic diseases such as diabetes bloat insurance companies' payments, raising premiums for everyone as a result (Mathews & Radnofsky 2017).

The country spends almost as much on medical expenditures for heart disease and Alzheimer's as it does on diabetes. Similarly, nearly everyone's life has been touched by cancer in one way or another, making these diseases plausible candidates for Medicare expansion as well. This paper, however, focuses specifically on diabetes for two reasons:

1. Diabetes is the most expensive chronic disease, and if Medicare were to cover one disease at a time, it makes sense to start with the most expensive one. Medicare could cover either Type 1 or Type 2 diabetes (or both), but many of the biggest medical expenditures for diabetes, like insulin, are similar for both types of patients.

2. Almost all Alzheimer's patients are over 65, so those costs are already largely being covered by Medicare. Only 5 percent of the Alzheimer's population shows symptoms before this age (Graff-Radford 2019).

Meanwhile, the diabetes disease profile is more similar to kidney illness than other chronic diseases. Both conditions have a clearly defined treatment course (insulin injections and dialysis, respectively) and the treatment is both life-extending and extremely expensive. Both diseases have a history of bankrupting the people affected by them, and patients with both diseases face death if they do not receive treatment (Rosenfeld 2019).

Furthermore, treatment for diabetes is becoming even more expensive than treatment for chronic kidney disease (CKD). According to the American Diabetes Association (2018) and Golestaneh et al. (2017), diabetics face more than twice the costs, on average, for hospital and emergency department (ED) visits and prescriptions compared to the average patient with renal disease. Compared to the average nondiabetic person, diabetics have over five times the prescription drug costs on average. Figure 2 illustrates the scale of this discrepancy.

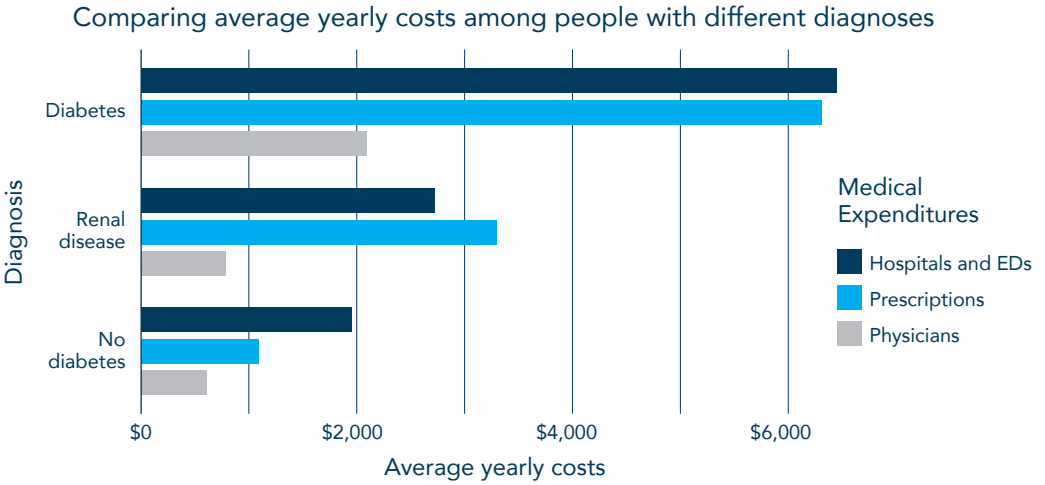


*Figure 2. Author's visualization based on American Diabetes Association 2018; Golestaneh, et al. 2017*

The average diabetes patient spends over $16,000 per year on medical costs (American Diabetes Association 2018). These costs include insurance premiums, coinsurance, deductibles, co-payments, and out-of-pocket costs. Many diabetes drugs are not covered by private insurance. Insulin costs have skyrocketed in the past few years (Rosenfeld 2019). Accordingly, stories abound of patients paying thousands of dollars at the pharmacy counter, or even trying to forego the life-saving treatment, in order to make ends meet (Sable-Smith 2018).

It is possible that in a world without the 1972 Social Security Amendments, costs of dialysis could have risen at a similar rate. However, since all US renal patients are on Medicare, Medicare is essentially a monopsony for this treatment, and its power to negotiate rates has likely kept treatment costs from rising drastically.

## PROBLEM IDENTIFICATION

Another trait of diabetes is that lower-income populations are disproportionately more likely to contract the disease (Gaskin et al. 2014). One commonly cited reason for this disparity is that low-income populations consume less healthy food on average, leading them to develop prediabetes at higher rates. As James Levine (2011, 2667) explains, impoverished areas are often food deserts:

> Poverty-dense areas are oftentimes called 'food deserts,' implying diminished access to fresh food. However, 43% of households with incomes below the poverty line ($21,756) are food insecure (uncertain of having, or unable to acquire, sufficient food). Accordingly, 14% of US counties have more than 1 in 5 individuals use the Supplemental Nutrition Assistance Program. The county-wide utility of the program, as expected, correlates with county-wide poverty rates ($r = 0.81$). Thus, in many poverty-dense regions, people are in hunger and unable to access affordable healthy food, even when funds avail.

However, Levine finds food insecurity unlikely to be the only reason for the correlation between poverty and diabetes diagnosis. He also points to higher rates of sedentariness and inactivity in impoverished areas, which contributes to obesity (a risk factor for Type 2 diabetes) when combined with a lack of healthy food. Given all the factors correlating poverty and diabetes, he concluded that "halting [the] US diabesity epidemic and curtailing its health cost may necessitate addressing poverty" (Levine 2011).

It should be noted, however, that diabetes can also cause poverty. According to a study based on Census data, medical bills are now the leading cause of bankruptcy. Nearly two million people were driven to bankruptcy from unpaid medical bills in 2013, and over 20 percent of the population aged 19-64 struggles to pay off medical bills (Mangan 2013).

Regardless of the causal relationship between diabetes and poverty, it's clear that counties and states with lower median incomes have markedly higher rates of diabetes diagnoses, according to data from County Health Rankings & Roadmaps. Figure 3 illustrates this relationship.

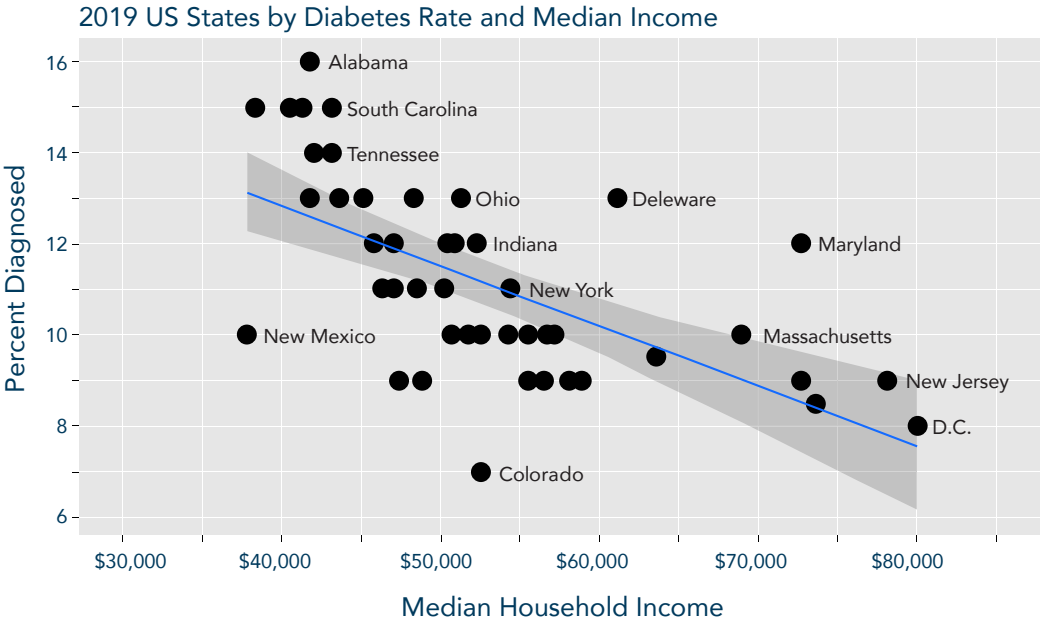


*Figure 3. Author's visualization, based on County Health Rankings & Roadmaps, n.d.*

In addition, high diabetes rates are heavily clustered in the South and upper Midwest, particularly in areas that are relatively low-income and have tended not to expand Medicaid (KFF 2019a). Furthermore, these areas have large proportions of minority populations, who are also at greater-than-average risk of contracting Type 2 diabetes (Spanakis & Golden 2013). These counties—shaded darker in Figure 4—are the ones that stand to gain the most from diabetes entitlement.

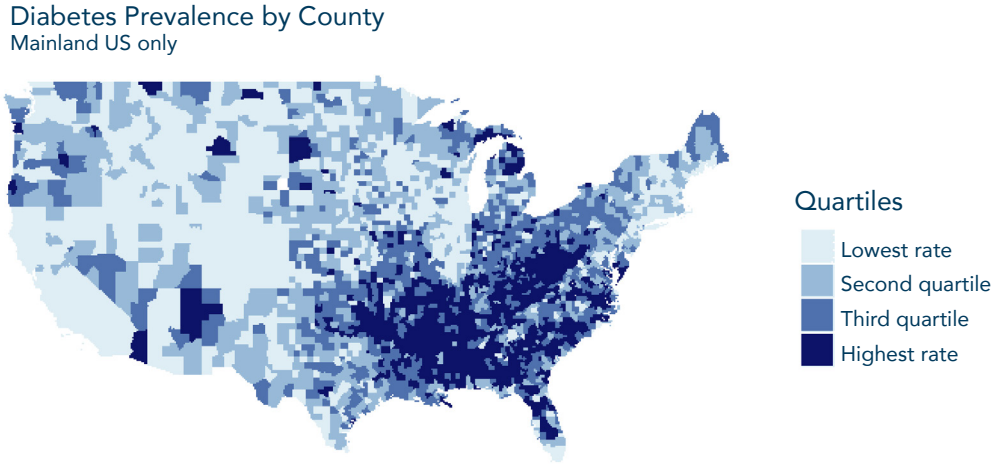


*Figure 4. Author's visualization based on County Health Rankings & Roadmaps, n.d.*

## RECOMMENDATION

Given the high cost of diabetes treatment and the socioeconomic status of those it disproportionately impacts, it makes sense to target diabetes directly. Enrolling all diabetics, regardless of age, in Medicare is a powerful healthcare tool. Diabetics would no longer have to face impossible decisions about whether they can afford life-saving treatment. It would take diabetes out of the insurance market entirely, reducing costs for private insurance. By insuring all patients with the disease, the policy would give Medicare greater power to negotiate the price of diabetes treatment, driving costs down. Hospital and physician payments could decrease as the program lowers fees for these services. A limitation to reducing costs is that CMS does not have authority to negotiate insulin prices, one of the highest diabetes-related costs; currently, Medicare Part D, the portion of Medicare that covers prescription drugs, does not give the CMS authority to negotiate any drug prices directly (Cubanski et al. 2019). While many politicians have proposed changing that policy, absent another change in the law, this paper will have to assume drug costs will be equivalent to what diabetics pay now.

To model the potential effect of a diabetes entitlement on the federal budget, I used an estimate of the number of diabetics who are under 65 in 2020 and 2025 (Lin et al. 2018) to derive an annual growth rate of approximately 2.6 percent. I then extended this rate to the time period between 2022 and 2028. I multiplied the average annual cost of total medical treatment for a patient with diabetes, $16,752 (American Diabetes Association 2018), by the number of forecasted diabetics for that year, and finally I added these totals to the Congressional Budget Office's (CBO) existing estimate of Medicare cost growth (CBO 2019). I used the total average medical costs for a person with diabetes, rather than the costs attributed solely to diabetes; diabetes creates so many other health complications that it would be impractical to cover only procedures related to diabetes (Diabetes UK, n.d). Figure 5 shows the results of this modeling.

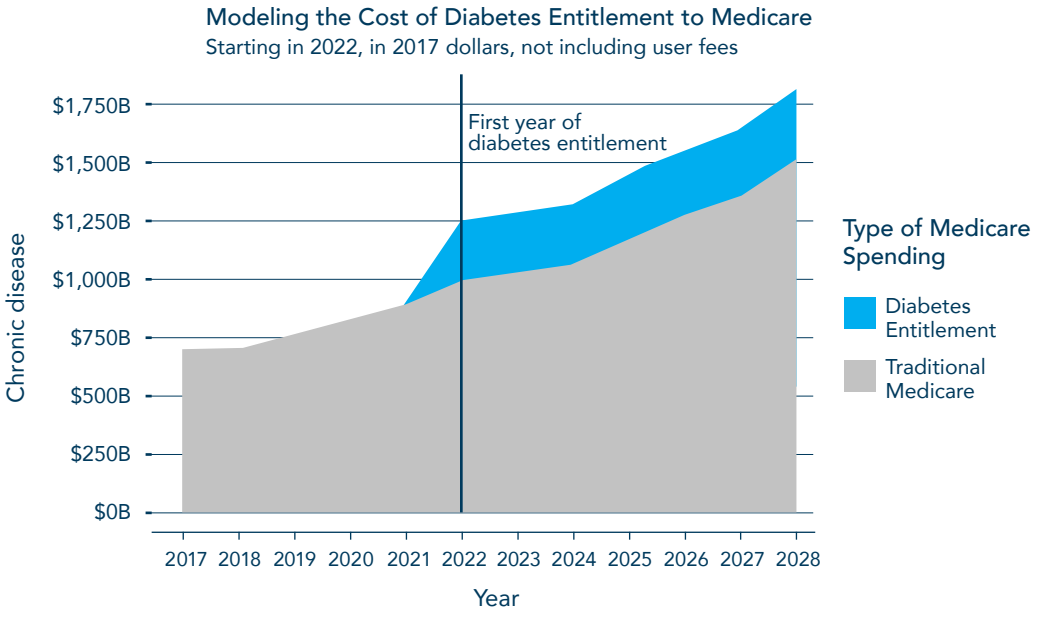


*Figure 5. Author's visualization, based on CBO 2019; Lin et al. 2018; American Diabetes Association 2018.*

According to my model, diabetes entitlement would cost the Medicare program around $250 billion per year. While this is a considerable amount, it should also be seen as an upper-bound estimate. Under current law, diabetics who are over 65 are already on Medicare. The younger diabetics added to the program will have significantly lower-than-average medical expenses compared to the average total cost assumed in the model. When considering costs attributed solely to diabetes, the numbers are even lower. The highest average costs attributed to diabetes for any age group below 65 are $7,510, faced by the cohort aged 0-18. For those over 65, average diabetes-specific medical costs total approximately $13,000 annually, lower than the $16,752 average cited above after removing related but not diabetes-specific costs, which would be covered regardless (American Diabetes Association 2018). Furthermore, my model does not account for any price negotiation CMS could use to lower diabetes care costs in the next decade. Any discounted rate on diabetes care would decrease the entitlement's overall cost to Medicare.

CMS would not want to set prices too low, however. In addition to deadweight loss, discounts from monopsony come with a further downside: by setting prices lower than they would be in an efficient market, Medicare risks reducing incentives for innovations in treatment. Indeed, one criticism of CKD entitlement is that it has cemented dialysis providers' place in the healthcare industry. Since they have a guaranteed flow of paying customers, private dialysis giants like DaVita and Fresenius Medical Care don't have much incentive to find alternatives to dialysis treatment (NPR 2010). In fact, they have a somewhat perverse incentive to keep patients away from dialysis alternatives like transplantation (Carroll 2019). They also have a history of steering patients away from the public health insurance that sets lower prices in the first place (Morse 2016).

Assuming CMS administrators pursue minimal discounting to avoid this issue, a $250 billion estimate is a reasonable cost increase for Medicare to bear. The addition of diabetes entitlement would constitute a 16.6 percent increase in the program's costs, lower than the proportion of Medicare spending on CKD in 2016. Medicare CKD spending has not stagnated either: CKD entitlement costs grew from 4.7 percent of Medicare spending in 1995 to 24.7 percent by 2016, according to the US Renal Data System (USRDS, n.d.). This growth is illustrated in Figure 6.

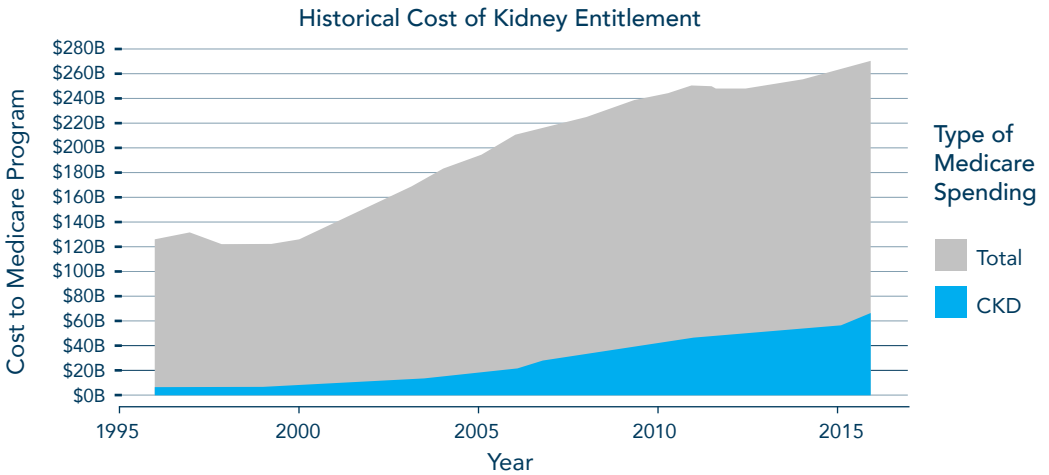


*Figure 6. Author's visualization, based on USRDS, n.d.*

From this perspective, it is clear that the increase in spending is a manageable amount for the federal government to cover, but it is a prohibitive amount for private individuals to pay themselves.

## ALTERNATIVE APPROACHES TO EXPANDING MEDICARE

From the moment Lyndon Johnson signed the bill creating Medicare, the Social Security Amendments of 1965, into law, Social Security Administration staffers were already envisioning ways the program could cover the entire US population (Abrams 2019). The phrase "Medicare for All" can be traced back to 1970 (New York Times 1970), but the concept became particularly popular following the implementation of the Affordable Care Act and Senator Bernie Sanders' (I-Vt.) 2016 presidential campaign. However, Medicare for All advocates do not all share the same vision for this policy.

### *PURE SINGLE-PAYER*

Sen. Sanders' Medicare for All Act of 2019 (S. 1129, 2019) would add all Americans to the program, eliminate the private insurance market, and require the program to cover more procedures than it does currently. This approach comes with several drawbacks, however. First, estimates for the bill's cost range from $25-35 trillion in the first 10 years—nearly as large as the rest of the federal budget (Alonso-Zaldivar 2018). Second, the bill is not specific about exactly which procedures it would cover, and which it would exclude. The more procedures that are covered, the higher the price, but deciding where to draw the line will be painful and invite significant debate. Should dieticians be covered? What about chiropractic massage? Acupuncture? Aromatherapy? Including debated healthcare disciplines like these in Medicare will make the program more expensive. However, without private insurance, excluding these disciplines means people can only receive these types of treatments if they pay completely out-of-pocket, which will anger certain constituencies.

### *MEDICARE FOR THOSE WHO WANT IT*

One alternative and less expensive model is a Medicare buy-in, which would offer Medicare coverage to adults younger than 65 at rates more similar to private insurance (Neuman, Pollitz, & Tolbert 2018). This approach would control costs more than a pure single-payer system because the federal government would be acting similarly to a private, for-profit insurance company. The goal certainly would not be to make a profit, but as long as premiums and deductibles are high enough, the revenue taken in would offset the new beneficiaries' medical expenses. Meanwhile, private insurance would continue to exist, so employer-provided and supplemental private plans could stay intact.

The problem with this approach is that it most benefits those who can afford the premium. Lower-income populations—which have higher rates of diabetes on average than the general population—may not be able to afford the premium, putting Medicare coverage out of their reach. Some plans for a buy-in suggest solving this problem by using means-tested premiums instead, so that the quoted premium would be derived from the patient's income. The 2003 Medicare Prescription Drug, Improvement, and Modernization Act introduced means-tested premiums for Medicare Part B, so this idea would be in line with current law (Pauly 2004).

However, these plans could also create unintended consequences. Wealthier patients may be incentivized to obtain private insurance to get a cheaper premium, which would decrease potential revenues for Medicare and turn it into more of a welfare program. This may not be a catastrophe, but it was not the original vision for Medicare (Matthews 2015).

### *MEDICARE FOR SOME (MORE)*

Another model is to lower the enrollment age of Medicare, perhaps to 55 (Vague 2019). This change would capture the cohort of patients with the highest average medical costs (after those already on Medicare), theoretically taking them out of the commercial insurance market. As Thomas Bodenheimer (2017) explains, "Extending Medicare to the 55-64 age group—who have relatively high health care costs—is a potential fix that could insure the near-elderly and provide stability to the marketplaces. It would remove expensive individuals and families from coverage by private insurance companies, who could in turn reduce premiums for individuals and families below the age of 55."

However, stabilizing private insurance markets by lowering the Medicare enrollment age is an indirect mechanism. Although the population in that age group has higher medical costs on average, Medicare resources could be wasted on certain individuals. Some 55- to 64-year-olds are healthier and do not need additional insurance. Many people in this age group are still working and have other avenues to obtaining health insurance. Moreover, considering people hit their peak wage period between the ages of 45-55 (PayScale 2019), they may be in lesser need of public assistance. People with diabetes, however, have an inherently harder time because these diagnoses come with such high costs. If Medicare is expanded to cover the people with the most expensive diseases, instead of the most expensive cohort of people, the program has a higher chance of reaching someone who needs it. It also takes the costs for these diseases out of the private insurance market directly, since the people removed from private insurance will, by definition, be diagnosed with an expensive disease.

## POLICY IMPLICATIONS AND CONCLUSION

Disease entitlement is a neglected but powerful approach to expanding Medicare that targets patients with the highest medical costs and removes these costs from the private insurance market. Medicare has already treated millions of patients with end-stage renal disease, giving them and the healthcare system financial relief as a result. Given the program's success, I recommend expanding Medicare further by including the next most expensive disease, diabetes.

Due to its chronic nature and high treatment costs, I have argued in this paper that diabetes makes the most sense to target through Medicare expansion. Similar to people suffering from CKD, diabetics require prohibitively expensive healthcare and treatment to prevent their early death. Both diseases have a history of bankrupting the people who are unlucky enough to receive a diagnosis of either one.

My model demonstrates that the cost for diabetes entitlement would not be exorbitant. $250 billion per year would represent a smaller percentage increase to Medicare costs than kidney entitlement did, and the policy would end the everyday cruelty that leads diabetics to bankrupt themselves over lifesaving treatment.

No matter what illness policymakers want to target, however, disease entitlement is a useful tool to consider. If cancer, for example, represents a more dangerous and expensive threat to public health than diabetes, Medicare could just as easily be changed to cover all cancer patients. Even if the program only covered specific cancers (excluding smoking-based lung disease, for example), disease entitlement could simply specify the covered indications.

This approach can appeal to many different ideologies and constituencies. Medicare for All advocates, for example, could design disease entitlement as an iterative approach for providing universal healthcare. Rather than adding all healthcare costs to Medicare at once and completely revamping the US healthcare system within a few years, moving one organ at a time would cause a smaller shock to the industry and the economy. Furthermore, with each successive organ covered, Medicare administrators would have more chances to learn how to most efficiently to expand the coverage. By adding procedures one at a time, Medicare would also avoid the uncomfortable choice of denying certain medical disciplines over others. This approach would not be suggesting uncovered disciplines are unimportant, just that they do not represent large costs to insurance companies.

Meanwhile, private health insurance companies can also benefit from disease entitlement. By taking the highest costs out of their actuarial tables, insurance companies would have more flexibility to offer cheaper health plans than they do now—they wouldn't need to overcharge healthy members by as much in order to cover the medical costs of the most costly patients (Mathews & Radnofsky 2017). For administrators who want to see the private health insurance system succeed, disease entitlement could be a way to cover a pool of high-risk patients apart from the rest of the system.

The disease entitlement approach would fundamentally change the healthcare system in one of two ways: with all diseases covered (essentially creating a de facto single-payer system), or with the government deciding that certain diseases should remain covered by the private insurance market. Perhaps, if enough expensive diseases are covered by Medicare, the costs of the remaining diseases would be more manageable for private insurance to cover, and premiums could drop to historically lower levels. This policy would turn Medicare into a high-risk pool of sorts, taking the patients with very high healthcare costs, like seniors and people with chronic diseases, out of the insurance market equation.

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ELI RICHMAN is a data journalist and Master of Public Policy candidate studying technology and healthcare policy. He works full time making charts and podcasts for Questex's industry newsletters, covering telecommunications, healthcare, pharmaceuticals and other areas. Richman hails from City Island in New York City and got his Bachelor's in politics at Earlham College in Richmond, Indiana. He is a proud cat dad, avid board gamer and scooter enthusiast. He is also a recurring co-host on WonkCast, Policy Perspectives' sister podcast.

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