The Hill-Burton Program, Desegregation, and Racial Health Disparities

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1 Introduction

Patient outcomes in the American healthcare system vary greatly according to race. For example, compared to their white counterparts, the infant mortality rate is 2.5 times higher among black babies, life expectancy for black men and women is almost a decade shorter, and black mortality rates for heart disease, stroke, and prostate and breast cancer are significantly higher (Riley, 2012). The COVID-19 pandemic recently pushed these racial health disparities further into the spotlight. In July 2020, the hospitalization and death rates per 10,000 individuals were 24.6 and 5.6 among black patients compared to only 7.4 and 2.3 among white patients, respectively. This record of poor health outcomes relative to whites extends beyond the Black population: hospitalization and death rates among Hispanic and Asian individuals were also at least double those experienced by whites (Lopez et al., 2021).

Racial health disparities are well-documented in the medical and public health literatures, but there are growing calls for research into their underlying causes from a more historical perspective (Chowkwanyun, 2011; Hammonds and Reverby, 2019). As Chowkwanyun and Reed (2020) note in the context of the COVID-19 pandemic, highlighting disparities in outcomes without proper historical and structural context can be counterproductive by leading

to the propagation of racial stereotypes about individual behavior instead of illuminating the true underlying mechanisms. One understudied line of research in this realm is the role of the Hill-Burton program in shaping access to healthcare nationwide, particularly among non-white patients. The Hospital Survey and Construction Act of 1946, co-sponsored by Senators Harold Burton (R-OH) and Lister Hill (D-AL) and commonly referred to as the Hill-Burton program, was passed in the wake of World War II and still stands as the largest federal investment in the construction of public and nonprofit hospitals in American history. From 1946-1971, the federal government distributed over $36 billion (2022 USD) to state governments for the construction and modernization of healthcare institutions, with a particular focus on expanding bed capacity by building and improving public and nonprofit hospitals. As reported in Chung et al. (2017), the first modern economic evaluation of Hill-Burton, the program was largely successful in reaching its goals. The authors estimate that the program led to a net increase of over 70,000 hospital beds nationwide, and reductions in the differences in bed capacity between high- and low-income counties, rural and urban counties, and the South and the rest of the nation.

Despite the program's success in reaching its targeted outcomes, the Hill-Burton Act was still certainly laden with controversy. When the Act was being drafted, northern statesmen called for nondiscrimination in the use of funds awarded to states, while southern politicians fought for the right of state governments and local hospital authorities to distribute funds without any federal interference. The southerners won out in the end with the inclusion of a "separate-but-equal" provision, specifically calling for the "equitable distribution of hospital beds for each population group." This marks the first and only time in American history that a piece of federal legislation explicitly permitted the use of federal funds to provide racially exclusionary services (Smith, 1999; Largent, 2018). This provision remained in effect until the mid-1960s when a myriad of court cases and the passage of the 1964 Civil Rights Act forced change, as discussed in depth in Section 2. In this paper, we aim to explore the allocation of Hill-Burton beds and funds across the United States at each stage of desegregation (and

eventually determine the effects of these allocations on the magnitude of various Black-white health gaps?).

Despite focusing only on the South, Thomas (2006) provides the most detailed discussion to date of the role the Hill-Burton Act played in expanding hospital access for the black population. The author argues that despite the clearly discriminatory language and intent of the Act, the legislation forced southern states to greatly increase the number of hospital beds available for black patients, even if those beds were located in a separate wing or facility. Although the economics literature has not directly studied the impact of Hill-Burton on healthcare provision and health outcomes along racial lines, there have been papers that draw a link between geography and patient outcomes / racial health disparities. Chandra and Skinner (2003) note that even if black and white patients are treated equally within a hospital, disparities in health outcomes can arise if the black population is more likely to reside and seek care in areas with lower levels of quality for all patients. Thus, to the extent that Hill-Burton can reduce geographic disparities in the quality of care, it could also reduce racial health disparities. More recently, Finkelstein et al. (2016) exploit the migration of Medicare patients to disentangle the role of demand and supply side factors and find that over 50% of geographic variation in healthcare utilization can be attributed to place-specific supply side factors. Therefore, increases in the provision of healthcare due to Hill-Burton ought to lead to increased healthcare utilization which could improve health outcomes. The extent to which this influences the magnitude of racial health disparities depends on the population makeup of areas that receive Hill-Burton funding.

2 Policy Background

Since we would like to examine the allocation of Hill-Burton funds and beds before and after desegregation, it is important to identify when hospitals were ordered to integrate and when integration actually took place. Broadly speaking, there are a four key moments that

dictate the legality and prevalence of segregation within Hill-Burton hospitals: the passage of the Hill-Burton Act in 1947, *Simkins v Moses H. Cone Memorial Hospital* in 1963, the passage of Title VI of the 1964 Civil Rights Act, and *Cypress v Newport News Hospital Association* in 1967.

As mentioned previously, upon passage in 1947 the Hill-Burton act explicitly allowed for and funded "separate-but-equal" facilities for black and white patients. It is worth noting that from 1946-1963, only 70 of 7000 Hill-Burton construction projects were built as explicitly "separate-but-equal" facilities, meaning either "all-black" or "all-white" hospitals/renovations. This is not to say that the remaining hospitals weren't segregated — the majority of the remaining 7000 still segregated black and white patients into separate wards and denied black physicians and dentists admitting priveleges — just that most of the time there was internal segregation as opposed to outright separate institutions (Reynolds, 2004).

Simkins v Moses H. Cone Memorial Hospital (1963) established that the use of federal funds for discriminatory purposes was unconstitutional under the 5th and 14th Amendments, essentially serving as the *Brown v Board of Education* decision for hospitals. However, the reach of this decision was extremely limited. Initially, the ruling only applied to *new* Hill-Burton funds in the jurisdiction of the Fourth Circuit Court, which handed down the decision (MD, VA, WV, NC, & SC).

Title VI of the 1964 Civil Rights Act strengthened the *Simkins* ruling by prohibiting the distribution of federal funds to any public or private institution engaging in discrimination based on race, color, or national origin. This policy went into effect in July 1965, but the federal government hoped (with little success) to encourage voluntary compliance instead of rigorously pursuing noncompliant institutions.

After almost two years of weak enforcement and underwhelming levels of compliance, particularly among hospitals in Southern states, *Cypress v Newport News Hospital Association* (1967) made it crystal clear that hospitals were not allowed under any circumstances to segregate patients into distinct areas of care on the basis of race. Two decades after the

passage of the Hill-Burton Act, legal hospital segregation was finally and forcefully put to an end. For a more thorough account of the process of hospital desegregation, see Reynolds (2004) or Largent (2018).

3 Data

Closely following Chung et al. (2017), our data comes from three primary sources: the Hill-Burton Project Register, historical Annual Survey data from the American Hospital Association, and Area Resource Files from the U.S. Department of Health and Human Services

The Hill-Burton Project Register was published by the U.S. Department of Health, Education, and Welfare and contains facility-level data on all approved Hill-Burton projects from 1947-1971. The digitized data we possess is collapsed to the county-year level and includes the number of approved beds, amount of approved federal funding, and total estimated cost.

The historical Annual Survey data from the American Hospital Association spans from 1947-2006 and provides hospital-level data including facility name, city, county, state, total beds, admissions, and days. This is the data we'll use to construct our main hospital infrastructure outcome variables.

The Area Resource Files from HHS contain county characteristics such as population, median family income, and population breakdowns by age and race compiled from the U.S. Census Bureau, the American Medical Association, and the Bureau of Labor Statistics. There are many more variables included in these data, but we are limited to the subset available from 1940 onward and often must impute observations based on decennial census data.

Due to the redrawing of several county boundaries in the 1970s, we are forced to drop Virginia from part of the analysis, and also exclude Hawaii and Alaska since they became states during the Hill-Burton roll out. (Perhaps these two states could be used as some kind

of counterfactual group in a later phase of the paper?) Currently, the most complete set of data we have compiled from these three sources is a county-level dataset spanning 1948-1969 with partially-complete covariates. However, there are several variables with problematic outliers and the uneven coverage of years and FIPS codes across sources makes creating a usable, balanced panel difficult. In the next steps of the paper, I would like to return to the raw Hill-Burton register and a less-polished but more complete version of the historical AHA data. I can then source the desired ARF covariates directly from the 1940-1970 decennial censuses to construct a more complete hospital-level dataset spanning a longer time period, which would be better-suited for comparing hospitals with various segregation statuses and ownership types.

4 Preliminary Evidence

Due to the current data constraints, I don't feel confident presenting any preliminary regression results, but I have performed some basic data visualization to get a sense of the distribution of Hill-Burton funds and nonwhite population across the continental United States.

Figure 1 shows the total amount of Hill-Burton funds received by 1969 at the county level. The data issues discussed previously are evident in the graph; each gray county represents a FIPS code for which we are missing both AHA and Hill-Burton data. With the current status of our data, it seems that we won't get very meaningful county-level analyses, so for the remaining figures we aggregate up to the state level.

Figure 2 is based solely on federal funding data from the Hill-Burton Project Register aggregated to the state level. Funding seems to be concentrated in the most populous areas of the country, with solid coverage on the eastern half of the country and strong pockets of funding in New York, Texas, and California. Figure 3 tries to incorporate this information by looking at per capita funding as of 1969. With this measure, we see a shift in the

concentration of funding toward the more rural center of the country. Since Hill-Burton was proposed to benefit populations that were historically underserved by the medical system (rural and non-white residents), the higher levels of per capita funding observed in rural areas makes sense. Note that this figure is preliminary due to the difficulty with getting complete matched population data, and differs significantly from the bottom panel of Figure 1 in Chung et al. (2017).

Finally, Figure 4 shows the percentage of nonwhite residents in each state in 1948. As expected for the time period, we see the highest concentration of nonwhite residents in the South, particularly in the southeastern corner of the United States. If we trust Figure 3, this would suggest that Hill-Burton funds catered more toward the underserved rural population on a per capita basis than the underserved non-white population, but I would like to have better data and a true identification strategy before making such a claim.

5 Discussion & Next Steps

There is still a lot of work to be done before I can make any claims about the allocation of Hill-Burton funds and beds along racial lines throughout the desegregation process. First and foremost, I need to return to the data construction stage, hopefully culminating in a hospital-level panel combining hospital resources/capacity from the historical AHA annual surveys, Hill-Burton beds and funding from the Hill-Burton Project Register and demographic data from the US Census Bureau. Once the revised data is constructed, I can calculate summary statistics for the number of hospitals and beds before the program's start in 1947, the amount of approved Hill-Burton projects, funds, and beds, and demographic characteristics such as percentage of nonwhite residents, percentage of rural residents, and median household income. These can be compared over time and across hospital types and regions to get some early descriptive results. Then, the real work can begin on connecting any historical disparities in funding/resources to modern-day disparities in health outcomes.

At the moment I lack true identification strategies for pinning down the effect of race on fund/bed allocation or pinning down the effect of historic segregation/discrimination on health outcomes, so developing those will be essential to getting truly meaningful results.

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Figures

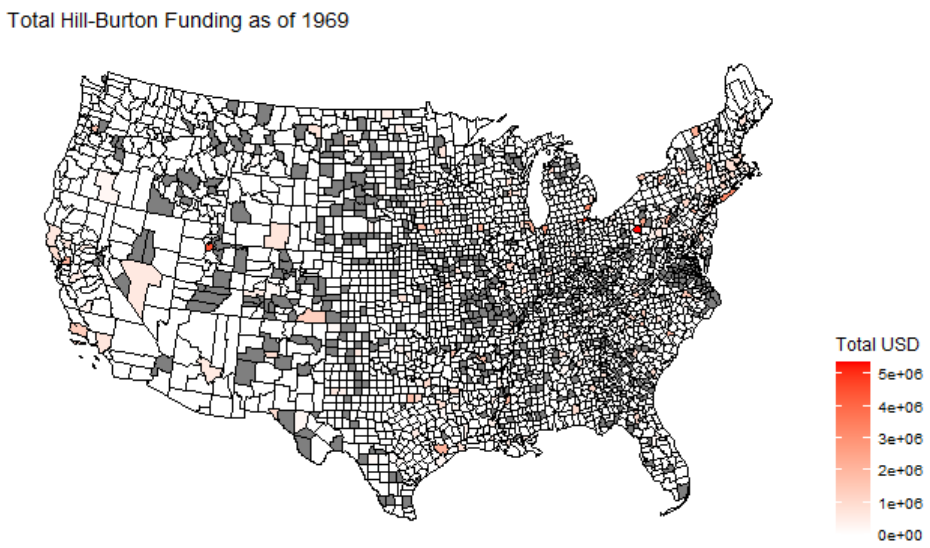

Figure 1: County-level Hill-Burton funding as of 1969

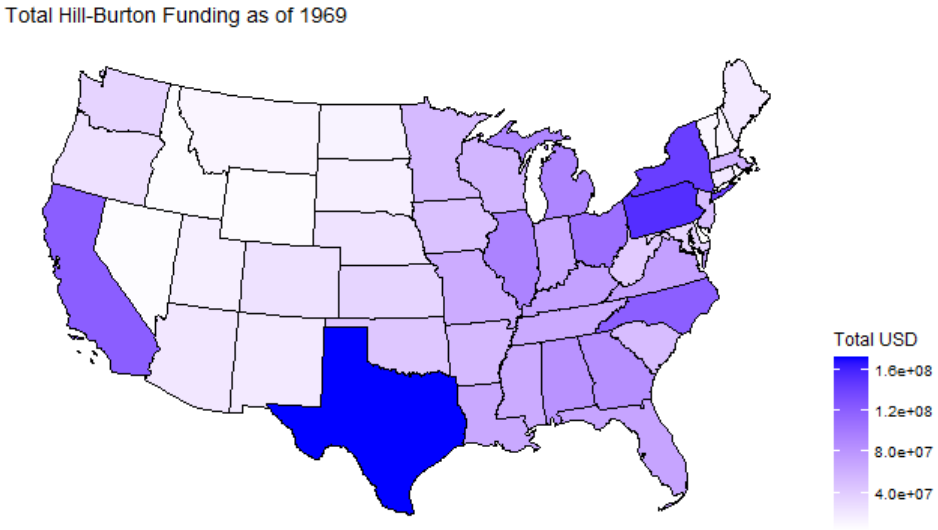

Figure 2: State-level Hill-Burton funding as of 1969

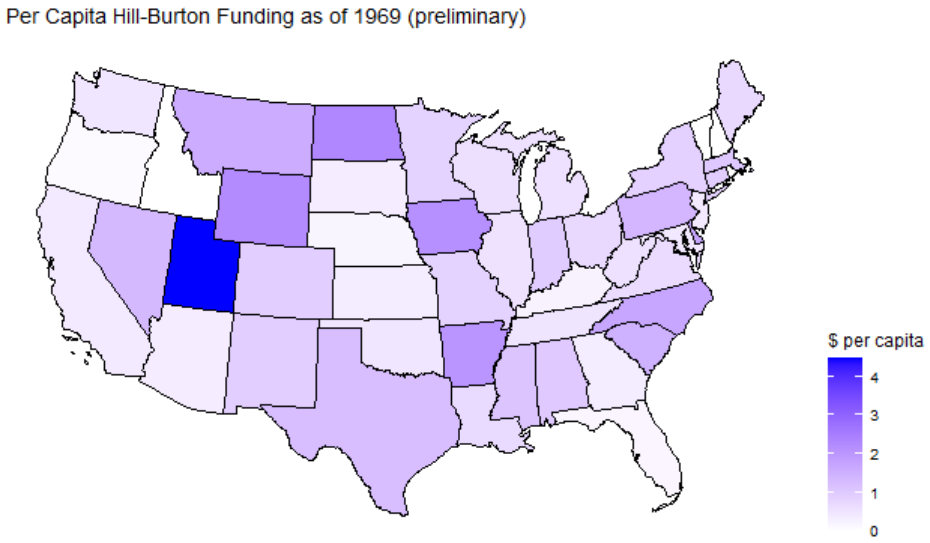

Figure 3: State-level Hill-Burton funding per capita as of 1969

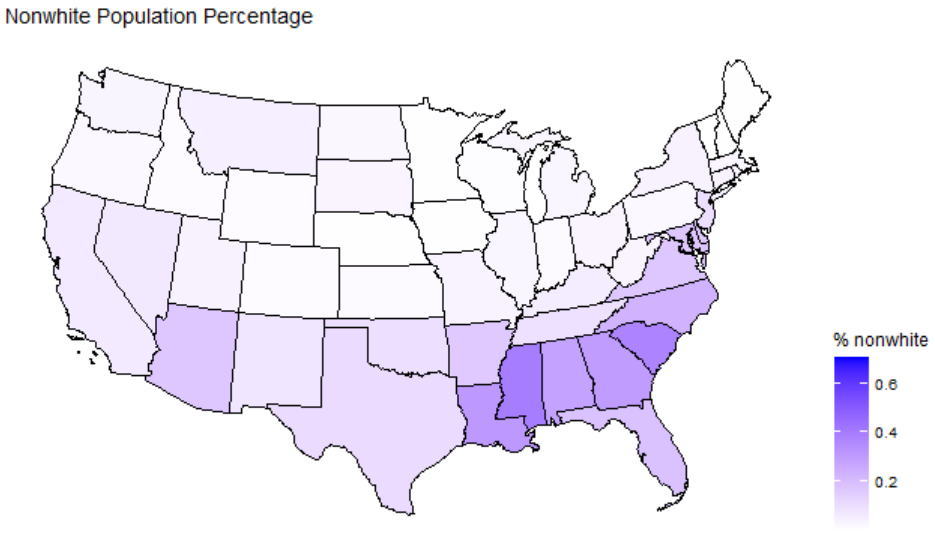

Figure 4: Percentage of nonwhite residents by state in 1948