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Keywords
charity care, community benefits, policy evaluation, Schedule H

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Business | Health and Medical Administration

THE PROVISION OF CHARITY CARE BY NONPROFIT HOSPITALS

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Abstract
As part of an unwritten 'social contract,' nonprofit hospitals receive exemptions from federal and state property taxes in return for providing uncompensated care to community members who would otherwise be unable to afford the medical costs. However, literature has long debated the question of whether or not the tax exemptions are justified. In 2009, the federal government passed legislation mandating the public reporting of community benefit activities, instantly improving the standardization and transparency of reporting measures. Using IRS Form 990 Schedule H data from 212 hospitals across 18 states, this study uses a multivariate panel data model to assess for the impact of state-level regulations on nonprofit hospital community benefit behavior. Three dependent variables (charity care, total charity care and total benefits) and four types of regulations were examined. Results suggest that policies can influence community benefit provision, but the level of efficacy varies by regulation.

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Introduction

Hospitals have long been regarded as centers of healing for individuals of all walks of life. In the 1700s, the U.S. saw the emergence of isolation houses and almshouses devoted to the sick or the infirm. On top of serving strictly medical cases, the almshouses also provided custodial care to the poor and destitute. For most of the nineteenth century, only the socially marginal, poor, or isolated received medical care in United States institutions, while the middle and upper classes received care at home.

In more recent history, policies have encouraged hospitals to continue the provision of uncompensated care in the face of rising healthcare costs (Weisbrod 1991). "Uncompensated care" includes charity care, bad debt, and shortfalls in government-sponsored care (such as Medicare and Medicaid), while "charity care" refers to the unbilled and uncollected expenditures for disadvantaged patients when the determination to provide care is made before the medical services are rendered (Raja, Arif, Warren-Findlow, and Racine 2013). Because hospitals have a financial incentive to avoid providing free care, governmental bodies have enacted measures that aim to ensure that hospitals uphold their responsibility to the surrounding community's welfare.

The 1946 Hospital Survey and Construction Act, more commonly known as the Hill-Burton Act, was the original compromise between nonprofit hospitals and the federal government. This act required hospitals to provide charity care if they wanted to be eligible for grants that encouraged hospital construction and facility modernization. Then in 1986, federal law in the form of the Emergency Medical Treatment and Labor Act (EMTALA) required hospitals participating in Medicare and Medicaid programs to provide a minimum level of care to all patients of an emergency room regardless of their ability to pay (Kennedy, Burney, Troyer and Stroup 2010).

Today, one of the most salient questions surrounding the provision of charity care relates to its association with the favorable tax treatment of the non-profit hospital. As tax-exempt institutions, not-for-profit hospitals are expected to undertake charitable community endeavors – primarily in the form of providing uncompensated care – to promote community welfare in return for a lower tax burden. The tax exemption can be viewed as a "bargain" that was "struck between the hospital and the community: a hospital would treat patients who were unable to pay, and the government would grant a tax exemption to the hospital" (David and Helmchen 2006).

In 2011, the value of this tax exemption was estimated at $24.6 billion (Rosenbaum, Kindig, Bao, Byrnes and O'Laughlin, 2015). Some of the highest average tax benefits per hospital by state included Massachusetts, California and Florida at $20.6 million, $15 million and $14 million, respectively. If communities do not receive such large dollar amounts from hospitals, they lose a hefty sum of public money. Therefore, in return for the tax break, hospitals can be reasonably expected to provide much of their tax exemption in medical benefits to the surrounding community. However, without strict regulations, hospitals have financial incentives to shirk this responsibility. Questions regarding whether or not these institutions are upholding their own end of the bargain and providing justifiable amounts of charity care have come under increased scrutiny (Rosenthal 2013).

This paper adds to the existing literature by taking a novel approach and using publicly available federal tax filings to evaluate how hospital provision of uncompensated care changes in response to the implementation of state-level charity care regulations. Hospital community benefit data from eighteen states for years 2009 to 2013 is used, giving the study a geographic reach and time span that has not yet been examined. Potential influences of market factors (such as local hospital competition and ownership composition) and community factors (including employment

status, racial composition and insurance status of the surrounding area) on uncompensated care provision will also be considered. While such predictors have been studied in isolation, this analysis will contribute a unique new approach by examining multiple variables as they relate to hospitals around the nation.

Given the ever-growing price tag for medical care and increasing wage disparities, many people in America would not be able to afford their medical bills without external aid. This paper's findings help elucidate effective aspects of regulations in influencing hospital community benefit behavior, and the findings may potentially help focus future efforts in policy design. In the greater picture, since a lack of health insurance puts individuals at a higher risk for medical problems throughout their lifetime, adequate provision of hospital charity care can quite literally save the medical and financial lives of patients who are unable to pay.

Background

Nonprofit and For-profit – Is there a Difference?

While close examination of nonprofit charity care provision has recently gained traction in policy and media (Wall Street Journal 2009; Modern Healthcare 2016; The Sacramento Bee 2015), questions about the provision of nonprofit hospital charity care – particularly as it compares to the behavior of their for-profit counterparts – are old. This, in part, has been due to a historical lack of transparency in reporting standards. Some previous studies have found that, by receiving more social subsidies than their for-profit counterparts but failing to be more accessible to the uninsured and medically indigent, nonprofit hospitals have not fulfilled their social promise. (Herzlinger and Krasker 1987). Meanwhile, others came to the opposite conclusion: nonprofit hospitals return more social benefits, including access to care, than for-profits. (Arrington and Haddock 1990).

Though the economic and systematic environments of hospitals have drastically changed since these original findings, research on the validity of the non-profit hospital tax exemption has remained inconclusive. One side finds evidence suggesting that the provision of social benefits by nonprofit hospitals may fall short of their community benefit expectations (Nicholson, Pauly, Burns, Baumritter and Asche 2000). Meanwhile, the other side claims that on average, nonprofit hospitals provided higher levels of uncompensated care than did otherwise similar for-profit hospitals (Congressional Budget Office 2006). Some of this variation in findings may stem from the fact that, prior to 2009, each study designed a unique method of classifying and quantifying charity care due to the lack of available and uniform reporting standards.

These opposing findings point to a conspicuous need for greater clarity in defining charity care, as well as standardization in its performance measurements and reporting methods (Clement, Smith and Wheeler 1994). Some authors even suggested that the Internal Revenue Service (IRS) needed to issue a new revenue ruling specifying both qualitative and quantitative levels of annual charity care required from nonprofit hospitals as part of the community benefit standard (Aitsebaomo 2004).

New Federal Regulations

The call for more uniformity in charity care measurements and reporting did not fall on deaf ears. Beginning in 2009, hospitals under Section 501(c)(3) of the Internal Revenue Code (which exempts nonprofit hospitals from federal income taxes) were required to submit a newly redesigned IRS Form 990 and the supporting Schedule H on an annual basis. Form 990 provides information on the nonprofit organization's mission, programs and finances, while Schedule H specifically applies to hospitals and includes information on their activities, policies, bad debt and

levels of community benefit provision. Schedule H also breaks down "uncompensated care" into two main categories: "Financial Assistance and Means-Tested Government Programs" (including financial assistance at cost and unreimbursed Medicaid), and "Other Benefits" (including community health improvement services, community benefit operations and health professions education). By providing definitions and examples of terms such as "charity" and "community health improvement services" that assist hospitals in the proper classification of their activities, the forms provided a promising advancement towards standardization (See Figure I in the Appendix). Furthermore, the forms are readily available for public inspection.

The beginning of the public reporting prompted several new studies. Some researchers have used the new forms to quantify the amount of charity care provision. One of the first papers to use Schedule H found that on average, hospitals expended 7.5% of their operating expenses on community-benefit services and activities (Young et al. 2013). An earlier study using data from reporting requirements similar to Schedule H found that nonprofit hospitals in Maryland spent 7.4% of expenses on community benefits in 2007, and charity care accounted for one-third of the amount (Grey and Schlesinger, 2009). The value of uncompensated care costs was estimated to total between $46 and $51 billion in 2012 (DeLeire, Joynt and McDonald 2014), which highlights the economic significance of charity care, as well as the scale of individual lives affected.

In addition to determining charity care amounts, the advent of extensive, publicly available financial and community benefits reporting by hospitals enables the exploration of a host of other interesting research questions pertaining to nonprofit hospital community benefit provision. For instance, what local characteristics predict levels of charity care? How effective are community benefit regulations at altering hospital behavior?

Market Influencers of Uncompensated Care

Studies have suggested that nonprofit and for-profit hospitals exhibit comparable behavior when faced with mutual market conditions. Evidence from Illinois, for example, indicates that both hospital types may have engaged in cost-shifting, raising prices to private paying patients in response to substantial reductions in Medicaid payments (Dranove 1988). If ownership differences are actually much less important than they first appear, then the differential tax treatment of the two firms may have caused excessive spread of nonprofit as compared to for-profit hospitals (Pauly 1987).

The apparent convergence of hospital behavior is reflected in similar approaches to uncompensated care provision between nonprofit and for-profit hospitals. Previous studies suggest that increased competitive pressures give nonprofit hospitals less latitude to produce outputs typically deemed to be socially worthy, and instead lead to more profit-seeking behavior (Sloan 1998; Sloan 2000). In other words, as hospital competition increases in a market and nonprofit hospitals receive reduced profits from private patients, they may be less able to uphold their end of the 'social contract'; charity care levels in more competitive areas likely decline over time (Gruber 1994; Keeler, Melnick and Zwanziger 1999). However, one difference that stands between nonprofit and for-profit hospitals relates to the hospital location decisions. For-profit hospitals exhibited a tendency to locate in market areas where the patient population has a higher ability to pay for hospital care and avoided states in which reimbursement was low (Sloan 1998).

While increased levels of competition in the market may lower uncompensated care provision, the composition of the competition may also influence nonprofit hospital charity care behavior. Prior studies indicate a greater difference in provision of uncompensated care between publicly run government hospitals and private hospitals than between either type of private hospital;

the effect of a hospital conversion from nonprofit to for-profit status on the provision of uncompensated care is ambiguous (Sloan 1998; Thorpe, Florence and Seiber 2000). However, uncompensated care costs are more concentrated among public hospitals and other hospitals that provide a disproportionately high level of uncompensated care (Cunningham 1997), which is congruent with the notion that both nonprofit and for-profit hospitals appear to seek opportunities to limit the costs of uncompensated care. Real cases of this kind of avoidance have been identified: in Florida, when charity care requirements were binding on hospitals, private hospitals "cream skimmed" the least risky maternity patients, thus providing less intensive maternity services without compromising patient health. However, when the regulations ended, the same hospitals reduced their charity care caseloads, pushing the unprofitable maternity patients to public hospitals (Almond, Currie and Simeonova 2010).

Community Predictors of Uncompensated Care

Demographic characteristics unique to a community may also influence charity care provided by hospitals. Examples of such factors include individual income, insurance coverage and employment status. Previous studies have found that low-income minority individuals and those with lower educational attainment are at greater risk for not having medical care access (Anderson et al. 2002), and minority children covered by Medicaid frequently use hospitals as their primary source of care. Adults below the federal poverty level also utilize hospital services at higher rates (Lillie-Blanton, Martinez and Salganicoff 2001).

The specific association between demographic data and charity care provision has less conclusive findings, and literature that relates community demographic factors to uncompensated care levels is mostly limited in scope. Some studies are geographically constrained, and others are

limited by time, using only one or two years' worth of data. Previous findings suggest that a decrease in the uninsured population in Minnesota resulted in over $50 million of savings in uncompensated care costs (Blewett, Davidson, Brown and Maude-Griffin 2003). Another study in New Jersey focused on age and income level, finding that most charity care users were non-elderly adults with family income below 200% of the Federal Poverty Level, and elderly residents exceeded children in charity care utilization (DeLia 2007). In California, a recent study examining racial effects found a significant relationship between growth rates in California's Latino population and hospitals' uncompensated care provision (Chen et al. 2015). Relating environmental predictors to market influencers, previous findings show that hospitals provide more uncompensated care in areas where residents have lower income, but provide less uncompensated care when in the same region as a major safety net hospital (Hsieh, Clement and Bazzoli 2010). Generally, the literature indicates that low socioeconomic status is associated with increased levels of hospital community benefits and charity care.

Uninsured rates can also reasonably be expected to affect a hospital's provision of uncompensated care. Since uncompensated care provision increases in the presence of higher demand (Hsieh, Clement and Bazzoli, 2010), hospitals in regions with higher rates of coverage may be more likely to provide less care to indigent populations. Along the same line, since uninsured admissions at major for-profit U.S. hospitals decreased by 50-70% in states that expanded Medicaid, in contrast with only 2-14% in states that did not (DeLeire, Joynt and McDonald 2014), Medicaid expansion may potentially decrease hospital provision of charity care. In fact, uncompensated care levels in Connecticut were found to be about one-third lower with Medicaid Expansion than they would have been without (Nikpay, Buchmueller and Levy, 2015).

If these patterns apply to all forms of insurance, then local uninsured rates likely play a large role in the supply of charity care.

State regulations of uncompensated care

While the analysis of market and community influencers of charity care take into account how the surrounding community might naturally affect hospital charity care provision and behavior, policies enacted specifically to increase levels of charity care provision can be reasonably expected to influence levels of charity care. Since the charity care regulatory environment has recently been changing at both the state and federal levels, a great opportunity exists to examine the efficacy of these policies.

Although the IRS did not require tax-exempt hospitals to provide detailed information about their charity care activities until 2009, prior to the federal requirement, fifteen states had already enacted laws that required non-profit hospitals to report community benefit information on an annual basis. These states were California, Connecticut, Georgia, Idaho, Illinois, Maryland, Minnesota, Nevada, New Hampshire, New York, Pennsylvania, Rhode Island, Texas, Utah and West Virginia. Out of these states, ten required hospitals to report specific levels of charity care (Hellinger 2009).

Since these laws are at the state-level, they vary widely in language, level of detail and stringency of requirements. For instance, while most states did not specify penalties if hospitals fail to meet reporting requirements, Texas and Indiana had a civil penalty of $1,000 for each day the report is overdue. The widely varying legal constraints likely influenced the actual amount of charity care provided in each state. Despite the lack of standardized clarity for interstate

comparison of charity care levels, the laws still allowed for the preliminary study of how laws might influence levels of provision.

Taking advantage of the state laws' heterogeneity, previous studies have indicated that state laws may increase levels of charity care. For instance, the presence of a state reporting requirement compared to no requirement at all was associated with a 12.4% increase in the total hospital expenses dedicated to community benefits (Johnson 2012). With regards to the stringency of the language used, evidence from Indiana suggested that not-for-profit hospitals in states with relatively strict reporting requirements provide larger volumes of uncompensated care (Hellinger 2009). Increases in the volume of charity care and other community benefits provided by non-profit hospitals occurred primarily in states where reporting laws mandate specific levels, or set minimums, of community benefits. A comparison of nonprofit hospitals in Washington, California and Texas from 1996 through 1998 furthered this claim: Texas nonprofits – which faced strict minimum-standard laws – were providing three times more charity care and two times more uncompensated care than hospitals in the other two states, which had less specific, more process-oriented regulations (Sutton and Stensland 2004).

Although prior studies only examined a handful of states and might not be representative of how hospitals in all fifty states react to charity care regulations, the findings suggest that reporting requirements, particularly those including specific guidelines and minimum thresholds, may be associated with an increase in the volume of charity and community benefits.

Federal Health Reform: Uncompensated Care Regulations and Consequences

The changing landscape of national healthcare engenders an exciting time to study health policy efficacy. The Affordable Care Act (ACA), enacted March 2010, aims to make health care

more affordable, accessible and of higher quality for everyone in America. Among the many provisions made in the law, one introduced IRC §501(r), which includes four new requirements that tax-exempt hospital facilities must meet:

1. Establish written and financial assistance and emergency medical care policies
2. Limit amounts charged for emergency or other medically necessary care to individuals eligible for assistance under the hospital's financial assistance policy
3. Make reasonable efforts to determine whether an individual is eligible for assistance under the hospital's financial assistance policy before engaging in extraordinary collection actions against the individual
4. Conduct a community health needs assessment (CHNA) and adopt an implementation strategy at least once every three years

These new laws pertaining specifically to hospital charity care policies signal the federal government's recognition of the importance of clarifying and reforming the way uncompensated care is provided. However, the language leaves much to providers' discretion. For instance, while the first provision mandates written financial assistance policies, it does not specify guidelines for the eligibilities or thresholds of these policies. Similarly, while hospitals are now required to conduct a community health assessment, they are not required to use those findings to change the hospital's practice, or connect the findings to their financial assistance policies. The new requirements impose new restrictions on how hospitals should bill and collect for uncompensated services, but are not grounded by results. With little standardization, hospitals are left to establish their own eligibility criteria and policies, and the change in the actual amount of charity care provided could be minimal.

The compliance of hospitals with these new IRC §501(r) requirements has been mixed. The first requirement, establishing written policies, appears to be nearly universally met: in 2012, a total of 94% of hospitals had both written charity care and emergency medical care policies in place (Nikpay and Ayanian 2015). This first requirement, however, seems to be the easiest to achieve. Only 44% of hospitals regularly notified patients of their potential eligibility for charity care before initiating debt collection (requirement #3), 29% reported charging charity care patients the amounts generally billed to insured patients (requirement #2), and only 11% of hospitals had conducted a community needs assessment (requirement #4). The last statistic might be an underestimate, as the CHNA was not yet a requirement for all hospitals at the time the study was conducted.

Failure to meet these federal requirements are severe, ranging from an annual $50,000 excise tax for failing to conduct the CHNA, to a facility-level tax that is applied to income derived from the noncompliant hospital facility, to revocation of the hospital's 501(c)(3) status (IRS 2015). The last measure, while seemingly drastic, has become an increasing threat to nonprofit hospitals. In 2010, the 202-bed Provena Covenant Medical Center in Illinois was stripped of its property tax exemption, with the presiding judge of the Illinois Supreme Court writing that the hospital did not clearly demonstrate that it 'dispensed charity to all who needed it and applied for it' and 'failed to meet its burden' to society (Crain's Chicago Business, 2010). As a result, the Urbana hospital was ordered to pay $1.2 million in local property tax payments annually. One year later, tax exemptions were denied to three other hospitals – Prentice Women's Hospital in Chicago, Edward Hospital in Naperville and Decatur Memorial Hospital in Decatur (CBS 2011). In 2012, five Illinois hospitals withdrew their applications for tax exemptions. In other parts of the nation, a ruling in June 2015 by the New Jersey tax court found that Morristown Medical Center had shirked its non-profit

responsibilities, and as a result, the medical system was ordered to pay approximately $5 million in back taxes for the years 2006-2008 (Sanborn 2015). Hospitals in Ohio and Pennsylvania have also been scrutinized (Schencker 2015).

The passage of the federal charity care mandates and the increased public interest on the topic reflect the importance of adequate charity care provision. Policymakers, academics and regulatory bodies all have a vested concern in seeing that charity care levels justify the tax exemptions.

Methods

Sample Selection

Eighteen states from geographically diverse areas of the nation were selected for study. Hospitals in the data set are from the two largest metropolitan areas in each state. The eighteen chosen states are Arizona, California, Colorado, Florida, Georgia, Illinois, Indiana, Kansas, Missouri, New Jersey, New York, North Carolina, Pennsylvania, South Carolina, Tennessee, Texas, Utah and Wisconsin.

When choosing the sample states, existing state legislation relating to charity care was considered. Recognizing that the nature of state-specific charity care laws is enormously varied, state charity care legislation was systematically analyzed in order to choose a set of states that had diversity in the presence and strength of laws. The "Community Benefit State Law Profiles Comparison" table compiled by the Hilltop Institute at the University of Maryland Baltimore County was heavily utilized, since the database includes links to legislation for all state laws pertaining to hospital charity care, as well as details about the tax exemptions for which the nonprofit hospitals qualified. Charity care legislation fits into eight overarching categories:

- Community Benefits Requirement
- Minimum Community Benefits Requirement
- Community Benefits Reporting Requirement
- Community Health Needs Assessment
- Implementation Strategy
- Financial Assistance Policy
- Financial Assistance Policy Dissemination
- Limitation on Charges, Billing and Collection

The legislation for each of these categories was coded according to the perceived strength of its language. In coding each law as strong, moderate or weak, a set of law strength standards was developed in order to maintain consistency. A "strong" law includes: 1) a reporting requirement, and 2) a quantifiable threshold for the community benefit. A "moderate" law specifies a reporting requirement that holds the hospital at least partially accountable. However, moderate laws have no specific requirement of benefits that the hospital must provide, and thus, are more open to interpretation with regards to the amount a hospital should provide. A "weak" law neither requires reporting nor includes measurable standards. Such a law is completely open to interpretation, and is signaled by words such as "recommends" or "reasonable. The strengths of the eight laws for each of the eighteen states of interest were visually represented on maps of the USA (see Figure II in the Appendix).

At least three of the eighteen states implemented new legislation during the 2009-2013 time period in four regulatory categories: Community Benefits Requirement (CB), Financial Assistance Policy (FA), Financial Assistance Policy Dissemination (FAD), and Limitations on Charges, Billing and Collections (LCBC). Table I in the Appendix lists the sample of policy-implementing

and non-implementing states included in each model. Non-implementing states were further divided into two control buckets: those that had existing state legislation passed before 2009, and those that lack any state charity care legislation at all.

Data

The data used for uncompensated care information is from Form 990, including Schedule H, which became available after the passing of the federal mandate in 2009. Form 990, as previously explained, is an annual report that federally tax-exempt organizations must file with the IRS, providing details on the organization's mission, programs and finances. Schedule H specifically applies to hospitals and includes information on their activities, policies, and levels of community benefit provision. The Form 990 and Schedule H data are supplied from Guidestar, which is a company that gathers, digitizes and disseminates nonprofit organizations' federal filings. Initially, the dataset included 381 hospital names from eighteen specified states. After ridding the list of duplicates and narrowing it down to include only general medical and surgical not-for-profit hospitals, the final data set included 212 hospitals from the years 2008-2013. However, data from year 2008 was unreliable, likely because reporting in 2008 was not yet mandatory, so only data from 2009-2013 were used in analyses.

Market characteristics were collected from annual data generated by the American Hospital Association (AHA) on all hospitals in the United States. While the AHA collects up to 1,000 fields of information on topics that pertain to hospital organizational structure, staffing, purchasing and more, the three fields chosen – Herfindahl-Hirschman Index, for-profit share of hospitals in a city and government owned hospital share in a city – were chosen to represent market factors in each hospital's geographic vicinity.

To obtain information on environmental characteristics, data from the American Community Survey (ACS) was used. The ACS, which is a national survey representing millions of U.S. households every year, provides information on a large selection of local demographics, including housing status, income level and educational attainment. The data is available at the zip code tabulation area (ZCTA) level, which largely corresponds with zip codes in the Guidestar data files. The ACS website has survey estimates from 2009 to 2013 freely available to the public.

Model Specification

A multivariate panel data model where hospital-year is nested in hospital was used for analyses. Three separate dependent variables are examined: charity care percent, total charity care percent, and total benefits percent (see Table II for explanations). Each represents a percentage of a hospital's total expenses. The model is specified as follows:

$$y_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 Policy_i + \beta_3 Post_{it} + \beta_4 State_i + \beta_5 Year_t + \varepsilon_{it}$$

Variable *yit* represent the continuous charity care dependent variable for hospital *i* at year *t*. X_{it} is a vector of market-level factors, including the share of beds in the market provided by a government hospital, the share of beds provided by a for-profit hospital, and the Herfindahl-Hirshman Index (HHI), which is a measure of market concentration. HHI is calculated by squaring the market share of each hospital in a market in a year and then summing the values; a higher HHI value indicates lower levels of competition. *Policy* represents a series of indicator variables for whether a state had no relevant legislation throughout the time period, had legislation throughout, or passed charity-care legislation at some point during the time period. *Post* is the key variable of

interest, representing the influence of regulation post-passage; it is equal to 1 for the year a state passed a regulation and for all subsequent years, and 0 otherwise. The model includes state and year fixed effects, and clusters standard errors at the state level.

Separate models are run for each of four policy types, including community benefits, financial assistance, financial assistance dissemination, and limitations on charges, billing, and collection (see Table III). This yields twelve sets of models – for each of the four policy types, all three dependent variables were tested. Within each set, six models were specified to check for consistency in results. Half of the models (models 2, 4 and 6) excluded states that had passed "weak" legislation. Doing so allowed for an examination of whether effects varied by strength of policy.

In a separate associational study, a different set of regressions were run to inspect the relationship between community factors and charity care, regardless of changes in charity care legislation. The results, however, remain very preliminary. The same three dependent variables were used, and the independent variables included a set of local community measures, including percentage of individuals unemployed, percent of black individuals, percent of Hispanic individuals, percent of individuals with low income (defined as under $40,000 annually), and percent uninsured. The data was divided by zip code tabulation area, and each measure was taken as a percentage of the hospital zip code tabulation areas' total population. Standard errors were clustered on the state level.

Results

Observed Trends

In order to gain a greater visual understanding of the data, data for all three dependent variables were graphed for each of the four policies (See Graphs I - XII in Appendix). The overall average community benefit provision of the hospitals in the two control groups – "no law" and "existing" – from 2009-2013 are represented as horizontal lines, giving benchmark values for comparison.

Graphs I – III depict data sorted by CB regulations. Illinois, Pennsylvania and South Carolina were the three treatment states that adopted CB policy legislation during the time period. The graph of charity care percent bounces around, showing no clear trend, while the graphs for total charity care percent and total benefits percent show that hospitals in states that implemented a charity care law appear to start well below the two control groups, and then rise to similar levels by the time the laws were passed.

The graphs for the two regulations are very similar to each other because the treatment groups are nearly identical; the FAD treatment group includes all three states of FA (Colorado, Illinois and Indiana), as well as North Carolina. Overall, graphs for FA and FAD regulations do not reveal a clear trend; instead the values for the treatment group fluctuate throughout the time period for each dependent variable.

Graphs X – XII depict community benefit provision levels, grouped by LCBC policy passage. These treatment states include Illinois, Kansas and North Carolina. Before the passage of the LCBC policy, the charity care percent levels of the treatment states were already higher than the two control groups. However, for total charity care percent levels and total benefits percent, the average level of provision started at comparable levels to the control groups, but then outpaced

control levels over time. Total charity care and total benefits provision also peak during the year the LCBC legislation was passed.

Regulation Effects

Regression results indicated that the implementation of a Community Benefits (CB) policy did not have a significant effect on the provision of charity care alone, but all six regression models suggested that the CB policy increased total charity care provision and total benefits provision. The coefficient of *Post* represents the additional percentage of total hospital expense directed towards each community benefit category under the policy in question. Depending on the model, the increase in the amount spent on total charity care ranges from 1.18-1.66%, and the increase in amount spent on total benefits ranges from 1.69 – 2.20% (see Appendix, Tables IV - VII for full regression results).

Neither the Financial Assistance policy (FA) nor the Financial Assistance Dissemination policy (FAD) significantly affected levels of community benefit provision. These empirical findings reflect the lack of a visual trend found for the corresponding graphs (Graphs IV – IX). Some evidence exists for a small effect of FA policy on total charity care and total benefits provision, but only two out of the six models found such a relationship at even $p<0.1$. Furthermore, these two models looked only at states that passed legislation classified as "moderate" or "strong".

Like the CB policy, results regarding the passage of Limitations on Charging and Billing Collections (LCBC) policies were statistically significant, indicating increased levels of all three dependent variables – charity care, total charity care, and total benefits. Depending on the model, in states that implemented an LCBC policy, the percent increase in the provision of charity care

ranged from 0.63 – 0.97%. The increase in total charity care ranged from 0.86 – 1.79%, and the models predicted a 1.40 – 2.32% increase in total benefits provision.

Effects of Law Strength, Market Factors and Community Factors

Close examination of the total benefits percent variable in Table IV shows that the coefficients of models run excluding states with weak legislation are greater than those including weak legislation for CB regulations. Specifically, the 'cb_post_alt' variable of model 2 has a greater coefficient than 'cb_post' of model 1, the coefficient for model 4 is greater than model 3, and the coefficient for model 6 is greater than model 5. All coefficients were statistically significant. The value for the models excluding weak legislation were, on average, about 0.14 percentage points higher for total charity care percent, and 0.24 percentage points higher for total benefits percent than those including the weak legislation. These results indicate that moderate and strong policies might be more effective than those that use weak language. For the LCBC regulations, none of the states in the treatment sample had weak legislation. Therefore, none of the states were dropped, and the effect of legislation strength could not be assessed.

Some evidence exists for the influence of market factors on community benefit provision. However, across all regressions, this effect was contained to the provision of total benefits, Furthermore, only the Herfindahl-Hirschman Index (HHI) and the share of government hospitals produced an effect; the presence of for-profit hospitals in the area does not appear to make a difference. For all four policies examined, on average across all models, a one standard deviation increase in the HHI was associated with a 1.46% reduction in the amounts of the total benefits provided. Similarly, a one-unit increase in the share of beds in the market provided by government hospitals has was associated with about an 8.01% reduction in total benefits percent.

The community factor analyses appear to suggest that an increase in the percentage of black individuals in a given zip code may be associated with an increase in the amount of total benefit provided by hospitals in the area. The other community factors examined – individuals under 18, unemployment, income level, and insurance status – did not appear to have any statistically significant effects. These results, however, are very preliminary and will require further in-depth examination.

Discussion

Using hospital-reported data of charity care levels from 2009 to 2013 provided by Schedule H of Form 990, this study's analyses demonstrate that policies regulating the provision of nonprofit hospital charity care can be effective, but the efficacy depends on the type of regulation passed and the classification of charity care considered. In general, legislation limiting the billing and collections practices of hospitals appear to have the largest effect, followed by policies specifically regulating community benefit provisions. Policies regarding financial assistance and financial assistance information dissemination, on the other hand, did not appear to produce any changes in uncompensated care provision.

Described by the Hilltop Institute as "legislation that, at minimum, requires hospitals to provide free or discounted care to indigent patients," one would expect that the implementation of a community benefit (CB) regulation would result in an increase of charity care provision in hospitals that, prior to the regulation, were underproviding. This may be the reason why the data does not reveal statistically significant change for charity care provision under the CB law, as opposed to the increases seen in total charity care and total benefit provision. Comparison of Graph I to Graphs II and III shows that three years prior to the passing of the legislation, the provision of

charity care among treatment states exceeded both groups of control states. In contrast, the treatment states were providing less total charity care and less total benefits than the control groups. Since the provision of charity care by Illinois, Pennsylvania and South Carolina already started at a much higher baseline than the control groups, indicating that these states on average already provided more charity care than many other parts of the nation, the lack of effect produced by the passage of the community benefits regulation on charity care provision seems reasonable.

In contrast, the significant increase in amount of total charity care and total benefits provided in CB regulation treatment states deserves attention. A couple reasons could explain the increase. First, though unconfirmed, the community benefit regulations may have been passed in the treatment states in response to their low starting levels of total charity care and total benefits provision. Of these three treatment states, Illinois and Pennsylvania are also two states that have come under public pressure in the environment of increased scrutiny and questioning of charity care provision (Crain's Chicago Business 2010; Schencker 2015). Therefore, the combination of public pressure and impending legislation could have compelled the hospitals of the treatment states to increase their community benefit contributions even before legislation was passed.

Language and purpose of the CB regulation may have also selectively increased the levels of total charity and total benefits. As implied in the title, the purpose of the "community benefit" regulation is primarily to increase total levels of community benefits, rather than specifically encourage hospitals to provide unreimbursed patient services. For example, the qualifying activities of the Illinois regulation include charity care, as well as "health services to low-income or underserved individuals, subsidies of state or local government programs, support for state health care programs for low-income individuals, and other activities" (McDermott Will & Emery 2012) as a condition of property and sales tax provision. Similarly, the Pennsylvania legislation

requires that the hospital "donates or renders gratuitously a substantial portion of its services" to benefit the community (Pa. Stat. 375(d)). Given the language of the regulations, the legislation primarily aims to increase levels of total benefits to the community, which gives hospitals flexible options for meeting the new requirements. As a result, nonprofit hospitals may have chosen to meet the requirements through increases in total charity care and total benefits provision, rather than through expanding the provision of charity care itself.

The implementation of financial assistance policies and financial assistance dissemination policies did not produce any statistically significant results, which is not surprising when considering the nature of financial assistance policies. Hospital charity-care and financial aid policies are not new; they have long played an important role in the U.S. healthcare safety net by forgiving the medical bills of the poor and uninsured (Evans, 2014). Legislation mandating hospitals to have financial assistance policies that are already largely in existence understandably will not have a significant effect on charity care or community benefit provision. Furthermore, a disconnect exists between the policy and its purpose: simply having a financial assistance policy will not necessarily increase the amounts of charity care provided.

While a financial assistance dissemination policy might be expected to increase charity care levels by increasing consumer awareness of the financial assistance policies, the regression results indicate that no statistical relationship exists. As previously explained, one of the four new requirements for nonprofit hospitals regarding charity care under the Affordable Care Act was to "establish written and financial assistance and emergency medical care policies." This requirement closely ties in with financial assistance policy dissemination. Illinois, for instance, requires each hospital to post a sign with the following notice in the admission and registration areas of the hospital:

> You may be eligible for financial assistance under the terms and conditions the hospital offers to qualified patients. For more information contact [hospital financial assistance representative].

Additional requirements include a notice about financial assistance in a prominent place on the hospital's website, a description of the assistance application process, and a copy of the financial assistance application. The information must be available in a brochure as well. Since the "dissemination" of an existing financial aid policy requires minimal effort, about 94% of hospitals had written charity care policies in place by 2012 (Nikpay and Ayanian 2015). However, even if these policies are readily available for patients to access, an actual increase in the levels of charity care provision by the hospitals requires patients to read the information, contact a representative to learn more, and then, if they qualify, take the initiative to obtain free care. Such a process for increasing charity care levels has multiple barriers, which is reflected in the lack of statistically significant increases in any form of community benefits post-policy implementation. Again, as with FA regulations, a disconnect exists; simply meeting the regulation does not lead to results.

In contrast, policies that limit the collection and billing practices of hospitals have the potential to increase charity care provision en masse. By directly influencing a hospital's ability to charge for care, LCBC regulations, by nature, are relatively stringent. For instance, the LCBC policy for Kansas lists multiple rules, including: (1) No more than 25% of an individual's wage can be subject to garnishment, (2) A court may not order the garnishment of an individual's wages if the individual or a family member has an illness that prevented them from working for over two weeks, and (3) A creditor cannot issue more than one garnishment against the same individual during any 30-day period (Kan. Stat. Ann. 60-2310). Illinois and North Carolina have similar specific, delineated requirements. The clear specifications leave little room for open interpretation, reflecting the finding that specific, black-and-white rules tend to result in greater provision of uncompensated care (Johnson 2012). Thus, LCBC regulations provide a concrete method of

limiting the hospital's ability to collect from indigent patients. Hospitals have responded to these limitations, as indicated by the statistically significant increase in provision by the treatment group at all three levels of charity care.

Interestingly, in addition to the type of the regulation passed, the strength of a legislation's language might affect efficacy of the implemented regulation as well, but this difference only seems to appear with community benefit regulations. The effects of law strength were not testable under LCBC regulation, because none of the treatment states contained weak legislation to begin with. Though this may be due to the particular sample set chosen, it may not be entirely coincidental. As mentioned above, LCBC regulations, by nature, are cut and dry, setting limits and clearly delineating hospital behavior; LCBC laws may be inherently stronger. CB regulations, on the other hand, can range in law strength, depending on language used.

External market factors, including market concentration and the local share of government hospital beds, also appear to influence nonprofit hospital charity care provision, but the influence seems to only apply to total community benefits. An increase in either the HHI or the governmental share of hospital beds was associated with a statistically significant reduction in total benefits provision, but the total charity care levels and charity care levels remained unaffected. Since measurements of total charity care and charity care are nestled within the total benefits measurement, other sources of community benefit included within total benefits are likely driving the reduction. Specifically, these other community benefit activities include: community health improvement services, community benefit operations, health professions education, subsidized health services, research, and cash and in-kind contributions to community groups.

If an increase in HHI, which is synonymous with an increase in market concentration and decrease in competition, is associated with a decrease in hospital provision of community benefits,

then this finding opposes the existing claim that increased competition decreases levels of uncompensated care (Gruber 1994; Keeler, Melnick and Zwanziger 1999). The decrease in hospital community benefit provision with an increase market concentration can potentially be explained by the need to "market" the charitable image of the nonprofit hospital in a competitive environment. Successful promotion of a charitable image to the community is associated with positive public perception; local citizens and officials alike look on the hospital in a more favorable light, and new taxing legislation is less likely to be passed if legislators know that the public is well educated on the benefits the hospitals provide (Kolu and Parsons 1992). Thus, engagement and promotion of charity care activities may help a hospital to forge a strong relationship with the local community, and in the end, the positive perception of the hospital may give it a competitive edge in a concentrated market. In contrast, a dominant hospital in a market with low levels of competition might not feel the need to promote a positive image through charity care, and will take less initiative to engage in local community benefit activities.

The association between an increased share of governmental hospital beds in the local market and decreased levels of uncompensated care is consistent with previous findings (Almond, Currie and Simeonova 2010). However, while all six regression models agreed upon a reduction, the value of the reduction varied about five percentage points, from 6.2% to 11.4%. Given the large degree of variability, the average reduction of about 8% should not be taken definitively. Rather, the finding that hospitals in the presence of more governmental hospital beds provide lower levels of community benefits is of interest. Furthermore, since the share of for-profit hospital beds exhibits no effect upon nonprofit hospital community benefit provision, these findings potentially indicate that nonprofit hospitals and for-profit hospitals alike make less effort to provide benefits for local indigent populations in the presence of a public hospital.

Limitations

This paper is subject to a number of limitations. While the approach is exciting because this is one of the first studies that examines the effects of charity care regulation over time and across such a diverse set of states, this paper still faces data constraints. At least three states implemented a new regulation under the time period (2009 to 2013) for each policy examined, but it is possible that not enough time passed post-policy adoption for a complete understanding of the policy's effect. For instance, Illinois, South Carolina and Pennsylvania were treatment states for the CB regulations, but they passed the legislation in 2012. Over the course of a year, the behavior of a hospital might not have time to noticeably alter. Thus, using data that ends in 2013 might not capture the entire picture.

Similarly, the study would likely be more robust with an expanded dataset. While the 18 states included were carefully selected, using data from 18 out of the 50 states, and including hospitals in only the largest two cities of each state might only be the start of understanding nationwide nonprofit hospital responses to charity care policies. Ideally, the dataset could be expanded, particularly to include more than three states per treatment group, to provide a more holistic understanding of the effects of regulation.

The regressions using ACS data to predict charity care levels are very preliminary findings. These models operate under the assumption that 100% of the hospital's patient population is sourced from its local zip code, which is most certainly untrue. To address this issue in the future, data from the Hospital Service Area File (HSAF) provided by the Research Data Assistance Center (RESDAC) will be used. This dataset includes information about each hospital's Medicare claims, sorted by zip code; these claims will weight each neighborhood surrounding the population, giving a more accurate description of each hospital's patient population.

Conclusion

Findings indicate that policies can significantly increase levels of community benefits provided by nonprofit hospitals, but the increase depends on the nature of the legislation passed. Overall, regulation that limited charges and billing collection practices of hospitals appeared to produce the greatest increases in charity care, total charity care and total benefits. In addition, the degree of efficacy may also depend on the strength and specificity of language used.

This paper has started to identify some aspects of policy that may be particularly effective at increasing nonprofit hospital provision of community benefits. More data should be obtained and further analyses on this topic should be performed to uncover a more comprehensive understanding. For instance, only four of the eight types of community benefit regulations were examined, so the other four regulations could be studied as well. An evidence-based understanding of how nonprofit hospitals respond to different state regulations may lead to a future of more targeted, efficient charity care policies. This, in turn, could increase medical access to individuals in need while also ensuring that nonprofit hospitals are deserving of their tax-exempt status.

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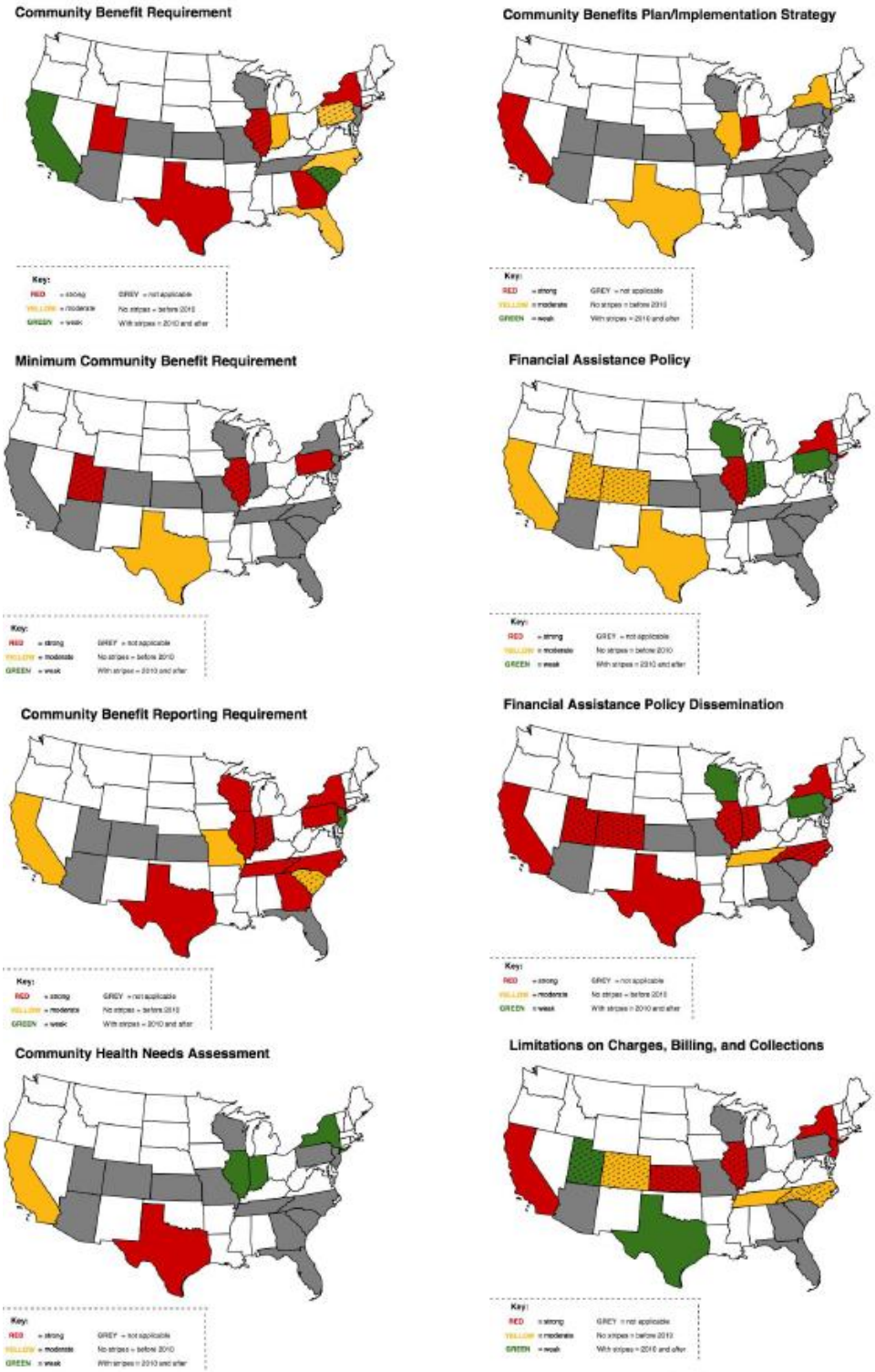
Appendix

Figure I. IRS Form 990 Schedule H: Definitions and Examples

Title	Definition or Example
Charity care and other community benefits	Programs or activities that provide treatment or promote health and healing as a response to an identified community need
Charity care	Free or discounted services for those who cannot afford to pay and meet the hospital's financial assistance criteria
Medicaid and other means—tested government programs	CHIP and other federal, state, and local programs also qualify
Community health improvement services	Extend beyond patient care; do not generate inpatient or outpatient bills (e.g., screenings, support groups, mobile units)
Community benefit operations	Costs associated with planning or operating community benefit programs (e.g., assigned staff, community health assessments)
Health professions education	Programs that result in a degree or certificate or training necessary to be certified; costs for residents or interns
Subsidized health services	Negative margin service; meets an identifiable community need; if no longer offered would be unavailable or fall to the responsibility of another nonprofit or government agency (e.g., emergency room and trauma centers, burn units)
Research	Produces "generalizable knowledge" and funded by tax-exempt sources (e.g., clinical and community health research)
Cash or in-kind contributions to community groups	Receiving group must be engaged in a community benefit activity; in-kind donations may include the indirect cost of space donated to community groups and direct cost of donated food or supplies
Community-building activities	Programs that address underlying causes of health problems to improve health status and quality of life (e.g., economic development initiatives, physical improvements such as maintenance of parks and playgrounds, participation in community coalitions)

Figure II. Eight categories of charity care legislation, with sample states coded by law strength



States shaded in gray had no law throughout the time period (2009 – 2013). Red = strong laws, yellow = moderate laws, green = weak laws. Dashed lines indicate the passage of legislation sometime during 2009 – 2013.

Table I. States included in analyses, listed by regulation status and policy

Control: No Law	Control: Existing	Treatment States (year)
Community Benefits Requirement (CB)		
AZ	CA	IL (2012)
CO	FL	PA (2012)
KS	NY	SC (2012)
MO	NC	
NJ	TX	
WI	UT	
TN	GA	
	IN	
Financial Assistance (FA)		
AZ	CA	CO (2012)
FL	NY	IL (2012)
GA	PA	IN (2011)
KS	TX	
MO	WI	
NC		
NJ		
SC		
TN		
UT		
Financial Assistance Dissemination Policy (FAD)		
AZ	CA	CO (2012)
FL	NY	IL (2012)
GA	PA	IN (2011)
KS	TN	NC (2013)
MO	TX	
NJ	WI	
SC		
UT		
Limitations on Charges and Billing Collections (LCBC)		
AZ	CA	IL (2012)
CO	NJ	KS (2012)
FL	NY	NC (2013)
GA	PA	
SC	TN	
IN	TX	
MO		
UT		
WI		

"No law" refers to states that did not have any legislation passed before or during 2009 – 2013. "Existing" refers to states that passed legislation before 2009. Treatment states had legislation passed during 2009 – 2013. The value in parentheses indicates the year the legislation passed.

Table II. Explanations of the three dependent variables studied

Dependent Variable	Explanation
Charity Care Percent (CC)	The net difference between the total community benefit expense – or the total charges at the full established rates for the provision of patient services before deductions from revenue are applied, including any Medicaid or provider taxes paid – written off to charity care under the organization's charity care policies and the revenues from uncompensated care pools or programs. These revenues refer to payments received from a state, including Medicaid, as direct offsetting revenue for charity care or to enhance Medicaid reimbursement rates for providers.
Total Charity Care (TCC)	The sum of net charity care, unreimbursed Medicaid, and means-tested government program expenses. A "means-tested government program" is a government program for which eligibility depends on the recipient's income or asset level. "Medicaid" refers to the U.S. health program for individuals and families with low incomes and resources, while the State Children's Health Insurance Program (SCHIP), which is a federal government program that gives funds to states to provide health insurance to families with children, is an example of a means-tested government program.
Total Benefits (TB)	The sum of total charity care and all other benefits. These "other benefits include community health improvement services and community benefit operations, health professions education, subsidized health services, research, and cash or in-kind contributions to community groups.

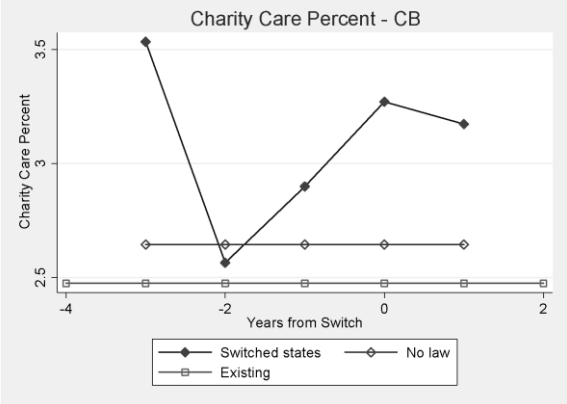
Source: Schedule H instructions

Table III. Definitions of the four types of charity care regulations studied

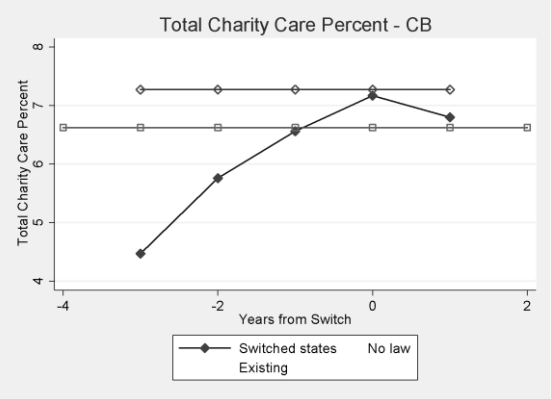
Policy	Definition
Community Benefit Requirement (CB)	Legislation that, at minimum, requires hospitals to provide free or discounted care to indigent patients.
Financial Assistance Policy (FA)	A requirement to adopt financial assistance policies for indigent patients
Financial Assistance Dissemination Policy (FAD)	A requirement to adopt and implement financial assistance policies, as well as make these policies, which allows for hospital charges incurred by indigent parties to be waived or reduced, to be publicly available.
Limitations on Charges, Billing and Collections (LCBC)	Legislation that places limits on the hospital billing and collection practices. This may include requirements for the determination of charity care eligibility before beginning collection activities, or limitations on how soon a hospital may collect payment after services are rendered.

Source: Hilltop Institute

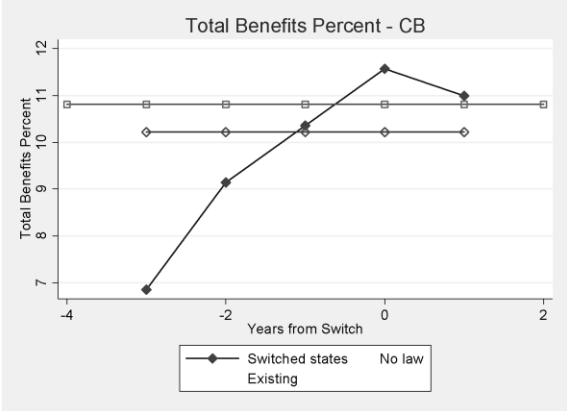
Graphs I - III: Treatment and control states under Community Benefit Regulations, for each dependent variable



Graph I



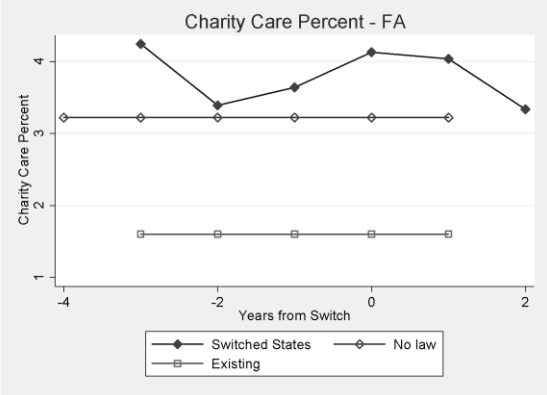
Graph II



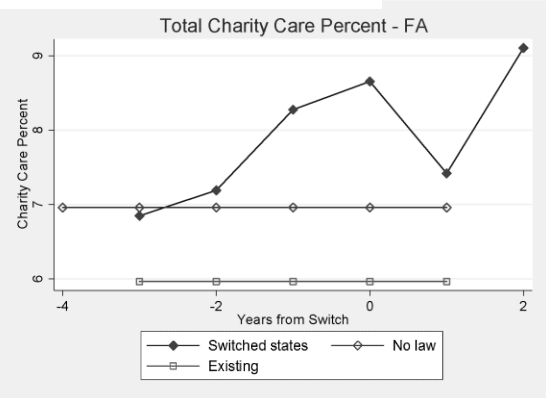
Graph III

Control measures represent the average of all states in the control, across all years. '0' years from switch on the x-axis indicates the year that legislation was passed in each treatment state.

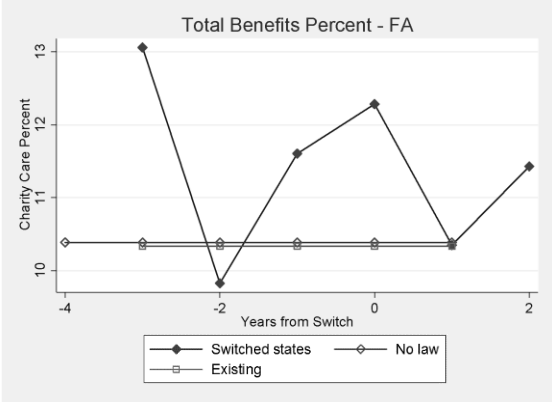
Graphs IV - VI: Treatment and control states under Financial Assistance regulations, for each dependent variable



Graph IV



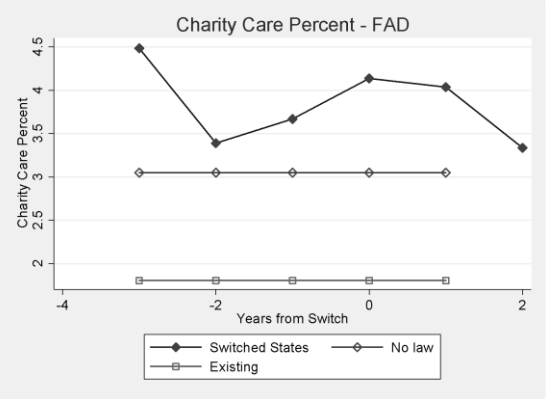
Graph V



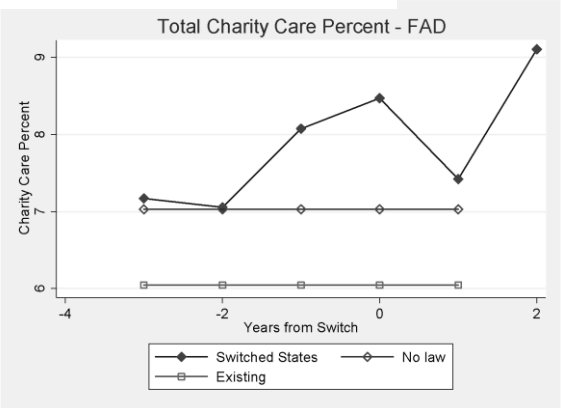
Graph VI

Control measures represent the average of all states in the control, across all years. '0' years from switch on the x-axis indicates the year that legislation was passed in each treatment state.

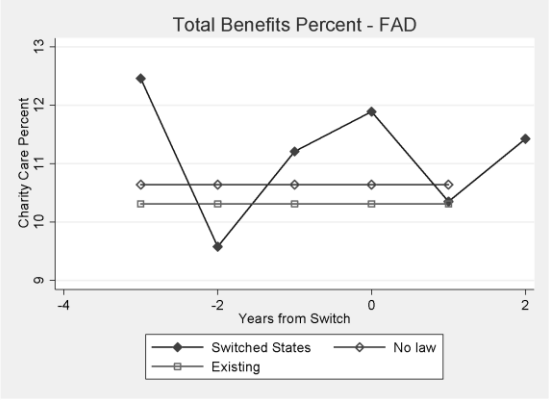
Graphs VII - IX: Treatment and control states under Financial Assistance Dissemination regulations, for each dependent variable



Graph VII



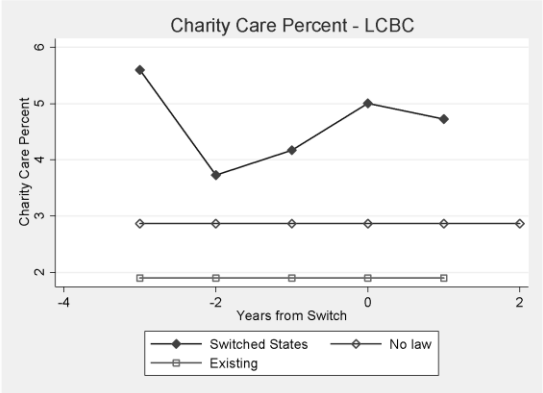
Graph VIII



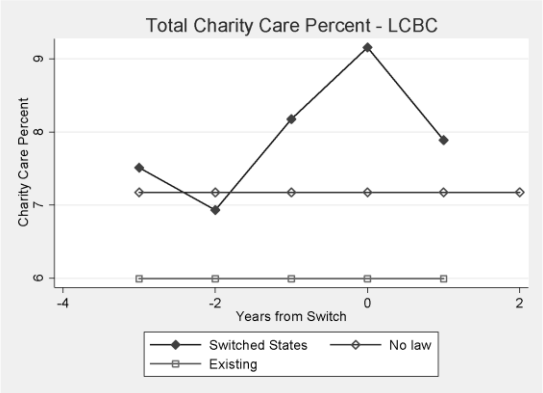
Graph IX

Control measures represent the average of all states in the control, across all years. '0' years from switch on the x-axis indicates the year that legislation was passed in each treatment state.

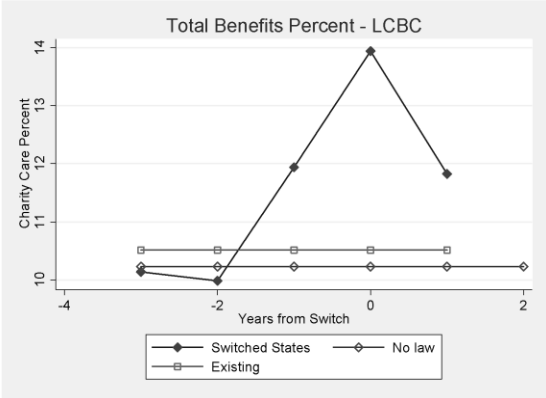
Graphs X - XII: Treatment and control states under Limitations of Charging and Billing Collections regulations, for each dependent variable



Graph X



Graph XI



Graph XII

Control measures represent the average of all states in the control, across all years. '0' years from switch on the x-axis indicates the year that legislation was passed in each treatment state.

Table IV. Regression sets 1-3 for Community Benefits (CB) regulations

Charity Care Percent	Model 1	Model 2 (weak excluded)	Model 3	Model 4 (weak excluded)	Model 5	Model 6 (weak excluded)
cb_post	0.529		0.515		0.383	
cb_post_alt		0.559		0.559		0.381
Standardized values of (hhi)	-0.052	-0.056	-1.273 +	-1.303 +	0.221	0.220
Share of beds in for-profit hospitals	-1.680	-1.623	0.945	1.373	-1.851	-1.847
Share of beds in government hospitals	-2.019	-1.989	-1.713	-1.620	-0.962	-0.958

Total Charity Care Percent	Model 1	Model 2 (weak excluded)	Model 3	Model 4 (weak excluded)	Model 5	Model 6 (weak excluded)
cb_post	1.419 *		1.494 *		1.179 *	
cb_post_alt		1.566 **		1.661 *		1.282 **
Standardized values of (hhi)	-0.143	-0.150	0.218	0.134	-0.200	-0.201
Share of beds in for-profit hospitals	-2.994	-2.850	13.045	14.354	-6.000 +	-5.983 +
Share of beds in government hospitals	-2.777	-2.718	-5.848	-5.598	-0.511	-0.501

Total Benefits Percent	Model 1	Model 2 (weak excluded)	Model 3	Model 4 (weak excluded)	Model 5	Model 6 (weak excluded)
cb_post	1.850 **		1.951 *		1.692 **	
cb_post_alt		2.093 **		2.201 *		1.905 ***
Standardized values of (hhi)	-1.268 *	-1.276 *	0.610	0.502	-1.616 **	-1.617 **
Share of beds in for-profit hospitals	2.506	2.710	16.080	17.851	-0.774	-0.748
Share of beds in government hospitals	-7.729 *	-7.657 *	-11.461 +	-11.143 +	-6.270 +	-6.257 +

Results for all six models run for each dependent variable under CB regulations. Models 1-4 use Stata 'xtreg' command; models 5-6 use 'areg' command
N = 814
*+p<0.1 *p<0.05 **p<0.01 ***p<0.001*
Coefficients for state fixed effects, year fixed effects and policy indicator variable not shown
cb_post and cb_post_alt are the primary coefficients of interest, representing the influence of the regulation on the dependent variable post-passage. cb_post_alt excludes states with weak legislation

Table V. Regression sets 4-6 for Financial Assistance (FA) regulations

Charity Care Percent	Model 1	Model 2 (weak excluded)	Model 3	Model 4 (weak excluded)	Model 5	Model 6 (weak excluded)
fa_post	0.586		0.610		0.431	
fa_post_alt		0.563		0.624		0.388
Standardized values of (hhi)	-0.065	-0.081	-1.376 +	-1.445 +	0.222	0.220
Share of beds in for-profit hospitals	-1.817	-1.758	0.022	0.912	-1.842	-1.861
Share of beds in government hospitals	-1.397	-2.173	-0.245	-2.008	-0.893	-0.979

Total Charity Care Percent	Model 1	Model 2 (weak excluded)	Model 3	Model 4 (weak excluded)	Model 5	Model 6 (weak excluded)
fa_post	0.605		0.641		0.192	
fa_post_alt		1.329 +		1.464 +		0.785
Standardized values of (hhi)	-0.169	-0.201	-0.011	-0.222	-0.199	-0.202
Share of beds in for-profit hospitals	-3.295	-3.203	10.799	12.555	-6.014 +	-6.028 +
Share of beds in government hospitals	-2.074	-3.048	-3.891	-6.393	-0.443	-0.530

Total Benefits Percent	Model 1	Model 2 (weak excluded)	Model 3	Model 4 (weak excluded)	Model 5	Model 6 (weak excluded)
fa_post	0.704		0.804		0.042	
fa_post_alt		1.738 +		1.902 +		0.854
Standardized values of (hhi)	-1.308 *	-1.351 *	0.314	0.037	-1.614 **	-1.617 **
Share of beds in for-profit hospitals	2.088	2.182	13.160	15.431	-0.803	-0.811
Share of beds in government hospitals	-6.877 *	-8.062 *	-8.972	-12.165	-6.203 +	-6.275 +

Results for all six models run for each dependent variable under CB regulations. Models 1-4 use Stata 'xtreg' command; models 5-6 use 'areg' command
N = 814
*+p<0.1 *p<0.05 **p<0.01 ***p<0.001*
Coefficients for state fixed effects, year fixed effects and policy indicator variable not shown
fa_post and fa_post_alt are the primary coefficients of interest, representing the influence of the regulation on the dependent variable post-passage. fa_post_alt excludes states with weak legislation

Table VI. Regression sets 7-9 for Financial Assistance Dissemination (FAD) regulations

Charity Care Percent	Model 1	Model 2 (weak excluded)	Model 3	Model 4 (weak excluded)	Model 5	Model 6 (weak excluded)
fad_post	0.535		0.553		0.404	
fad_post_alt		0.535		0.553		0.404
Standardized values of (hhi)	-0.064	-0.064	-1.364 +	-1.364 +	0.222	0.222
Share of beds in for-profit hospitals	-1.823	-1.823	-0.017	-0.017	-1.843	-1.843
Share of beds in government hospitals	-1.429	-1.429	-0.368	-0.368	-0.881	-0.881

Total Charity Care Percent	Model 1	Model 2 (weak excluded)	Model 3	Model 4 (weak excluded)	Model 5	Model 6 (weak excluded)
fad_post	0.538		0.566		0.176	
fad_post_alt		0.538		0.566		0.176
Standardized values of (hhi)	-0.169	-0.169	0.002	0.002	-0.199	-0.199
Share of beds in for-profit hospitals	-3.302	-3.302	10.762	10.762	-6.015 +	-6.015 +
Share of beds in government hospitals	-2.111	-2.111	-4.049	-4.049	-0.438	-0.438

Total Benefits Percent	Model 1	Model 2 (weak excluded)	Model 3	Model 4 (weak excluded)	Model 5	Model 6 (weak excluded)
fad_post	0.613		0.705		0.004	
fad_post_alt		0.613		0.705		0.004
Standardized values of (hhi)	-1.308 *	-1.308 *	0.330	0.330	-1.614 **	-1.614 **
Share of beds in for-profit hospitals	2.080	2.080	13.115	13.115	-0.805	-0.805
Share of beds in government hospitals	-6.930 *	-6.930 *	-9.178	-9.178	-6.208 +	-6.208 +

Results for all six models run for each dependent variable under CB regulations. Models 1-4 use Stata 'xtreg' command; models 5-6 use 'areg' command
N = 814
*+p<0.1 *p<0.05 **p<0.01 ***p<0.001*
Coefficients for state fixed effects, year fixed effects and policy indicator variable not shown
fad_post and fad_post_alt are the primary coefficients of interest, representing the influence of the regulation on the dependent variable post-passage. fad_post_alt excludes states with weak legislation

Table VII. Regression sets 7-9 for Limitations on Charging and Billing Collections (LCBC) regulations

Charity Care Percent	Model 1	Model 2 (weak excluded)	Model 3	Model 4 (weak excluded)	Model 5	Model 6 (weak excluded)
lcbc_post	0.901 **		0.970 **		0.631 *	
lcbc_post_alt		0.901 **		0.970 **		0.631 *
Standardized values of (hhi)	-0.062	-0.062	-1.394 +	-1.394 +	0.221	0.221
Share of beds in for-profit hospitals	-1.244	-1.244	4.152	4.152	-1.827	-1.827
Share of beds in government hospitals	-1.957	-1.957	-1.487	-1.487	-0.932	-0.932

Total Charity Care Percent	Model 1	Model 2 (weak excluded)	Model 3	Model 4 (weak excluded)	Model 5	Model 6 (weak excluded)
lcbc_post	1.497 **		1.793 **		0.862 +	
lcbc_post_alt		1.497 **		1.793 **		0.862 +
Standardized values of (hhi)	-0.163	-0.163	-0.072	-0.072	-0.199	-0.199
Share of beds in for-profit hospitals	-2.559	-2.559	18.189	18.189	-5.979 +	-5.979 +
Share of beds in government hospitals	-2.579	-2.579	-5.192	-5.192	-0.447	-0.447

Total Benefits Percent	Model 1	Model 2 (weak excluded)	Model 3	Model 4 (weak excluded)	Model 5	Model 6 (weak excluded)
lcbc_post	2.020 **		2.323 **		1.397 *	
lcbc_post_alt		2.020 **		2.323 **		1.397 *
Standardized values of (hhi)	-1.298 *	-1.298 *	0.232	0.232	-1.614 **	-1.614 **
Share of beds in for-profit hospitals	3.096	3.096	22.725	22.725	-0.735	-0.735
Share of beds in government hospitals	-7.474 *	-7.474 *	-10.605 +	-10.605 +	-6.174 +	-6.174 +

Results for all six models run for each dependent variable under CB regulations. Models 1-4 use Stata 'xtreg' command; models 5-6 use 'areg' command
N = 814
*+p<0.1 *p<0.05 **p<0.01 ***p<0.001*
Coefficients for state fixed effects, year fixed effects and policy indicator variable not shown
lcbc_post and lcbc_post_alt are the primary coefficients of interest, representing the influence of the regulation on the dependent variable post-passage. lcbc_post_alt excludes states with weak legislation