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ABSTRACT

We examine the financial consequences of the 2007 California Fair Pricing Law, which places a price ceiling on hospital bills for financially vulnerable individuals. Using cross-sectional variation in exposure to the law, proxied by county-level uninsured rates, we estimate its impact on individual financial outcomes. We find that the law reduces the likelihood of incurring non-medical debt in collections and the number of non-medical accounts in collections. In addition, we find evidence that credit scores increased and suggestive evidence that the number of delinquent accounts decreased for individuals in more exposed counties. Our results suggest hospital billing regulations can improve targeted individuals' financial outcomes.

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An online appendix is available at http://www.nber.org/data-appendix/w35080

1 Introduction

Medical bills are frequently cited as a reason why US households struggle to meet financial obligations (Fulford and Wilson, 2025). This is unsurprising given the high and rising costs of health care in the U.S. and the large share of non-elderly individuals who are uninsured, at approximately 11.6 percent as of 2024 (Briones and Cohen, 2024). Furthermore, the risk of experiencing expensive medical bills, and subsequent financial distress, is likely to grow given proposed cuts to Medicaid funding (Euhus et al., 2025). This risk is important to understand given that prior research shows that large and often unexpected medical expenses can lead to negative, persistent financial consequences (Canilang et al., 2020; Dobkin et al., 2018; Moulton et al., 2022; Gupta et al., 2018). While most policy discussions focus on expanding health insurance coverage or increasing plan generosity to reduce financial risk, less attention has been given to policies that directly reduce patients' medical expenses through legislated price regulation.

In this paper, we examine how legislation that limits exposure to expensive medical bills affects individual financial outcomes. We focus on the introduction of California's Hospital Fair Pricing Act, commonly referred to as the California Fair Pricing Law (CAFPL), and estimate how the law affects several measures of financial distress for individuals who are most likely to be eligible. The CAFPL, enacted in 2007, limits the prices paid for a hospital visit by lower-income uninsured patients and lower-income insured patients experiencing "burdensome" medical bills. The law also requires the adoption of "formal, written financial assistance policies," which must be clearly advertised in the hospital (Melnick and Fonkych, 2013). While similar laws exist in other states, our analysis focuses on California because of its population size and demographic background, both of which lend well to extrapolation to different settings.

An analysis of fair pricing laws by Batty and Ippolito (2017a) finds that the introduction of these laws reduced hospitals' provision of care and lowered prices charged to uninsured patients. These results establish that the law meaningfully affected hospital behavior and pricing. We add to this evidence by examining whether these changes translated into improvements in household financial well-being. Specifically, we analyze the policy's effects

on individual measures of financial distress, capturing the impact of price reductions and utilization responses on those most likely to qualify for the law. This is important, as the direction and magnitude of the financial effects of the CAFPL are *a priori* ambiguous. For example, decreases in hospital prices may lead to an increase in "real income" and subsequently improve financial outcomes, as individuals may have additional financial resources to pay down existing debts or prevent future delinquencies. Conversely, decreases in hospital prices could lead to increases in the consumption of health care services, resulting in worse financial outcomes, especially if individuals borrow to finance this increased consumption. However, the impact of the latter channel might be limited given that hospitals may limit the quantity of care provided, during a given medical episode, to those who qualify for the CAFPL (Batty and Ippolito, 2017a).

Thus, understanding the impact of such legislation on financial outcomes is an empirical question. By quantifying how hospital price regulation affects household financial outcomes, our study provides evidence on an alternative policy lever for reducing the financial consequences of medical shocks, complementing the extensive literature on insurance expansions and health care market regulation.

To study the effect of the CAFPL on individual financial outcomes, we use data from the Federal Reserve Bank of New York Consumer Credit Panel/Equifax (CCP), which is a 5 percent anonymized random sample of individuals with credit bureau records. We then merge the CCP with a unique data set that contains detailed anonymized information on medical debt reported to Equifax by third-party debt collectors. Using data from 2003 to 2010, we estimate difference-in-difference-in-differences (DDD) models across California and its neighboring states, comparing, over time, individuals living in counties that have varying levels of pre-policy "exposure" to the FPL (i.e., pre-policy uninsured rates). Specifically, in California and its neighboring states, we compare outcomes for younger adults, ages 18 to 39, who live in areas with varied rates of health-insurance coverage before and after the implementation of the CAFPL.[1] We note that our estimates measure the intent-to-treat effect of the CAFPL, as we can only determine if individuals are likely to be covered by the

[1]This approach is similar to that of Finkelstein (2007), Miller (2012), Mazumder and Miller (2016), and Courtemanche et al. (2017).

law based on county of residence.

We find that the CAFPL impacted *non*-medical debt in collections for younger adults. We find that a 10 percentage point increase in the county uninsured rate leads to a 0.54 percentage point decline in the probability of having any non-medical debt in collections, a relative decrease of 5.1 percent, and approximately 0.013 fewer non-medical accounts sent to collections. We also find that the *distribution* of non-medical collections is affected: a 10 percentage point increase in the county uninsured rate leads to a 0.57 percentage point increase in the probability of an individual having a $0 non-medical collection balance and lowers the probability of having a balance between $1 and $1,000 by 0.46 percentage points. This is consistent with the findings from Argys et al. (2020), who also find changes in non-medical accounts after Tennessee's 2007 Medicaid reform. For medical collections, we only find transitory effects in the year after the CAFPL is enacted for both our intensive and extensive margin measures.

We also examine three additional measures of financial health: credit scores, the percentage of all debt that is delinquent, and the total number of delinquent accounts.[2] After the introduction of the CAFPL, we find evidence that for individuals most likely to be exposed to the law, credit scores improved within the first year of the law taking effect, and delinquencies decreased, consistent with our collection results. Specifically, we find that a 10 percentage point increase in the county-level uninsured rate increases credit score by 2.4 points and reduces the share of debt that is delinquent by 0.0106 percentage points (a relative decrease of 6.9 percent). While results from Batty and Ippolito (2017a) show decreases in the amount of hospital care received by uninsured patients, which may explain some of our findings, taken together, our results overall imply that hospital billing legislation can provide financial protections to financially vulnerable populations and to consumers who have "thin" health-insurance coverage.

Our paper contributes to the growing literature that examines the relationship between health-care access/utilization and personal finances. The literature has examined how health-care utilization affects financial outcomes (Dobkin et al., 2018), the importance of

[2]The credit score measure we use is the Equifax Risk Score, a proprietary credit score produced by Equifax that is similar to other risk scores used in the industry.

liquidity for health-care utilization (Gross and Notowidigdo, 2011), and more recently, how the availability of public health-insurance options affect financial outcomes (e.g., Brevoort et al. (2020), Hu et al. (2018), Mazumder and Miller (2016), and Barcellos and Jacobson (2015)). These studies have found that access to health insurance improves measures of financial well-being and interactions with the health-care system can be costly in both the shorter and longer run.

Additionally, several studies examine the effects of hospital billing policies on health-care utilization. For example, Batty and Ippolito (2017a), Bai (2015), and Melnick and Fonkych (2013) examine the impacts of fair pricing laws. Batty and Ippolito (2017a) find that fair pricing laws reduce the medical payments of the uninsured, resulting in lower provisions of health care by hospitals. Adams et al. (2022) examine the impact of Kaiser Permanente's financial assistance program on qualifying patients' health-care utilization and find that financial assistance programs can promote the consumption of high-value health care. In contrast to our work, these studies largely focus on health-care utilization effects (i.e., how much health care is provided by hospitals or consumed by patients after the policy is introduced) or price effects (i.e., what price do the uninsured face when visiting the hospital after the policy is introduced).

The novelty of our study is that we investigate how hospital billing regulations, such as the CAFPL, affect the shorter- to medium-run *financial outcomes* of those likely to be uninsured or financially vulnerable. Moreover, we examine a setting where the government, via legislation, directly affects the prices charged by health-care providers. This differs from the typical setting where an intermediary, such as a health insurer, negotiates prices with providers. Thus, we are able to observe the impacts of price ceilings set by the government and their effects on consumers' financial well-being. This examination may be useful for understanding the financial impacts of other policies, such as changes to the federal government's ability to negotiate drug prices for select medications as part of the 2022 *Inflation Reduction Act* (Cubanski et al., 2023).

Additionally, while a reduction in the prices paid for health care likely impacts financial outcomes, we quantify these effects over time. Thus, by making use of detailed individual-level credit bureau data, we can trace the impacts of the law over a number of relevant

financial outcomes, such as delinquent debt and credit scores. As such, this is the first study, known to the authors, to examine how legislative changes to hospital billing regulations affect the financial outcomes of consumers.

The rest of our paper proceeds as follows: Section 2 discusses the law's background and impact on hospital revenues, Section 3 describes our data, and Section 4 discusses our methods. We present results and discussion in Sections 5 and 6 and conclude in Section 7.

2 Policy Background and Impact on Hospital Revenue

2.1 Policy Background

The California Fair Pricing Law (CAFPL), Assembly Bill 774, was passed in 2006 and became effective on January 1, 2007. The law restricted hospital billing practices for patients with family incomes at or below 350 percent of the federal poverty level who were either uninsured or faced medical expenses exceeding 10 percent of their household income (California Assembly, 2007).[3]

For these patients, hospitals were required to cap charges at amounts no higher than those paid by government programs such as Medicare or the state Medicaid program, Medi-Cal (Melnick and Fonkych, 2013). Prior to the passage of the law, hospitals could charge uninsured patients the "chargemaster" price, which tended to be higher than the prices negotiated with health insurers (Batty and Ippolito, 2017b). Additionally, hospitals were also required to extend eligibility for charity care to these patients, refrain from adverse credit reporting or civil collections for at least 150 days post-billing, and publicize written financial assistance policies (California Assembly, 2007). Additional restrictions limited collection practices such as wage garnishments and the use of collection agencies for CAFPL-eligible patients making "good faith" attempts to pay their bills (Office of Statewide Health Planning and Development, 2021).[4]

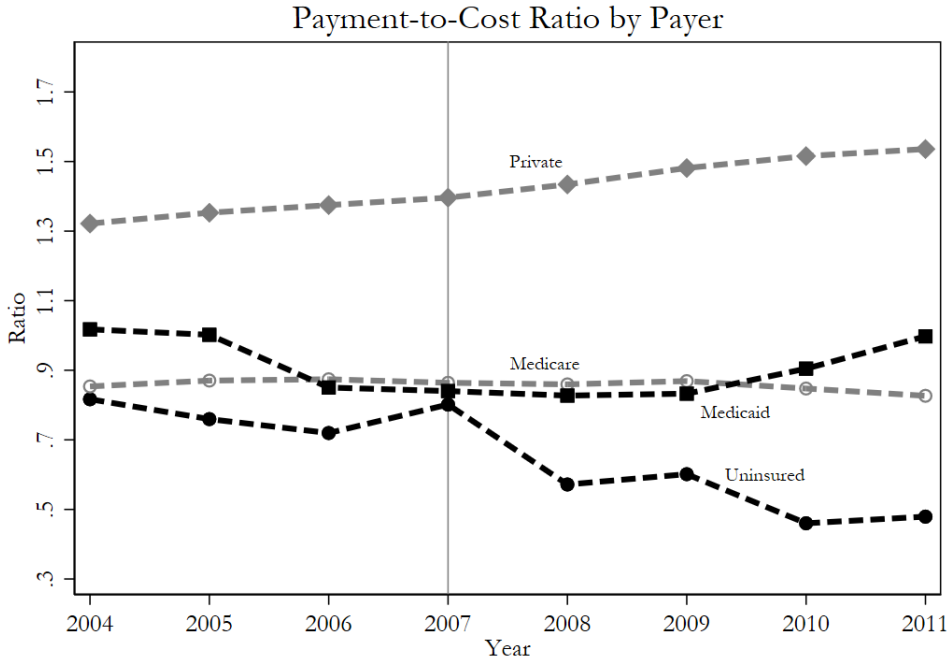
[3]For context, in 2007, the federal poverty guidelines were, respectively, \$10,210, \$13,690, \$17,170, \$20,650, and \$32,470 for households of sizes one, two, three, four, and five (Office of the Assistant Secretary for Planning and Evaluation (2007)). Meanwhile, California 2006 median incomes were \$29,576, \$58,752, \$65,010, \$75,000, and \$65,000, for households of size one, two, three, four, and five, respectively (CA Demographic Research Unit (2009)).

[4]Further details about the provisions of the law can be found in the California Health and Safety Code,

2.2 Hospital Revenue and Patient Payments

To understand if the CAPFL impacted individual financial outcomes, we first examine whether the uninsured paid relatively less for hospitalizations after the implementation of the CAFPL. To do this, we examine how the introduction of the CAFPL affected hospital revenues and patient payments. Using annual hospital financial reports from the California Health Care Access and Information system from 2004 to 2011, we analyze changes in the ratio of payments to costs (PtC) for uninsured patients relative to those with other coverage types. The PtC ratio captures the extent to which hospitals recover treatment costs across payer groups (Batty and Ippolito, 2017a).[5]

Figure 1: **Hospital Revenues and Patient Payments**



Note: Authors' calculations using California Office of Statewide Health Planning and Development Data. This figure presents payment-to-cost (PtC) ratios for California hospitals between 2007 and 2011. A hospital's PtC ratio represents the hospital's net revenue to total hospital expense. Prices are adjusted to 2011 dollars.

Figure 1 shows that prior to the CAFPL, the PtC ratio for the uninsured averaged approximately 0.8 and was consistently lower than that for other payers. Following the law's

Chapter 2.5 of Division 107.

[5]A PtC of 1 indicates full cost recovery; values above 1 imply payments exceed treatment costs, while values below 1 indicate that hospitals recover less than the cost of care.

implementation, the uninsured PtC declined steadily, reaching about 0.5 by 2011. In contrast, PtC ratios for privately insured, Medicare, and Medicaid patients remained stable or increased. We also estimate that the average annual difference between gross charges and net payments for the uninsured grew from $13.2 million pre-reform (2004–2006) to $25.1 million post-reform (2007–2011), consistent with the 25 to 30 percent price reduction documented by Batty and Ippolito (2017a). These results suggest that the CAFPL meaningfully reduced the amounts hospitals collected from uninsured patients, likely improving financial outcomes for this group. We explore these effects further in the remainder of the paper.

3 Data

3.1 Data Sources

To examine the effects of the CAFPL on financial distress, we use consumer credit data from the Federal Reserve Bank of New York Consumer Credit Panel/Equifax data (CCP). The CCP is an anonymized, nationally representative 5 percent random sample of individuals with credit bureau records from 1999 to the present. Consumers must have at least one public record or credit account and a Social Security number (SSN) to be included in the CCP, and are followed at a quarterly frequency.[6] In a given quarter, the CCP contains data on approximately 12 million different consumers.[7] While the CCP contains extensive information regarding credit data, it does not contain any demographic information besides year of birth, census geography, and a scrambled address. Importantly, we do not observe information on income or health insurance status.

We merge the CCP to a unique data set that contains detailed information on medical bills placed for collection by third-party debt collectors. The medical collections data set is an approximately 40 percent anonymized random sample of individuals in the CCP with and without a medical collection on their credit report. This data set runs from 2003 to 2017 and the sampled consumers are observed at the end of the fourth quarter in each year.

[6]Individuals leave the CCP if they die, change their SSN, or have an extended period of credit market inactivity.

[7]For a comprehensive overview of credit bureau data, see Gibbs et al. (2025).

For each consumer, we have detailed information on up to 10 medical collection accounts, including the current balance on each account, the amount of debt that was initially sent to the debt collector, and information on the date the account was assigned to a debt collector. The assignment date is reported directly to Equifax by the debt collection agency and is not necessarily dated by when the medical bill was incurred. Because CCP data are at the individual level, we aggregate the medical collection account information to the consumer-level for each year.[8] Each year of this merged data set contains medical collection and credit bureau information for approximately 5 million individuals.

During our analysis period, there was no uniform standard for how third-party collection agencies reported late bills in collections to credit bureaus. This stands in contrast to other forms of debt, like credit card debt, that are reported as being 30, 60, 90, or 120 days late. This means that we only observe late bills, including late medical bills, when the collection agency report them to the credit bureau. The lack of a uniform reporting standard means that the date that we observe new collections appearing in the credit bureau data does not necessarily coincide with the date that the bill was actually accrued.[9] Additionally, the medical collections we observe do not capture the universe of medical debt. Medical bills paid using a credit card do not appear in our medical collections data. Also, because hospitals may sue patients for unpaid medical bills (Cooper et al., 2021), if the outcome of such lawsuits is wage garnishment, the unpaid bill may not appear in the credit bureau data.[10]

3.2 Outcomes

The main outcomes of interest in our merged data are measures of debt owed to third-party debt collectors, a frequently used measure of financial distress in the literature (Finkelstein et al., 2012). Late bills or loans owed to these debt collectors are commonly referred to as *collections* and the amount of debt owed to debt collectors as *collection balances*. We observe

[8]Not all debt in collections is actually sold to debt buyers or collectors. Firms collecting debt on behalf of the original creditor furnish the majority of collections to credit reporting agencies (CFPB, 2023).

[9]Additionally, we are unable to infer how delinquent the debt is from the reporting date.

[10]Though the unpaid bill may not appear in the credit report, wage garnishment would appear as a civil judgment on a credit report.

two types of collection accounts in our merged data: medical and non-medical collections. Medical collections are categorized as delinquent accounts owed to a medical provider, such as a hospital or a doctor's office. Non-medical collections include both delinquent loans, such as retail store credit cards, and late or unpaid bills, which can include those for utilities and telecommunication services. For our non-medical collection variable, we are unable to dis-aggregate it into different account categories.[11]

To study the extensive margin effects of the CAFPL on collections, we analyze the probability of having any medical or non-medial collection accounts reported to Equifax in the past 12 months.[12] Additionally, we examine the probability of having a $0 medical or $0 non-medical collection balance in the past 12 months.[13] These outcomes allow us to investigate if the CAFPL was able to protect individuals from financial distress by mitigating the high costs of medical care. To study the intensive margin effects of the CAFPL on financial outcomes, we examine the number of medical and non-medical collection accounts and the debt balances of medical and non-medical collections reported to the credit bureau in the past 12 months. We also explore the effects of the law on the distribution of medical and non-medical collections by binning individuals' collection balances within a range of values. We follow Mazumder and Miller (2016) and create four bins of balance ranges: $0, $1 – $1,000, $1,001 – $2,000, and greater than $2,000.

Along with our medical and non-medical collection variables, we also consider three additional financial outcomes that capture financial distress: an individual's credit score (the Equifax Risk Score), the total number of delinquent accounts that an individual has, and the percent of all debt that is delinquent. Accounts and debts are considered delinquent if they are at least 30 days past due.

[11] In 2014, the CFPB reported that 52% of all collection tradelines were medical collections, 15.5% were telecommunication or utility bills, 7.2% were retail trades, and 3.4% were banking or financial (CFPB, 2014).

[12] Using collections within the past 12 months gives us *flow* measures of financial distress instead of stock measures. This is important because the stock of collections, especially medical collections, frequently consists of very old accounts, which may not be indicative of an individual's current financial situation. See Gibbs et al. (2025) for more details.

[13] Having a $0 collection balance may indicate that an individual does not have a collection balance or it can be the result of paying off a collection balance. For the latter, an individual may still have a collection account on their credit report despite it being paid off.

Table 1: **CCP Summary Statistics**

	Non-CA States		California	
	Pre	Post	Pre	Post
Share(Medical Collections)	0.07	0.10	0.04	0.05
	(0.248)	(0.299)	(0.190)	(0.221)
Share(Non-medical Collections)	0.13	0.14	0.11	0.12
	(0.337)	(0.346)	(0.308)	(0.321)
Share($0 Medical Collection Balance)	0.93	0.90	0.96	0.95
	(0.250)	(0.298)	(0.191)	(0.220)
Share($0 Non-medical Collection Balance)	0.87	0.86	0.89	0.88
	(0.337)	(0.345)	(0.307)	(0.320)
Total Collection Balance	463.64	684.06	430.68	583.26
	(2294.6)	(3066.1)	(2535.1)	(3172.7)
Non-medical Collection Balance	296.48	358.94	289.35	368.49
	(1833.1)	(2144.5)	(1818.2)	(2463.7)
Medical Collection Balance	167.16	325.12	141.33	214.77
	(1321.1)	(2097.6)	(1745.9)	(1941.8)
Number of Medical Collections	0.12	0.20	0.06	0.09
	(0.588)	(0.818)	(0.389)	(0.484)
Number of Non-medical Collections	0.20	0.21	0.15	0.16
	(0.688)	(0.690)	(0.514)	(0.550)
Credit Score	645.60	645.52	653.47	650.51
	(98.75)	(104.0)	(99.04)	(104.1)
% of All Debt That Is Delinquent	0.16	0.19	0.15	0.19
	(0.344)	(0.368)	(0.339)	(0.372)
Number of Delinquent Accounts	0.46	0.50	0.43	0.51
	(1.138)	(1.244)	(1.128)	(1.283)

Notes: Authors' calculations using Federal Reserve Bank of New York Consumer Credit Panel/Equifax and Census data. Standard deviations reported in parentheses. Sample includes individuals ages 18 – 39 from 2003 to 2010, which yields approximately 2.2 million observations and approximately 401,000 individuals. All collection variables are for accounts sent to a third-party debt collector in the past 12 months. Credit score is the Equifax Risk Score. An account is defined as delinquent if payment is at least 30 days late. Reported statistics are averages, unless otherwise stated.

4 Methodology

To examine the impact of the CAFPL on individual financial outcomes, we adopt an intent-to-treat (ITT) analysis that focuses on populations most likely to be affected by the law based on well-known patterns in health insurance coverage, income distribution by age, and within state variation in uninsured rates. This is because the CCP does not contain information on individuals' health insurance status or income, which prevents us from directly identifying individuals eligible for the CAFPL in our data.

As the CAFPL primarily targets uninsured and lower-income patients, we restrict our merged data to consist of individuals who were 18–39 years old between 2003 and 2010

and restrict the last year to 2010 since California expanded Medicaid in 2011.[14] We focus on this age group, 18–39 years, because it has traditionally had the lowest rates of health-insurance coverage, particularly during our study period (Akosa Antwi et al., 2013; Blascak and Mikhed, 2023).[15] Additionally, this age group has the lowest incomes, with data from the 2006 Current Population Survey showing that the average wage and salary income for individuals ages 18 to 39 is 30 percent lower than individuals ages 40 to 64. Finally, Batty et al. (2018) have shown that medical collections are highest for younger adults, despite the fact that they have lowest levels of medical spending.[16] Based on these institutional patterns, individuals in the 18–39 age group likely have the greatest exposure to the law.[17]

Following the empirical strategies in Mazumder and Miller (2016) and Bailey et al. (2025), we compare outcomes for individuals in California to outcomes for individuals in neighboring states (i.e., border states) that did not implement a fair pricing law during our study period. Our comparison group includes individuals in Arizona, Nevada, Oregon, and Washington because these states are geographically close to California and share similar economic conditions. By using individuals residing in border states as our control group, we can account for regional economic shocks and more localized changes in credit markets and healthcare utilization that may have influenced financial outcomes during the sample period.[18]

In addition to leveraging the across state variation, we also utilize within-state, across-county variation in the uninsured rates for the 18–39 age group. Since the CAFPL primarily

[14]Inclusion of the years beyond 2010 could result in biased treatment effect estimates if Medicaid expansions change the composition of the uninsured. For example, this could occur if there is selection into Medicaid participation among the uninsured.

[15]During this time period, U.S. health insurance coverage varied by age, income, and geography. Children under the age of 19 and adults age 65 and above had relatively high insurance coverage rates due to public programs such as Medicaid, the Children's Health Insurance Program, and Medicare. Working-age adults, in contrast, had higher uninsured rates, with the highest rates concentrated among younger adults and lower-income individuals. Because the CAFPL primarily affects uninsured and underinsured patients, younger non-elderly adults are most likely to be exposed to the policy.

[16]In results not shown, we confirm that the age distribution shown by Batty et al. (2018) holds during our study period.

[17]It is important to note that this assumption does not imply that the effect of CAFPL, conditional on being uninsured, is largest for younger adults; older, non-elderly adults typically face higher expected medical expenditure risk and may receive larger financial benefits. In Section 5.3, we return to this issue by evaluating the effect of the law on older adults between ages 40–64.

[18]Additionally, each state had relatively similar *overall* debt collection laws with no major contemporaneous changes during our analysis period. See Appendix B for a more detailed discussion of debt collection legislation (including medical collections) across states during our study period.

targets the uninsured, all else equal, counties with higher uninsured rates for the 18–39 age group will have a larger share of younger individuals "exposed" (i.e., potentially affected by) to the CAFPL. Utilizing this within-state, across-county variation in uninsured rates also allows us to better make comparisons across groups who face the same economic conditions and legislative environments.

To construct our measure of exposure to the CAFPL, we follow Miller (2012) and Mazumder and Miller (2016) and calculate county-level uninsured rates using data from the U.S. Census Bureau's Small Area Health Insurance Estimates (SAHIE) for 2006, the year before CAFPL was implemented. The SAHIE data provides model-based estimates of health insurance coverage for local areas by a number of demographic characteristics. To produce these estimates, the Census Bureau combines data from the Current Population Survey Annual Social and Economic Supplement with additional administrative and Census data.[19] Our county-level measure of the uninsured rate for low-income adults ages 18–39 shows that the baseline uninsured rates vary substantially across counties. In CA, the calculated baseline uninsured rates ranged from approximately 24 percent in Del Norte County to more than 70 percent in Mono County. Appendix Figure D1 documents this spatial variation in county uninsured rates across the states in our analysis.

We estimate the effect of CAFPL using the following triple-difference specification:

$$\begin{aligned} Y_{ict} &= \beta + \pi\big(CA_c \times Exposure_c \times Post_t\big) + \theta\big(CA_c \times Post_t\big) \\ &\quad + \psi\big(Exposure_c \times Post_t\big) + X_{it}'\gamma + C_{ct}'\omega \\ &\quad + \mu_i + \lambda_c + \tau_t + \varepsilon_{ict}, \end{aligned} \tag{1}$$

where Y_{ict} represents the financial outcomes described in Section 3.2 for individual i residing in county c in year t. CA_c equals one if an individual resides in California in 2006 and zero otherwise.[20] $Post_t$ equals one for the years after the law's introduction in 2007 and is zero

[19] We discuss the SAHIE data in greater detail and document the construction of our uninsured rate measure in Appendix A.

[20] We assign individuals to counties based on residence in 2006. Treatment status and baseline exposure are therefore fixed using pre-reform location and do not change if individuals move across counties or states after CAFPL takes effect. In robustness checks, we assess whether movers change our estimates and find little evidence that it does.

otherwise.[21] $Exposure_c$ denotes the 2006 county-level uninsured rate for low-income adults ages 18–39. The interaction $CA_c \times Post_t$ captures changes affecting all California counties after 2006, while $Exposure_c \times Post_t$ captures changes associated with the 2006 uninsured rate of county c in the post period. The triple interaction $CA_c \times Exposure_c \times Post_t$ measures how our financial outcomes of interest vary with county-level uninsured rate in the post-CAFPL period. Thus, the primary coefficient of interest is π, which captures how financial outcomes differentially change after the passage of the CAFPL, as the county-level uninsured rate varies.

We also include a vector of controls, X_{it}, that includes age and household size. Age is constructed using information on an individuals' year of birth while household size is calculated using a scrambled address variable to identify the number of individuals in the CCP that share the same address.[22] The vector C_{ct} includes county characteristics that may change over time and measures local economic conditions, including county unemployment rates from the Bureau of Labor Statistics, housing price indices from the Federal Housing Finance Agency, and the share of county establishments in manufacturing from the U.S. Census Bureau's County Business Patterns data.[23] Equation 1 also includes individual fixed effects (μ_i), county fixed effects (λ_c), and year fixed effects (τ_t) to account for time-invariant individual characteristics, persistent county differences, and common shocks across years. To account for potential within-county correlation of our outcomes, we cluster our standard errors at the county level.

Our identification strategy assumes that, absent the CAFPL, the relative outcomes of individuals who live in counties with higher uninsured rates (i.e., those who are more exposed to the CAFPL) compared to those who live in counties with lower uninsured rates (i.e., are not highly exposed to the CAFPL), within CA, would have trended similarly as the relative outcomes of individuals who live in counties with higher uninsured rates compared to those

[21] Similar to Courtemanche et al. (2017), $Post_t$ is not included separately in Equation 1 because it is perfectly collinear with the year fixed effects. Likewise, CA_c, $Exposure_c$, and $CA_c \times Exposure_c$ are absorbed by the county fixed effects.

[22] In each quarter of the CCP, we observe any additional household members that share the same address. For more details on the CCP and household size, see Lee and van der Klaauw (2010).

[23] We include the county manufacturing share in our estimating equation because the Great Recession may have had a differential economic impact on counties based on their exposure to the housing crisis and manufacturing.

who live in counties with lower uninsured rates, in border states (Olden and Møen (2022)). Under this assumption, any differential post-CAFPL changes in credit outcomes between individuals in higher and lower uninsured California counties, relative to the corresponding difference between higher and lower uninsured counties in the border states, can be attributed to the law.

To assess if trends in the relationship between the uninsured rate and our financial outcomes differed across California and its border states prior to the CAFPL, we estimate the following equation:

$$\begin{aligned} Y_{ict} &= \beta + \sum_{k=2003}^{2010} \pi_k \Big(CA_c \times Exposure_c \times \tau_{t=k;k\neq 2006} \Big) \\ &\quad + \gamma X_{it} + \omega C_{ct} + \mu_i + \lambda_c + \varepsilon_{ict}. \end{aligned} \tag{2}$$

In this specification, $Post_t$ is replaced with a full set of year indicators τ_t interacted with $CA_c \times Exposure_c$. The coefficients, π_k, trace out the evolution of the treatment effects relative to the omitted year 2006 and allow us to assess whether the pre-policy outcomes trend similarly across our treatment and control groups.

5 Results

5.1 Summary Statistics

We present summary statistics in Table 1. In both CA and comparison states, individuals are more likely to have recent non-medical accounts in collection than medical accounts. This may be due to differences in how medical and non-medical debt are reported to credit agencies as discussed in Section 3. Prior to the passage of the law, the share of individuals with recent medical collections was 4 percent in California and 7 percent in comparison states; after the law as implemented, the shares increased to 5 percent and 10 percent respectively. We see similar patterns for recent non-medical collections: Border states had a slightly higher share of individuals with non-medical collections than CA (13 percent vs. 11 percent) and both groups saw the share slightly increase from the pre-law period to the post-law period.

Across CA and non-CA states, we observe a decline in the share with a $0 medical

collection balance after 2007. In CA, the share declined by 1 percentage point and in non-CA states, the decline was 3 percentage points. The share with a $0 non-medical balance in both CA and comparison states declined by 1 percentage point after the law. The average number of medical collections is lower in CA, with individuals having 0.06 accounts in the pre-FPL period and 0.09 accounts after the CAFPL was enacted; in non-CA states, individuals had 0.12 accounts and 0.20 accounts, respectively.

Collection balances are also mostly lower in CA relative to other states, especially for medical collections, both in the pre- and post-periods. For context, we present Appendix Figure D2, which shows the county-level median collection balances for all counties in the U.S. in 2006. While there is significant geographic heterogeneity in median balance levels across the country in 2006, CA has lower levels than most western and midwestern states.[24] In Appendix Figure D3, we show the distribution of medical collections for CA and comparison states pre- and post-FPL. We see small shifts in the medical collections distribution, but overall, the distributions are fairly similar across time periods. In general during this time period, individuals in CA had lower medical collection balances than individuals living in other U.S. states.

5.2 Main Results

Our main event study results are presented graphically in Figures 2 to 4 and our main DDD results are reported in Table 2.[25] In the pre-CAFPL period, our event-study graphs show that the coefficients, π_k, are statistically indistinguishable from zero for each of our outcomes of interest. This suggests that our treatment and control groups followed similar

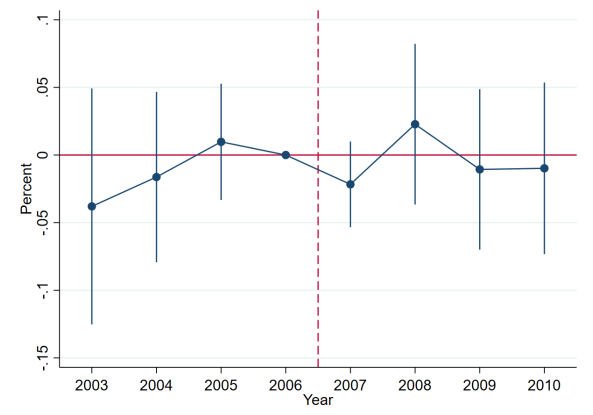
[24]This trend persists as California is currently among the states with the lowest levels of medical collections in the U.S. See Kluender et al. (2021) for a detailed map for 2020.

[25]In Table 2, the number of observations for each variable can vary because of a number of factors. First, values of some variables are reported under specific conditions. For instance, credit score are only available for individuals who have sufficient account information and history to estimate a score. Second, some variables only have non-missing values conditional on having another variable in a specific state. For instance, having an amount in collections is conditional on having an account sent to a debt collector. Third, missing values can arise from not having enough information to estimate a value. Fourth, there is heterogeneity in the reporting behavior of data providers that send data to credit bureaus. For more information, see `https://files.consumerfinance.gov/f/201212_cfpb_credit-reporting-white-paper.pdf`. Because we do not know the nature of the missingness for any given variable, we do not impute any values nor do we impose any additional sample restrictions based on any specific variable. Additionally, it is unlikely that the prevalence of missing values in credit variables is correlated with treatment status.

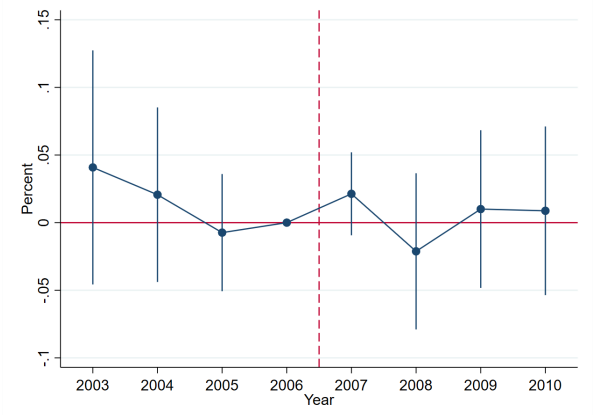
trends before the law was implemented, consistent with the parallel trends assumption.

Figure 2: **Triple Difference Event Study Results: Extensive Margin**

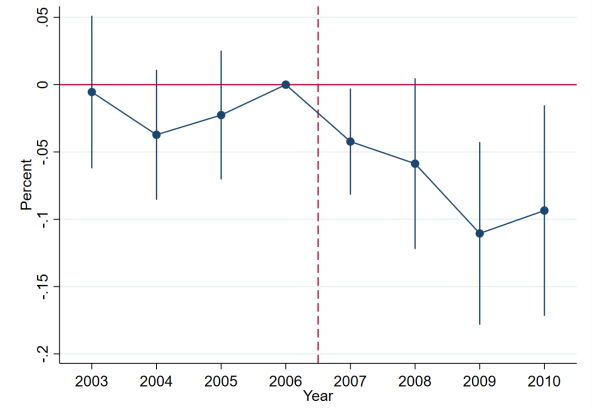
Panel A: Probability of having a medical account in third-party collections



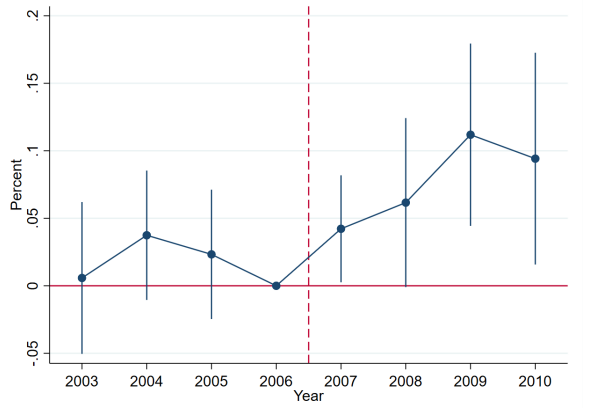
Panel B: Probability of having a $0 medical collection balance



Panel C: Probability of having a non-medical account in third-party collections



Panel D: Probability of having a $0 non-medical collection balance



Note: Authors' calculations using Federal Reserve Bank of New York Consumer Credit Panel/Equifax, Census, FHFA, and BLS data. All collection variables are for accounts sent to a third-party debt collector in the past 12 months. Lines represent 95 percent confidence intervals. Sample includes individuals ages 18 – 39.

In panel A of Figure 2, we do not find a statistically significant effect of the CAFPL on the likelihood of having any medical debt in collections within the past 12 months. Although the event study estimate show an immediate post-law decline in the probability of having any medical debt in collections, this decline is short-lived and is not sustained in subsequent years, indicating that any impacts on medical collections appear to be transitory. In contrast, we find persistent, statistically significant effects of the law's passage on *non-*

medical debt in collections. The event study estimates in panel C of Figure 2 show that the likelihood of having a non-medical account in collections declines in the first year after the law is enacted and this reduction is persistent and grows larger over time, consistent with sustained improvements along the extensive margin of non-medical collections.

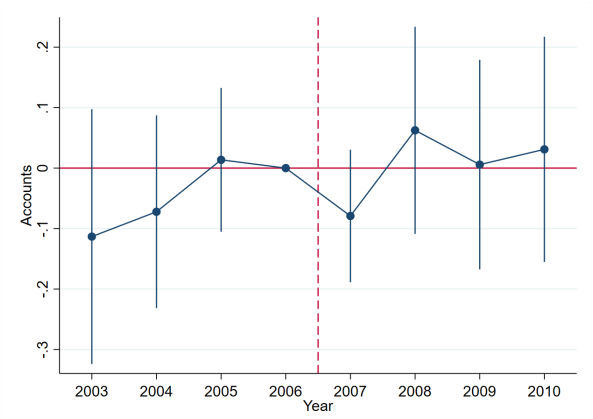
In Table 2, the estimated coefficients represent the effect of residing in a CA county where the uninsured rate is 100 percent, as compared to a CA county with a 0 percent uninsured rate. To interpret these coefficients, we rescale the estimates by 0.1 to capture the effect of a 10 percentage point increase in the county-level uninsured rate. We also provide an interpretation where we scale our estimates by 0.417, the average pre-CAFPL uninsured rate across all counties in our sample, to get the effect of the CAFPL in the average county. For our DDD estimates in Table 2, we find that a 10 percentage point increase in the uninsured rate leads to a 0.54 percentage point decline in the probability of having any non-medical debt in collections, a relative decrease of 5.1 percent.[26] Scaling this estimate to a county with the average uninsured rate yields a 2.25 percentage point decline, corresponding to a 21.2 percent reduction relative to the pre-treatment mean across all CA counties.

We find a similar pattern when examining the probability of having a $0 balance in collections. Panel B of Figure 2 shows an immediate, but small, post-reform increase in the probability of having a $0 medical collections balance, followed by estimates that are near zero with large standard errors. Consistent with the event study results, our results from Table 2 imply that a 10 percentage point increase in the uninsured rate leads to a statistically insignificant 0.04 percentage point decrease in the probability of having a $0 medical collection balance. In contrast, for non-medical collections, panel D of Figure 2 shows an immediate and significant increase in the likelihood of a $0 non-medical collection balance that grows in magnitude over time. This corresponds to DDD estimates in Table 2, which show that a 10 percentage point increase in the uninsured rate increases the probability of having $0 balance by a statistically significant 0.57 percentage points. At the average county-level exposure, this implies a 2.37 percentage point increase, or a 2.7 percent rise relative to the pre-reform mean. These results suggest that the law may have helped individuals to pay off their non-medical collection balances or prevented individuals from accruing non-medical

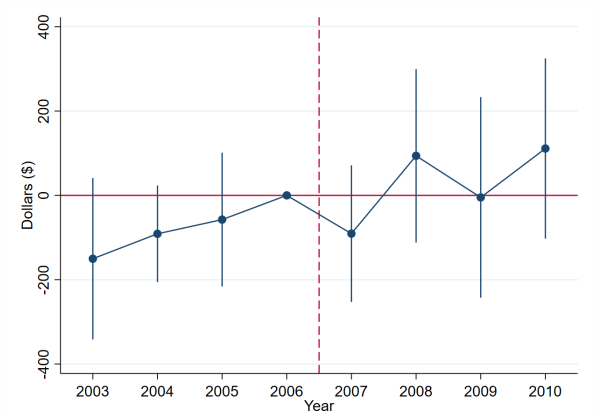
[26]This estimate is calculated as [(-0.054/10)/0.106] $\times$ 100%.

Figure 3: **Triple Difference Event Study Results: Intensive Margin**

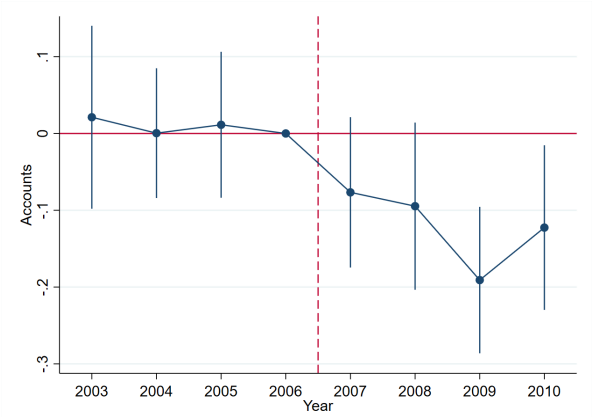
Panel A: Number of medical accounts sent to third-party collections in the past 12 months



Panel B: Balance of medical accounts sent to third-party collections in the past 12 months



Panel C: Number of non-medical accounts sent to third-party collections in the past 12 months



Panel D: Balance of non-medical accounts sent to third-party collections in the past 12 months

Note: Authors' calculations using Federal Reserve Bank of New York Consumer Credit Panel/Equifax, Census, FHFA, and BLS data. All collection variables are for accounts sent to a third-party debt collector in the past 12 months. Lines represent 95 percent confidence intervals. Sample includes individuals ages 18 – 39.

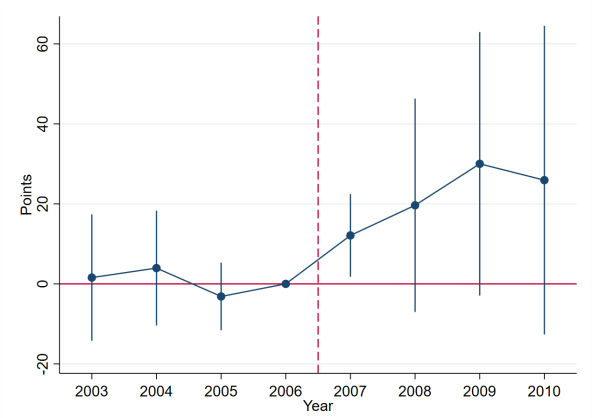
collection balances in the first place.

Finally, we examine number of collection accounts and collection balances in Figure 3. Similar to our previous results, we do not find any significant effects on the number of medical collections in the years after the CAFPL, but we do observe significant declines in the number of non-medical collections. For both collection balance variables, we do not observe any effects in the post-CAFPL years. Panel B of Table 2 shows no statistically significant effect of the law on the number of medical accounts sent to collections and a statistically

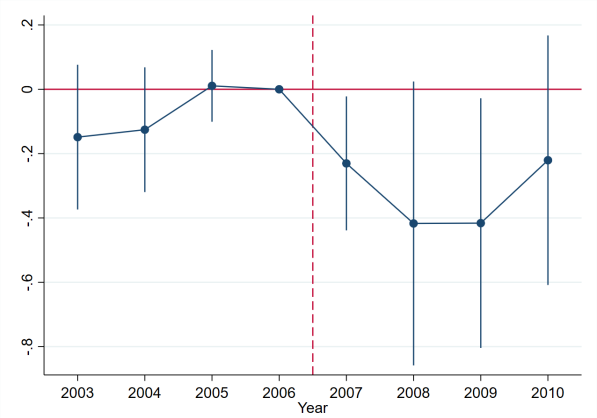
significant reduction in the number of non-medical accounts sent to third-party collections. A 10 percentage point increase in exposure reduces the number of non-medical collections by 0.013 accounts, implying a 8.7 percent decrease relative to the pre-treatment mean. For a county with the average uninsured rate, this translates into a reduction of 0.05 accounts, or a relative 36.6 percent decline.

Figure 4: **Triple Difference Event Study Results: Other Measures of Financial Distress**

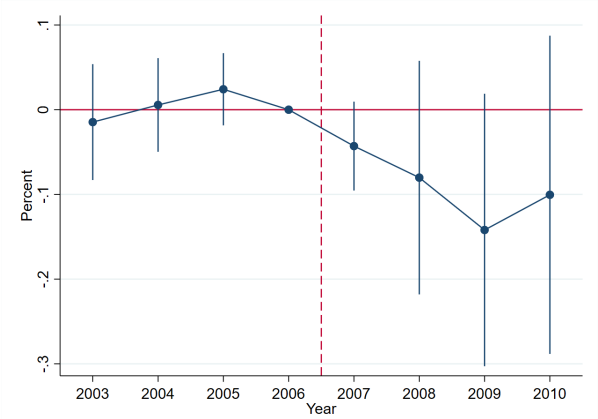
Panel A: Risk Score



Panel B: Number of Delinquent Accounts



Panel C: Share of Debt That Is Delinquent



Note: Authors' calculations using Federal Reserve Bank of New York Consumer Credit Panel/Equifax, Census, FHFA, and BLS data. Lines represent 95 percent confidence intervals. Risk Score is the Equifax Risk Score. Sample includes individuals ages 18 – 39. Accounts and debts are considered delinquent if they are at least 30 days past due.

One explanation for the null effect on collection balances is that the baseline collection balances were relatively low in CA prior to the CAFPL, averaging $141 for medical collections

and $289 for non-medical collections. Given these relatively low balances, the absence of detectable average effects may not be surprising. Consistent with these null findings, we show in Appendix Figure D3 that the majority of the medical collection balance distribution did not change from pre- to post-CAFPL in our sample, though there are small differences in the far right and left tails of the balance distribution. Therefore, it may be the case that the effects of the CAFPL varies over the collection distribution. These results also differ from the prior literature on insurance expansions, which have typically found sizable declines in collections. For example Hu et al. (2018) finds a $1,145 decline in collections after the ACA Medicaid expansion in 2014, while Finkelstein et al. (2012) finds a decrease of $390 in debt in collections for individuals who received Medicaid in the Oregon health insurance experiment. Our results likely differ from these previous studies since we study different policy changes (price ceiling vs. insurance expansions) and different target populations.

We also examine broader indicators of financial distress beyond medical and non-medical collections. Figure 4 and Table 2 report estimates of the CAFPL on credit scores, the share of debt that is delinquent (at least 30 days past due) and the number of delinquent accounts (at least 30 days past due). We find a positive and statistically significant effect on credit scores. A 10 percentage point increase in county-level exposure increases credit score by 2.4 points which is similar to result in Mazumder and Miller (2016), who find that a 10 percentage point increase in exposure to the 2006 Massachusets reform lead to a 3.4 point credit score increase.

For our other two measures, we find suggestive evidence of improved financial well-being. A 10 percentage point increase in exposure reduces the share of debt that is delinquent by 0.0106 percentage points (a relative decrease of 6.9 percent) and reduces the number of delinquent accounts by 0.031 accounts (a relative decrease of 7.3 percent); the latter estimate is statistically significant at the 10 percent level. Scaling these estimates to the average uninsured rate implies that the CAFPL reduced the share of delinquent debt by 4.4 percentage points and lowered the number of delinquent accounts by 0.13.

Overall, our results indicate that the CAFPL was able to reduce financial distress, primarily through reductions in non-medical collections. While the main mechanism responsible for these improvements is the price regulation, as shown in Batty and Ippolito (2017a), the

CAFPL also reduced the amount of hospital care received by the uninsured. This reduction in utilization likely plays a role in explaining some of our results, as less care should result in lower hospital charges.

Table 2: **Effect of CAFPL on Financial Distress**

	Medical Collections		Non-medical Collections	
	Any	$0 Balance	Any	$0 Balance
Panel A				
CA × Exposure × Post	0.002	-0.004	-0.054**	0.057**
	(0.018)	(0.018)	(0.022)	(0.022)
Pre-reform treatment mean	0.037	0.962	0.106	0.894
N	2,206,325	2,258,553	2,206,325	2,203,415

	Medical Collections		Non-medical Collections	
	Number	Balance	Number	Balance
Panel B				
CA × Exposure × Post	0.028	69.994	-0.128***	-58.723
	(0.056)	(83.150)	(0.043)	(137.428)
Pre-reform treatment mean	0.060	141.86	0.147	290.63
N	2,206,398	2,203,415	2,206,398	778,484

	Risk Score	Share of Debt That Is Delinquent (%)	Number of Delinquent Accounts
Panel C			
CA × Exposure × Post	24.465**	-0.106	-0.314*
	(11.941)	(0.067)	(0.160)
Pre-reform treatment mean	653.4	0.153	0.428
N	2,129,443	1,783,128	2,162,338

Notes: Authors' calculation using Federal Reserve Bank of New York Consumer Credit Panel/Equifax, Census, FHFA, and BLS data. All collection variables are for accounts sent to a third-party debt collector in the past 12 months. The *Any* collections variable = 1 if an individual has a positive number of accounts in collections, and the *$0 balance* variable = 1 if an individual has $0 collection balance during the *Post* period. $Treat = 1$ if an individual lives in CA, *Exposure* is a continuous measure of the county-level low-income young adult uninsured rate in 2006, and $Post = 1$ for the years 2007 to 2010. Risk Score is the Equifax Risk Score. Accounts and debts are considered delinquent if they are at least 30 days past due. Sample includes individuals ages 18 – 39. Standard errors clustered at the county-level. Treatment mean is the pre-policy average for individuals living in CA counties. *** p<0.01, **p < 0.05, *p < 0.1.

5.2.1 Effect on Collection Balances Distribution

In Appendix Table D1, we examine the impact of the CAFPL on the distribution of collection balances. For medical collections, we estimate a negative, but not statistically significant effect of the CAFPL on the probability of having a $0 medical debt balance in collections. The estimated effects for medical collection balances between $1 and $1,000 and between $1,001 and $2,000 are negative, small, but not statistically different from zero. For medical collection balances exceeding $2,000, we estimate a positive effect that is marginally statistically significant, suggesting a potential shift in the upper tail of medical collection distribution.

Consistent with our main results in Table 2, we see significant effects on the distribution of non-medical collection balances, particularly in the lower part of the balance distribution. A 10 percentage point increase in the county-level uninsured rate increases the likelihood of having a $0 non-medical collection balance by 0.57 percentage points, a relative increase of 0.64 percent, and lowers the probability of having a balance between $1 and $1,000 by 0.46 percentage points, a relative 5.48 percent decrease. Scaling to the average uninsured rate implies that, for a young adult in a county with average exposure, the probability of having a $0 non-medical balance increases by 2.4 percentage points (a relative 2.66 percent increase), while the probability of having a balance between $1 and $1,000 declines by 1.9 percentage points (a relative 22.84 percent decrease). For balance categories above $1,000, the estimates are negative, although we do not detect statistically significant effects.

Overall, the results show that the CAFPL improved financial well-being primarily through reductions in non-medical collections by moving individuals out of small collection balances into a zero-balance. Its effect on medical debt distribution is negligible, which is somewhat surprising, given that the law explicitly capped hospital prices. By contrast, the law led to economically meaningful improvements in non-medical collections, reducing the probability of holding small non-medical balances and increasing the likelihood of having zero non-medical debt in collections.

5.3 Robustness Checks

We assess the robustness of our estimates to several alternative specifications and sample restrictions. First, we consider an alternative definition of our exposure measure and re-estimate Equation 1 where exposure is now a binary variable. $Exposure_c$ now equals one if an individual resides in a county with an uninsured rate greater than or equal to the median uninsured rate for low-income 18–39 year-olds across all counties in the sample in 2006, and is zero otherwise.[27] Appendix Tables D2 and D3 shows that the results are broadly consistent with our main results which uses a continuous uninsured rate.

Second, we exclude Oregon from the comparison group. In 2008, Oregon expanded Medicaid through a lottery targeting low-income, uninsured, and non-disabled adults (Finkelstein et al., 2012). Because Medicaid provides financial protection and the population targeted by the Oregon expansion overlaps with the population most likely to be affected by the CAFPL, including Oregon could bias our estimates toward zero. Appendix Tables D4 and D5 shows that excluding Oregon yields results similar in sign and magnitude to our main results.

Third, we use an alternative sample comprising adults ages 40–64. Our primary analysis focuses on ages 18–39 because exposure to the CAFPL is most likely to be concentrated in this age group, given their higher uninsured rates. However, older uninsured adults may face higher medical expenditure risk, making it useful to examine whether the results extend to older, non-elderly adults. As shown in Appendix Tables D6 and D7, the estimates for ages 40–64 are similar in direction to the main results, but are smaller in magnitude and generally not statistically significant relative to our main results for individuals ages 18–39. We interpret these results as being consistent with there being lower treatment intensity for the older age group.

Fourth, we restrict the sample to individuals who remain in their 2006 county of residence throughout the sample period. This restriction addresses the possibility that moves after the CAFPL implementation may be endogenous to the policy. The resulting estimates in Appendix Tables D8 and D9 are qualitatively similar to the main results, suggesting that endogenous migration is not driving our findings.

[27] The median uninsured rate for low-income young adults across all counties in our sample is 39.9 percent; the corresponding mean is 41.7 percent.

Fifth, several California counties implemented changes to their medically indigent programs at roughly the same time CAFPL was adopted. These changes could potentially confound our estimates because the targeted population is a subset of the population most likely to be affected by the CAFPL. Appendix Section C and Appendix Tables D10 to D12 provide a detailed description of the county indigent programs and the corresponding changes, along with an analyses of the policy changes and a series of tests examining the robustness of our main results to account for these changes. Overall, the results are qualitatively unchanged, although the estimates are smaller and less precise than in our main specification.

Finally, our estimates could be affected by differences in hospital use between California and the comparison states after 2007, especially if utilization differences were larger in counties with higher 2006 uninsured rates. If hospital use increased by more in higher uninsured counties in the comparison states, individuals residing in those counties may have been more likely to incur medical bills and experience financial strain. This would bias our estimates toward finding more protective effects of the CAFPL. We cannot assess this directly because we do not have data on county-level hospital use by insurance status for the comparison states, therefore we use state-level data from the Healthcare Cost and Utilization Project (HCUP) as a partial check. Panel A of Appendix Figure D4 shows that quarterly emergency department visits by self-pay (uninsured) patients evolve similarly in California and Arizona before and after 2007.[28] In Panel B, while we do not observe discernible changes in hospitalizations in California or comparison states in the quarter the law was implemented, we do observe increases in adult hospitalizations in Arizona and Nevada in 2008. The increase would matter only if it was concentrated in higher-uninsured counties in the comparison states. While we cannot rule that out, we argue that if this occurred, it is unlikely to explain our results since this increase would bias our estimates towards finding strong effects for medical collections, which we do not find.

[28]Comparable emergency department data are available only for California and Arizona. We observe four quarters before CAFPL implementation and 15 quarters after.

6 Discussion

One plausible mechanism driving our significant non-medical collections results is that the law may have improved household liquidity in a way that primarily affected non-medical debt in collections. By reducing hospital bills and reducing the quantity and intensity of hospital encounters that generate bills, the CAFPL may have relaxed short-run budget constraints and freed up resources that households can use to remain current on other obligations. This is plausible since medical bill problems often spills over into broader financial distress. According to survey data in 2003 and 2007, because of medical bills or medical debt, millions of adults used up savings, incurred credit-card debt, or were unable to pay for basic necessities such as food, heat, or rent (Doty et al., 2005, 2008; Cunningham, 2008). In addition, families with medical bill problems frequently reported trouble paying other necessities and borrowing money to cover medical expenses (Cunningham, 2008). This interpretation is also broadly consistent with prior research on household financial behavior following Medicaid dis-enrollments in Tennessee and Missouri, which found that individuals responded to *increased* medical expenses by delaying non-medical payments on things such as auto loan and other non-mortgage revolving credit or by financing consumption with revolving debt (Argys et al., 2020; Bailey et al., 2025).

For our null findings of the CAFPL on medical collections, we propose three possible explanations. First, the CAFPL may have affected bills in the earlier stage of the hospital billing cycle. Hospitals already had several policies available to them, such as income-based financial assistance programs or payment plans, to reduce bill sizes to help patients pay their bills prior to the CAFPL.[29] It may be the case that the law helped patients pay their late bills earlier in the pre-collections stage or prevented bills from becoming late at all. If the most affected individuals are those that pay their bills prior to the collections process, we would not see a significant effect on medical collections. As mentioned in Section 5.2, the low rate of medical collections and the lack of any statistically significant effects along the extensive margin of medical collections suggests that most late medical bills may have been

[29]Additional policies, such as charity care, informal patient-hospital negotiations, or write-offs for low-income patients, can also reduce the portion of the bill formally recorded as delinquent, even if households still carried unpaid balances (Adams et al., 2022).

resolved during the billing process.

Although we do not have data on late medical bills *not* in collections, survey evidence during our sample period shows that medical bill problems were much more common than medical collections (Doty et al., 2008). For example, among adults ages 19 to 64 in 2007, 27 percent reported problems paying medical bills, while a smaller share, 16 percent, reported being contacted by a collection agency for unpaid medical bills. While not definitive, this is suggestive evidence that the law may have primarily targeted patients' medical bills instead of medical collections. However, it is important to note that the absence of an observed effect on medical collections does not necessarily mean the policy had no effect on late medical bills.

The second possible explanation for the null findings on medical collections is that our medical collections variables measure the final stage of the hospital billing process, when severely late bills are being pursued by third-party debt collectors. It is likely that these late bills in collections are not representative of most late medical bills and instead represent more extreme cases that are less likely to be affected by the CAFPL. Our summary statistics in Table 1 are broadly consistent with this idea, as the share of people in CA with medical collections during our sample period is generally low, at around 4 percent, which is approximately half of the share found in border states. If the types of late bills that make it to collections are extreme cases, we may expect relatively few people to have medical collections. Our regression results are also consistent with medical collections being extreme cases as we see little change in our extensive margin measures of medical collections in Table 2, suggesting that the rate at which late bills became medical collections was relatively unchanged after the CAFPL was enacted.

Although we do not have data on the nature of medical collections, external survey evidence provide some insights into the type of extreme cases that might be unaffected by the CAFPL. For example, late bills that go to collections may be from particularly low-income or liquidity-constrained individuals whose financial situation is so severe that lower hospital prices via the CAFPL would not help with bill payments. This is consistent with survey responses from Kaiser Family Foundation, which show approximately 25 percent of uninsured individuals never expect to be able to pay off their medical bills (Lopes et al.

(2022)). It could also be the case that bills that go to collections are those that patients mistakenly think they have already paid or do not owe, regardless of the price. For example, Fulford and Wilson (2025) discuss how complex billing procedures and insurance denials contribute to confusion about payment status of medical bills and how that can lead to nonpayment and medical collections. A 2023 CFPB report also corroborates this, with 64 percent of respondents with an out-of-pocket medical bill not covered by their insurance stating that they believed their health insurance would have paid the bill. Thus, if the majority of medical bills sent to collections fall under these kind of extreme cases, we may not expect the CAFPL to have a material effect on medical collections.

The third possible explanation is that, as mentioned in Section 5, we observe medical collections only when they are reported to the credit bureaus, not when an individual actually accrues the medical debt. This is relevant because during our study period, hospitals varied substantially in how aggressively they pursued unpaid bills. This variation likely generates differences in the decisions of health-care providers to report unpaid medical bills to the credit bureaus or not and which firms health-care providers used to collect unpaid medical bills (CFPB (2014)). Depending on the circumstances of the patient, this process may take months, during which the patient may be able to pay some or all of the outstanding balance of their bill. Additionally, there is significant variation in the timing of when debt collection agencies report medical collections to the credit reporting agencies (CRAs). While the CRAs provide standardized data format for data providers to submit data, data reporting and the date at which data is reported is voluntary.[30] Because of this variation, our collection variables may be measured with more noise than our other measures of financial health.

While none of the above factors by themselves explain the non-significant result we estimate for medical collections, together, these institutional factors – low collections rates, lengthy billing process, and hospital policies that reduce bill sizes – may explain why medical collections did not change significantly as a result of the CAFPL.

[30]For details on data reporting to the CRAs, see Gibbs et al. (2025) and Consumer Financial Protection Bureau (2012).

7 Conclusion

This paper studies the financial effects of the 2007 CAFPL, a hospital pricing regulation that capped charges for uninsured and underinsured low-income patients, changed medical debt collection reporting practices, and required hospitals to publicize their financial assistance policies. We use a large, nationally representative panel data set of anonymized credit bureau records from 2003 to 2010, merged with detailed information on medical collections to study the financial consequences of the law.

We find that the law improved several measures of household financial well-being. For non-medical bills in collections, we find that a 10 percentage point increase in the baseline county-level uninsured rate leads to a 0.54 percentage point reduction in the probability of having any non-medical debt in collections, a 5.1 percent decline relative to the pre-reform mean, and a 0.57 percentage point increase in the probability of having no non-medical debt in collections, a 2.37 percent increase relative to the pre-reform mean. We find no statistically significant effect the probability of having any medical debt in collections or the likelihood of having a $0 medical collections balance. We interpret these results as consistent with the way medical billing and collections worked during our sample period. Medical collections capture the last stage of the hospital billing process and may therefore miss upstream changes such as smaller medical bills, greater charity care, or increased use of payment plans that may allow patients to pay their late bills before they become collections.

We also find improvements in broader measures of financial well-being. For example, a 10 percentage point increase in the baseline county-level uninsured rate leads to a 2.4-point increase in credit scores, with suggestive evidence indicating that the number of delinquent accounts decreased after the passage of the law. We posit that smaller medical bills may have relaxed liquidity constraints, allowing affected individuals to remain current on other financial obligations and improve broader credit outcomes.

Taken together, these findings suggest that the law, whose goal is to protect uninsured and underinsured patients from excessive hospital charges, generated modest but meaningful improvements in individuals' financial well-being. These findings underscore the broader welfare implications of health-related consumer protection policies: by reducing exposure to

large medical expenses, such policies may be able to improve individuals' overall financial well-being.

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