POLITICS AND HEALTH CARE SPENDING IN THE UNITED STATES

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ABSTRACT

This paper explores a link between politics and health care spending in the US. To win votes for the 2004 Medicare Modernization Act, legislative leaders raised Medicare payment rates for hospitals in an effort to entice the members of Congress representing those hospitals to vote for the law. Members of Congress representing hospitals that received a payment increase were more likely to vote for the law. Following their payment increase, hospitals treated more patients and increased their spending. There was also an increase in local hiring. Politicians representing hospitals that were awarded a payment increase subsequently received more campaign contributions.

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"In the past, decisions on health care delivery were largely professional ones. Now the decisions will be largely political." – John G. Veneman, undersecretary of the Department of Health, Education and Welfare (HEW) in the Nixon administration, quoted in Iglehart (1971) as cited in Starr (1983) discussing the effect of the growing role of the federal government in the US health care system

1 Introduction

In 2016, the United States (US) spent $3.3 trillion on health care, of which more than $1 trillion was funded by the federal government (Centers for Medicare and Medicaid Services 2018). Ultimately, the US Congress has significant capacity to influence national health spending, particularly via reforms of the Medicare program. The Medicare program, which accounts for one fifth of US health spending and 15% of the federal budget, provides health insurance to 57 million people age 65 and older and to those with a subset of disabilities (Cubanski and Neuman 2016). Congress votes on the laws that define the scope and structure of the Medicare program, including those dictating how the program reimburses hospitals and physicians. Given the scale of the influence Congress has over how such a large share of health care dollars are spent, it should not be surprising that the health care industry spends more on lobbying efforts than is spent by any other industry (The Center for Responsive Politics 2018). In 2018, hospitals, health service providers, and health professionals spent $290 million on lobbying activities (for context, in the same year, defense lobbying totaled $65 million) (The Center for Responsive Politics 2018). However, despite the link between legislators and the health care system and the significant lobbying dollars spent by health care providers, there is no empirical work analyzing how political dynamics in the US influence hospital behavior and health care spending.

The level of Medicare spending and the growth in Medicare spending over time represent significant policy challenges in the US (Congressional Budget Office 2016). Until now, most research analyzing the factors that drive Medicare spending variation and growth have focused on the role of provider incentives, the diffusion of new technologies, provider consolidation, and differences in demographs across regions (for example, see Finkelstein, Gentzkow, and Williams 2016; Chandra and Skinner 2011; Smith, Newhouse, and Freeland 2009; Cutler et al. 2013). In this paper, we present the first work to formally explore how electoral politics and lobbying influence health care spending in the US. To do so, we study the passage of the Medicare Modernization Act (MMA) of 2003, which created the Medicare Part D program. Whereas most of the literature on the MMA of 2003 has analyzed

the impact of the law on individuals who received Part D drug insurance (for example, see Abaluck and Gruber 2011; Abaluck and Gruber 2016; Joyce et al. 2009), we use the law to examine how the political process necessary to pass sweeping health care legislation impacts hospital behavior, health spending, and political donations.

In the canonical analysis of legislator behavior, Mayhew (1974) argued that the primary goal of members of Congress is to be reelected. This pressure to be reelected drives members of Congress to pass legislation with direct benefits to their constituents for which the legislators can claim credit (Mayhew 1974; Weingast, Shepsle, and Johnsen 1981; Rocca and Gordon 2013). The desire to be reelected also dissuades members of Congress from devoting time to forming the coalitions necessary to pass sweeping laws, such as expansions of the Medicare program (Evans 2004). In general, the benefits of national programs like Medicare are diffuse, and it is difficult for an individual member of Congress to claim credit for the passage of such expansive legislation (Evans 2004). To push members of Congress to form coalitions, legislative leaders in the US House of Representatives often include provisions with targeted benefits to get reluctant members to vote for sweeping laws where credit claiming is difficult (Evans 2004). These provisions, such as the building of a train station in a district, are often referred to as 'pork-barrel projects,' 'sweeteners,' 'earmarks,' or 'distributive policies.' The hallmark of a distributive policy is that their benefits are focused geographically (generally within a legislator's district), but their costs are spread across wider groups. Although earmarks are often regarded as critical to passing legislation, Weingast, Shepsle, and Johnsen (1981) argue that distributive policies tend to be inefficient because the members of Congress who approve these policies generally focus on the local benefits while ignoring the wider costs, which are primarily borne by those outside their district.

Medicare was created in 1965, but until the passage of the MMA in 2003, the program did not include prescription drug coverage for seniors. The MMA was a political priority for President George W. Bush and his staff who thought expanding prescription drug coverage for seniors would be helpful in the run-up to 2004 his re-election campaign (Oliver, Lee, and Lipton 2004). Although the president's party controlled Congress, passing the law proved extremely difficult because many fiscally conservative Republicans were opposed to the large expansion of a government program and many Democrats were reluctant to support the Republican president's proposal. Likewise, because Medicare is a program that provides benefits to all seniors almost equally, it was politically challenging to build a coalition to introduce prescription drug coverage because most legislators who

voted for the MMA would struggle to claim credit for the benefits of the law in their districts. In the end, avoiding defections by Republican members of Congress was crucial to passing the law (Oliver, Lee, and Lipton 2004). With such a challenging vote, champions of the MMA introduced a number of legislative sweeteners in the bill to win support from reluctant lawmakers (Lee 2003a). These sweeteners included, among others, a specific provision – Section 508 – that significantly increased Medicare hospital payments for a small group of hospitals.

Most Medicare funds are allocated across the US via formula-based payment programs for physicians and hospitals. The majority of hospitals in the US are paid for treating Medicare patients under the Center for Medicare and Medicaid Services (CMS) prospective payment system (PPS). The PPS reimburses hospitals a fixed payment per inpatient case. Medicare payments vary across hospitals in the US by a factor of approximately three and are set to approximate hospital input costs for delivering care (Institute of Medicine 2012). The main factor that determines the level of hospitals' regulated payments is their wage index. A hospital's wage index is based on the hospital's physical location and is a measure of the labor costs a hospital faces. While the PPS program and the calculation of hospitals' wage indices are meant to be technocratic and apolitical, there are numerous examples over the last thirty years of politicians crafting legislation to shift a hospital's wage index for political purposes and thereby steer additional money to a member's constituency (Lee 2003a).

Section 508 of the MMA created a process through which, after the law was passed, hospitals could appeal the wage index currently assigned to them and apply to be paid based on the wage index of another geographic area. According to the law, to receive a payment increase, hospitals needed to meet "criteria, such as quality, as the Secretary may specify by instruction or otherwise" (Section 508 of P.L. 108 – 173: Medicare Prescription Drug Improvement, and Modernization Act of 2003). This broad language provided wide latitude for the executive branch to craft rules that steered 508 waivers to specific hospitals as a reward for votes from particular members of Congress. In addition, the broad language meant that some hospitals represented by legislators uninvolved in political bartering could quality for and benefit from the 508 program.

We submitted a Freedom of Information Request (FOIA) to the Centers for Medicare and Medicaid Services (CMS) and requested the identities of hospitals that applied for a 508 waiver and those that had their applications approved. FOIA requests allow individuals to request access to previously unreleased information and documents that are under the control of the federal government. The response to our FOIA request revealed that of the 4,138 hospitals that received Medicare PPS

payments in 2004, 404 hospitals applied for, and 120 were granted a Section 508 waiver. We find evidence that hospitals represented by a member of Congress who voted 'Yea' to the MMA of 2003 were significantly more likely to receive a waiver than hospitals represented by a member of Congress who voted 'Nay' to the law. In addition, hospitals that received a waiver and were represented by a member of Congress who voted 'Yea' also received larger payment increases than hospitals represented by a member who voted 'Nay'.

We then use the introduction of 508 waivers to test how an increase in Medicare payments affects hospitals' behavior and health care spending. On average, hospitals that won a Section 508 waiver received Medicare PPS payment increases of 6.5 percent as a result of the policy. We analyze two groups of treated hospitals: those in our high-treatment group that received Medicare PPS payment increases of, on average, 8.6 percent and those in our low-treatment group that received a Medicare PPS payment increase of, on average, 4.3 percent.

Hospitals that received a payment bump increased the number of inpatients cases they performed by approximately 6 percent per year relative to hospitals that applied for a payment change but had their applications rejected. Likewise, after receiving a payment increase, 508 recipient hospitals increased the complexity of the care they offered, which we measure using the Medicare Case Mix Index. Collectively, we find that hospitals that received a 508 waiver dramatically increased their inpatient Medicare spending from 2005 to 2010. During this period, we estimate that, relative to hospitals that applied for a 508 waiver but had their application rejected, the average hospital in our high-treatment group spent an additional $30 million on Medicare inpatient care. This represents an approximately 13 percent increase in inpatient spending. Across the 88 Section 508 recipient hospitals that were continuously in our data from 2002 to 2010, we observe that the receipt of a 508 waiver resulted in over $2 billion in excess Medicare spending from 2005 to 2010. It is notable that original language in Section 508 in the MMA only allocated $900 million to fund the program.

The Medicare payment increases generated by the Section 508 program also impacted local labor markets. We find suggestive evidence that the 508 payment increases led hospitals to increase their payroll. We also observe that counties which had a hospital that received a payment increase from the 508 program experienced a statically significant increase in job hiring in the years after the Section 508 payment increases took effect.

While payment changes created by the Section 508 program were originally written to expire three years after they were introduced, the hospitals and wider constituencies that benefitted from

the waivers had a considerable interest in seeing the program extended. Indeed, their shared financial interest in the continuance of the program was so great that 508 recipient hospitals joined together to form a political lobbying group called the Section 508 Hospital Coalition.[1] Using lobbying data from the Center for Responsive Politics, we find that the Section 508 Hospital Coalition spent significant resources lobbying members of Congress to extend the provision. Moreover, the need to extend the 508 program created a significant opportunity for legislators to credit claim with their constituents for maintaining this sizeable increase in hospital funding. Using data on campaign contributions from the Database on Ideology, Money in Politics, and Elections (DIME), we find that in the period after the MMA was passed and before the reauthorization of the 508 program, legislators who had a Section 508 hospital in their district received a 22 percent increase in total campaign contributions across all their donors and a 42 percent increase in contributions from individuals working in the health care industry and living in the members' home states. We do not find evidence that these members of Congress received significant increases in donations during the same period from individuals in four unrelated industries: the oil and gas industry, the transportation sector, the construction sector, and the television sector.

This paper makes two distinct contributions to the literature. As far as we are aware, this is the first work to formally test for a link between the US political process and domestic health spending. We show evidence that legislative leaders appear to offer increases in Medicare payments as an inducement to win support from members of Congress to vote for laws. Members of Congress who voted for the MMA were more likely to have a hospital in their district win a 508 waiver, and hospitals that received a 508 waiver were more likely to receive larger payment increases if their representative voted 'Yea' to the MMA. We also show that the increased payments generated from this political logrolling process led to large increases in hospital spending and created local jobs. Finally, legislators with hospitals in their district that received a Section 508 waiver received a large increase in campaign contributions after the 508 program was authorized and before it was reapproved.

Second, we present some of the first analysis that finds a causal link between distributive policies (e.g. logrolling) and subsequent political donations. We find that after members of Congress voted to expand benefits to their district and, before they voted to extend those benefits, legislators received a substantial increase in campaign contributions. They received an even larger percentage increase in campaign contributions from the individuals who directly benefitted from the legislators' efforts

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[1]See: https://www.opensecrets.org/lobby/clientsum.php?id=D000056560&year=2012.

(individuals from their home states working in the health care industry).

While this research focuses on a narrow provision written in the MMA, our results highlight a broader channel through which political bartering and the proximity of the US health care system to the electoral process could be dramatically influencing domestic health care spending. In addition to studying Section 508 of the MMA, we highlight numerous other similar examples where legislative leaders have used the Medicare program as a tool to direct funds to particular elected officials. Collectively, given that over one in three hospitals in the US has had their Medicare wage index altered by laws voted on in Congress, there is significant scope for political bartering to have impacted a large share of the Medicare budget. Moreover, beyond directly shaping Medicare policy and payments, members of Congress also vote on laws that define the scope and structure of insurance markets, influence pharmaceutical pricing, and regulate medical devises. These responsibilities further entwine the health care system and the electoral process and give more opportunity for politics to influence health care spending in the US.

Ultimately, this research highlights how political dynamics in the US help explain, in part, why it is so difficult to slow the growth in health spending. We show that when health spending goes up (in this case, because of the Section 508 program), it creates health care jobs, raises donations for politicians, and results in more care being delivered to patients within narrow geographic areas (i.e. Congressional districts). However, when this legislation was passed and the 508 program was inserted, as is the case with more general increases in spending, the costs of more care were spread across the whole of the population and were therefore less salient than the benefits of increased spending. Going forward, we hope this work motivates future research in this understudied, but important area.

This paper is structured as follows. In Section 2, we present background information on the Medicare program. Section 3 describes the MMA of 2003 and the Section 508 program. We assess the link between votes for the MMA and the receipt of a 508 waiver in Section 4. In Section 5, we analyze how the payment increases generated by the 508 program impacted hospital behavior and health care spending. Section 7 analyzes the link between Section 508 waivers and campaign contributions to members of Congress. We conclude in Section 8.

2   Background

Medicare is a universal program that provides health insurance coverage to individuals age 65 and older and covers a subset of individuals with disabilities who are under age 65. While the Medicare program is supposed to allocate funding based on local needs and not politics, the control that Congress has over payment rules allows members to narrowly focus funds to specific districts and key constituents. There are a number of examples of where legislators have used the Medicare program to reward their constituents. For example, within the 1999 federal budget, Representative Rob Portman successfully lobbied for an increase in Medicare payments for brachytherapy, a treatment for prostate cancer in which radioactive seeds are implanted in the prostate. The radioactive seeds subjected to the funding increase were produced by Indigo Medical, a firm based in Congressman Portman's district (Pear 1999). Similarly, the 1999 budget also increased funding for radioactive dye used to sharpen the precision of imaging studies (Pear 1999). The provision for this funding increase was inserted by William Roth, the senator from Delaware, the state where the largest manufacturer of this product is headquartered.

Policymakers and journalists have argued that these types of narrowly directed funds have been used to curry favor from lawmakers and nudge them to vote for laws that were successfully passed including the Children's Health Insurance Program, the Affordable Care Act (ACA), and the MMA (Vladeck 1999; Aaron and Reischauer 2015; Pear 1999; Cohn 2010; Abelson 2003). These kinds of logrolling efforts can involve significant sums of money. For example, a recent article on Senate Majority Leader Mitch McConnell's efforts to repeal the ACA and pass the Better Care Reconciliation Act of 2017 (BCRA) stated, "Using a combination of hardball politics, personal persuasion and lots of money – hundreds of billions of dollars were available to pay for more add-ons to the bill in order to get some votes – the Kentucky Republican scrambled to round up 50 Republicans to support the motion to proceed to the bill" (Bresnahan 2017).

Hospital payment rules, in particular, have been used to steer additional funding to particular hospitals and regions. While payment changes cannot be explicitly political, officials at CMS can write rules at the direction of legislative leaders that are crafted to steer funds narrowly to specific hospitals or groups of hospitals. Indeed, a significant portion of hospitals paid under the Medicare PPS have experienced a payment change.

Between 1997 and 2012, 16 statutory provisions were introduced that raised hospital reimburse-

ments for small groups of providers (Government Accountability Office 2013).[2] As a result, by 2012, 37.6% of hospitals received some form of wage index reclassification that raised their reimbursement rate above what was originally set by the PPS formula (Government Accountability Office 2013). While some of these changes were merit based, a number of provisions have produced large changes in hospital payments that are often credited to a particular lawmaker or were used to direct funds very narrowly.[3] For example, "Lugar counties" authorized and named after Indiana Senator Richard Lugar, were introduced in the Omnibus Reconciliation Act of 1987 and generated 10% increases in hospital payments for providers located in a small number of counties (American Hospital Association 2011). Likewise, within the 1999 budget, hospitals in districts represented by Representative Tom DeLay, the House Republican Whip and Representative Dennis Hastert, the Speaker of the House, were reclassified into other regions, which significantly increased the hospitals' Medicare payment rates (Pear 1999). These changes resulted in annual increases in hospital funding of $380,000 and $750,000, respectively (Pear 1999). More recently, in what became popularly known as the 'Bay State Boondoggle," John Kerry, then Senator from Massachusetts, lobbied to prohibit Medicare from paying urban hospitals below the rate paid to the rural hospital with the highest reimbursement rate in the state (Keane 2013; Jan 2013). Because the only rural hospital in Massachusetts is located in Nantucket, a wealthy island town, urban hospitals across the state saw a substantial increase in payments from this change.[4]

There have also been larger scale payment changes similar to the Section 508 program that were inserted into wider legislation and designed to win votes from reluctant legislators. For example, the ACA created the Frontier States provision, which raised the minimum wage index of hospitals in Montana, Nevada, North Dakota, South Dakota, and Wyoming. This payment change was reported to be a vehicle to win support for the Affordable Care Act from senators in these rural states (Cohn 2010).

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[2]For a detailed description of the statutory provisions that have increased hospital payments, see the US 2013 Government Accountability Offices report to Congress (Government Accountability Office 2013).

[3]For example, because hospital payments are, to a large extent, based on the metropolitan statistical area (MSA) where the hospital is located, hospitals located near one another but on other sides of an MSA border can face substantial differences in payment rates. To address this issue, for example, the Omnibus Budget Reconciliation Act of 1989 created a process for hospitals to apply to have their wage index changed if the hospital was located within a short distance of another hospital that was paid at a substantially higher rate.

[4]Ironically, in 2016, CMS discovered a mistake in calculating the wage index for Massachusetts that accidently led to higher hospital payments for Nantucket than should have been allowed. When the mistake was discovered and subsequently corrected, because of the 2012 law that linked statewide urban hospital payments to the payment rate for Nantucket, updating Nantucket's hospital payment rate led to cuts in hospital funding across all of Massachusetts that totaled approximately $160 million (Kuhn and Schencker 2016).

3 The Medicare Modernization Act of 2003 and Gains from Section 508 Waivers

3.1 The Medicare Modernization Act of 2003

On December 8, 2003, President George W. Bush signed the MMA, which, for the first time, provided prescription drug coverage to seniors via the Medicare Part D program. The MMA of 2003 was the largest expansion in the Medicare program's 38-year history. The law, which cost approximately $400 billion over 10 years, was a political priority for the George W. Bush White House, who thought the coverage expansion would bolster the senior vote that he had lost to Al Gore in the 2000 presidential election. According to Bruce Bartlett, "George W. Bush strongly supported this effort [to pass Medicare Part D]. Looking ahead to a close re-election in 2004, he thought a new government giveaway to the elderly would increase his vote share among this group" (Bartlett 2013).

The passage of the MMA of 2003 was politically fraught. The bill was introduced in the US House of Representatives by Speaker Dennis Hastert on June 25, 2003. Early roll call votes in the House indicated that the bill was unlikely to pass. The key vote that moved the bill from the House to the Senate (roll call vote 332) passed by a one-vote margin, 216 to 215, and was split along party lines. Democrats voted 9 'Yea' and 195 'Nay' while Republicans voted 207 'Yea' and 19 'Nay.' This vote, in breach of congressional rules, was kept open for an abnormally long period during which time Vice President Richard Cheney visited the House floor and there was substantial arm-twisting (Oliver, Lee, and Lipton 2004). Ultimately, passage of the law hinged on keeping Republican members of the House from voting against the legislation and mustering support from conservative Democrats (Oliver, Lee, and Lipton 2004). Section 508 was added immediately after this vote.[5] We focus on this vote and examine whether there are links between members' vote and whether hospitals in the members' districts received 508 waivers.

After the Senate passed the bill, the final vote on the reconciled legislation in the House of Representatives (roll call vote 669) was also extremely close. As was the case during the first House vote, rather than adhering to the standard 15-minute vote period and in contravention of the Rules of the House of Representatives, the vote was kept open for an extended window during which time HSS Secretary Tommy Thompson visited the House floor and President Bush phoned reluctant members

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[5]We spoke to individuals working on the staffs of members of Congress during the passage of the MMA, who indicated that Section 508 waivers were used as sweeteners during roll call vote 332.

of Congress (Oliver et al., 2004). In the end, the law passed by a vote of 220 to 215.

Consistent with Evans' 2004 argument that targeted policies can be inserted to garner votes in the passage of sweeping legislation, the MMA contains a number of provisions, in addition to Section 508, that provide targeted benefits in an effort to win over particular legislators (Lee 2003a; Abelson 2003). As Christopher Lee wrote in the Washington Post in 2003:

> "The $395 billion Medicare bill passed by the House yesterday, advertised as a way to provide a long-awaited prescription drug benefit for seniors, also has become a vehicle for scores of narrower provisions tailored to benefit special interests. Such measures, dubbed 'rifle shots' for their narrowly targeted effects, are commonly attached to complex, high-profile legislation in the crunch as a way to both build support for the larger bill and to provide an avenue to passage for provisions that likely would not succeed on their own."

Lee (2003a) notes a number of specific provisions including a large increase in funding added to the MMA for physicians in Alaska, the home state of Senator Ted Stevens, the chairman of the Senate Appropriations Committee. Another provision, championed by Senator Charles Grassley from Iowa, contains significant funding for trials to determine whether the Medicare program should fund chiropractic services. Iowa is the home of a leading chiropractic educational institution (Lee 2003a).

3.2 Section 508 of the Medicare Modernization Act of 2003

The 508 program created a process through which, in the months after the MMA was passed, hospitals could appeal their current wage index assignment and receive a time-limited change in their wage index that would increase their PPS payment rate for Medicare episodes. The provision was open to hospitals that were paid using the PPS that did not qualify for other changes in their wage index. According to the Federal Register (2004a), "a qualifying hospital...does not qualify for a change in wage index classification under paragraphs (8) or (10) of section 1886(d) of the Act on the basis of requirements relating to distance or commuting" (pg. 7341). The legislation did not specify the specific criteria hospitals would need to meet to quality. Instead, the law stated that a qualifying hospital "meets other criteria, such as quality, as the Secretary may specify by instruction or otherwise." Ultimately, the specific rules and regulations to determine how Section 508 waivers were to be granted were written after the MMA was passed and members of Congress had cast their votes. The broad language in Section 508 of the MMA created flexibility for the executive branch

to write rules that favored specific hospitals.[6] Originally, the law budgeted $900 million to fund the wage index changes from the 508 waivers, which were to run from April 1, 2004 to March 31, 2007. However, the program was extended numerous times until it finally expired on March 31, 2012 (Government Accountability Office 2013).

Approximately two months after the MMA was passed, the first set of rules for judging 508 requests was published in the Federal Register (Federal Register 2004a). A month later, the rules were updated with more detail and justification (Federal Register 2004b). In practice, the 508 program relaxed the criteria for hospitals to get their wage index changed. Historically, the Medicare Geographic Classification Review Board, the body responsible for assessing hospital wage index appeals, would allow hospitals to reclassify their wage index to an adjacent region if an urban hospital was within 15 miles of another hospital that was paid substantially more or a rural hospital was within 35 miles of a hospital paid substantially more (Federal Register 2004a). The Section 508 program allowed hospitals that did not meet those standard criteria to get a wage index change based on one of eight new criteria (Federal Register 2004a). These new criteria were quite specific and allowed policy-makers to target funds narrowly to specific groups of hospitals. For example, the program allowed urban hospitals in states with fewer than 10 people per square mile to get a reclassification. Likewise, the program allowed hospitals to change their assigned wage index to a wage index from a region in another state if the hospital's average hourly wages were at least 108% of the average hourly wages at a hospital in the area where the hospital was arguing to be reclassified.[7] While the Section 508 program was written with very specific criteria that allowed benefits to be directed to specific hospitals, other hospitals that were represented by politicians who were not part of the logrolling process around the MMA could apply and potentially get a waiver.

3.3   Quantifying Medicare Payments and Gains from the Section 508 Program

We submitted a FOIA request to CMS and asked for the criteria on which hospitals that applied for a 508 waiver were judged, a definitive list of hospitals that applied for and received a 508 waiver, and a list of hospitals that applied for but were rejected for a 508 reclassification. Within a year of our submission, we received a detailed reply from CMS with the information we requested.

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[6]In 2014, we spoke to officials at CMS when the 508 program was introduced. They described how the program allowed them to write 'rifle shot' provisions to target funds at specific hospitals.

[7]The Federal Register, Volume 69, Number 30, printed on February 13, 2004 includes a detailed description of the quality criteria hospitals had to meet to receive a 508 exemption. Per federal law, the Federal Register also includes justifications for these changes.

We followed the CMS payment rules presented in the Federal Register to construct hospital PPS payments for each inpatient case for each hospital in each year from 2002 through 2010.[8] Using this formula to calculate hospitals' Medicare PPS payments allowed us to create counterfactual payments and identify what hospitals would have been paid with and without the wage index change generated by the 508 program. In Figure 1, we show 508-recipient hospitals' base Medicare PPS payment rate with and without the wage index change generated by the program. Because of the immediate payment rules change, as we illustrate in the figure, the 508 program created a sharp and immediate increase in hospitals' payments in 2005 that persisted for the next five years. We find that the average 508 recipient hospital received a 6.47 percent increase in their Medicare PPS payment rates.

4   Hospital Receipt of Section 508 Waivers and the Medicare Modernization Act of 2003

In Table 1, we examine the relationship between the vote on the MMA by each member of Congress and whether the hospitals in their district received a Section 508 waiver. Data on members' votes was obtained from Voteview and data on whether hospitals received a 508 waiver came from our FOIA request (details on our data sources are included in Appendix A.1). Among the universe of hospitals paid using the PPS in 2004, 3.2 percent received a Section 508 waiver. Among the universe of hospitals eligible to receive a waiver (e.g. those that did not already have a wage index reassignment), 5.8% received a Section 508 waiver. Of hospitals that applied for a waiver, 29.7% had their application approved.

In Columns (1) and (2) in Table 1, we find that, among all hospitals in our sample eligible to receive a 508 waiver, hospitals represented by a member of Congress who voted 'Yea' to roll call vote 332 on the MMA were more likely to receive a waiver than hospitals represented by a member of Congress who voted 'Nay' (5.9 percent versus 4.2 percent; $p < 0.10$). Among hospitals that applied for a waiver, hospitals represented by a member who voted 'Yea' to the MMA were 1.4 times more likely to have their applications approved than hospitals represented by a member who voted 'Nay' (27.7 percent/19.9 percent; $p < 0.05$).[9]

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[8]See Appendix A.2 for more details about how we calculated Medicare PPS payments per hospital.

[9]We also analyze the frequency that hospitals eligible for a 508 waiver had their applications approved as a function of the votes of their member of Congress. Hospitals were only eligible for a 508 waiver if they were paid for inpatient care via the PPS and had not received a wage index change in the past. Eligible hospitals represented by a member of Congress who voted 'Yea' to the MMA were 1.4 times more likely (= 5.9 percent/4.2 percent) to receive a waiver than those represented by a member of Congress who voted 'Nay' ($p < 0.10$).

The political calculus and electoral risks associated with voting in favor of the legislation varied substantially by party with Republicans choosing between angering fiscal conservatives in their base and opposing a president from their own party, while Democrats who may have liked the policy were loath to provide legislative support that could help re-elect the Republican president. Therefore, we also split the analysis by the political party of the congressional representative in each hospital district. In Columns (4) and (5) in Table 1, we find that among hospitals that were eligible to receive a waiver, hospitals represented by a Republican member of Congress who voted 'Yea' to the MMA were nearly 7 times more likely to receive a 508 waiver than those represented by a Republican member of Congress who voted 'Nay' (= 5.6 percent/0.8 percent; $p < 0.05$). Among hospitals that applied for a Section 508, those represented by a Republican member of Congress who voted 'Yea' were 4 times more likely (= 26.3 percent/6.7 percent; $p < 0.05$) to receive a waiver than those represented by a Republican member of Congress who voted 'Nay' Likewise, hospitals represented by a Democratic member of Congress who voted 'Yea' were also significantly more likely to receive a waiver than hospitals represented by a Democratic member who voted 'Nay' ($p < 0.10$).

While the average gain in PPS payments for hospitals that received a 508 waiver was \$388.09 off of a mean PPS base payment rate of \$5,278.32 in 2004, there was significant heterogeneity in the size of the PPS payment gains. According to the MMA, the Secretary of HHS had influence over the size of the gains hospitals could obtain from a 508 waiver. Within the rules for the MMA, the Federal Register (2004a) stated, "Under this [508] process, a qualifying hospital may appeal the wage index classification otherwise applicable to the hospital and apply for reclassification to another area of the State in which the hospital is located (or, at the discretion of the Secretary, to an area within a contiguous State)" (pg. 7341). Therefore, the Secretary of HHS was able to decide whether hospitals that received a 508 could be reclassified to areas in other states with higher wage indexes.

In Table 1, we also test whether there were larger PPS payment gains among 508 recipient hospitals represented by members of Congress who voted 'Yea' relative to 'Nay.' In Columns (1) and (2), we show that, among hospitals represented by either Democrats or Republicans, those represented by a member of Congress who voted 'Yea' received larger gains than those represented by a member of voted 'Nay' (\$396.89 versus \$361.03; $p < 0.13$). These differences are statistically significant when we analyze the votes by party. The lone 508 recipient hospital represented by Republican member of Congress who voted 'Nay' received virtually no increase in PPS payments (the difference in gains between that hospital and the other 508 recipient hospitals represented by members who voted 'Yea'

is significant at $p < 0.05$). Likewise, we also find that hospitals represented by Democratic members of Congress who voted 'Yea' to the MMA received \$156.67 more from the program than hospitals represented by Democratic members of Congress who voted 'Nay' ($p < 0.01$).

5 Section 508 Waivers, Hospital Behavior, and Health Care Spending

5.1 Estimating the Impact of the Section 508 Medicare Payment Increases

In this section, we examine the effect of the Medicare payment change induced by the Section 508 program on hospital behavior, hospital spending, and local labor markets. Our FOIA request revealed that 404 hospitals that applied for a Section 508 waiver. Of those hospitals that applied for a waiver, 284 had their applications rejected and 120 hospitals had their applications approved. Among the 120 hospitals that had their waiver applications approved, 88 kept their waiver, remained registered with the AHA, and continued to treat patients from 2002 through 2010.[10] We separate the 88 hospitals that received a 508 waiver and were in our sample the entire period into two groups: a "high-treatment" group (46 hospitals) that received increases in their PPS payment rate from the 508 program of over \$537 (an average PPS gain of 8.55 percent) and a "low-treatment group" (42 hospitals) that received increases in their PPS rate of between \$0 and \$537 (an average PPS gain of 4.3 percent).

In Appendix Table 1, we compare the characteristics of hospitals that applied for a 508 waiver and had their waiver rejected, 508 recipient hospitals, and all hospitals registered with the AHA from 2002 to 2010 that were paid using the PPS. 508 recipient hospitals were slightly larger than the average AHA hospital, more likely to be a non-profit teaching hospital, and less likely to be located in a rural area. Hospitals that unsuccessfully applied for a 508 waiver were larger that 508 recipient hospitals, had more Medicaid discharges, and were less likely to be non-profit providers.

We use difference-in-difference regression to identify the outcomes for the 88 hospitals that received a 508 waiver relative to the outcomes at the 284 hospitals that applied for, but did not receive 508

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[10]Ten hospitals that received a 508 waiver were not registered with the AHA. Twenty-two hospitals were not in the data continuously from 2002 through 2010.

waiver. Our difference-in-difference specification takes the form:

$$Outcome_{h,t} = \beta_1 High\_508\_Recipient_h * 2005_t + \beta_2 High\_508\_Recipient_h * 2006\_2010_t$$

$$+ \beta_3 Low\_508\_Recipient_h * 2006\_2010_t + \vartheta_h + \tau_t + \varepsilon_{h,t} \quad (1)$$

where we measure outcomes, such as inpatient Medicare discharges, at hospital h in year t. We interact our treatment indicators (e.g. $High\_508\_Recipient_h$) with a short-run effect dummy, 2005_t, that takes a value of "1" for the year 2005 (the year after the 508 payment increases took effect), and with 2006_2010_t that takes a value of "1" for the years 2006 through 2010. The β_1 and β_3 coefficients capture the short-term effect of the Medicare payment increase from the 508 program in 2005; the β_2 and β_4 captures the long-term effect of the 508 payment increase annually from 2006 through 2010.[11] We also include a vector of year fixed effects τ_t and hospital fixed effects ϑ_h, which capture the main effects of each interaction. Our main estimates present our dependent variables in levels and we illustrate, in the appendix, that results are robust to measuring our outcomes in logs. Following Cameron, Gelbach, and Miller (2008), we report wild-bootstrapped standard errors (although our results are robust to clustering our standard errors around hospitals). To examine the trends in outcomes measures, we also estimate a more flexible difference-in-difference estimator where we interact our treatment indicators with year dummies:

$$Outcome_{h,t} = \beta_{1,t} High\_508\_Recipient_h + \beta_{2,t} Low\_508\_Recipient_h + \vartheta_h + \tau_t + \varepsilon_h, t \quad (2)$$

where we again measure outcomes at hospital h in year t. We interact our treatment indicators (e.g. $High\_508\_Recipient_h$) with a vector of year fixed effects τ_t. We also include a vector of year fixed effects τ_t and hospital fixed effects ϑ_h, which capture the main effects of each interaction.

6 Section 508 Waivers, Hospital Activity, and Health Care Spending

To test the impact of the increase in Medicare payments on hospital activity and health care spending, we utilize data from the 100 percent sample of Medicare claims data. We analyze how the Medicare

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[11]We chose to report the short- and long-term effects because of what we observed in our year-by-year graphs of hospital responses to the payment increases from the 508 program.

payment increases generated by the 508 program impacted inpatient Medicare discharges, hospitals' Medicare case mix index, and hospitals' annual inpatient Medicare spending.[12] The case mix index is a measure of the average severity of cases delivered per hospital and is calculated as the average of the CMS DRG weights for each case at each hospital per year (described in more detail in Appendix A.3).

In addition to increasing spending via simply raising the amount each 508 hospital gets paid for each inpatient case, it is likely that the increase in Medicare PPS payments generated by the Section 508 program would have induced hospitals to supply more care and potentially change the mix of services they delivered. The increase in the regulated payment for each case generated by the receipt of a 508 waiver should induce hospitals to move up their supply curve and provide more services. Further, as noted in previous work, as the gap between the payment rates for DRGs increases, providers tend to substitute to higher paying DRGs (Foo, Lee, and Fong 2017). The 508 program increased hospitals' base payment rates. This increase in their base payment rate raised the absolute size of the difference between payment rates for distinct DRGs. As a result, we predict that after receiving a Medicare PPS payment increase, in addition to increasing their activity, recipient hospitals should also substitute towards higher paying DRGs.

Within our sample, eighty-eight percent of 508-recipient hospitals are non-profit facilities. Newhouse (1970) has argued that private, nonprofit hospitals maximize output and prestige. If hospitals maximize output, then an increase in Medicare payment rates should also generate an increase in the number of Medicare patients treated, assuming Medicare reimbursements are greater than hospital per case marginal costs. In addition, since the complexity of care hospitals provide has been interpreted as a signal of quality, it is likely that 508 recipient hospitals increased the complexity of the care they offer in response to a Medicare payment increase (Pope 2009).

While there was a national reduction the share of hospital services performed in an inpatient setting in the 2000s, consistent with our predictions, we observe in Panel A of Figure 2 that inpatient quantities went down less in 508 recipient hospitals than they did in control hospitals (McDermott,

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[12]We accessed the 100% sample of Medicare claims via the American Hospital Directory (AHD). Our measure of annual hospital inpatient spending captures the total amount the Centers for Medicare and Medicaid paid each hospital for all inpatient care delivered to Medicare beneficiaries. Our spending measure is constructed in three steps. First, we identify the regulated DRG PPS payment for each DRG at each hospital in each year in our data and we identify the count of each DRG delivered at each hospital in each year. Second, we multiply the number of each case performed per hospital per year times the annual hospital-DRG-specific payment rate. Third, we sum the spending per DRG across hospitals each year to produce a measure of total inpatient spending per year per hospital. Our measure of inpatient spending does not outlier payments made for idiosyncratically expensive cases that had long lengths of stay. To comply with data masking rules from the Centers for Medicare and Medicaid Services, the AHD data does not release cells with fewer than ten observations. As a result, we do not capture spending on DRGs, for example, that were performed fewer than ten times per year at a given hospital. Therefore, our spending measure captures spending on the most common DRGs.

Elixhauser, and Sun 2017).[13] Our estimates of Equation (1) presented in Column (1) of Table 2 imply that the number of inpatient discharges were 403.94 higher per year from 2006 to 2010 at our high-treatment hospitals relative to what occurred at hospitals that applied for a 508 waiver, but had their applications rejected ($p < 0.01$). When we estimate the impact of the payment increase generated by a 508 waiver on logged inpatient discharges (Appendix Table 2), we observe that it increased discharges by 6 percent in 2005 ($p < 0.01$). Column (1) of Appendix Table 3 presents the estimates that underpin Panel A of Figure 2. We find that there were no differences in the trends of discharges per year between treated and untreated hospitals before 2005 and statistically significant increases in inpatient quantities at high-treatment hospitals in 2006 through 2010.

As we illustrate in Panel B of Figure 2, we also observe that the payment increases generated by the 508 program induced hospitals in the high-treatment group to shift toward more complex care. The increase in treated hospitals' case mix index occurred immediately after high-treatment hospitals received a 508 waiver. In Column (2) of Table 2, we observe a precisely estimated increase in the inpatient case mix index of 0.09 in 2005 ($p < 0.1$) (high-treatment only) off of a base case mix index at high-treatment hospitals in 2004 of 0.23. When we measure the case mix index in logs (Appendix Table 2), we observe a precisely estimated 16 percent increase in the case mix index in 2005 at high-treatment hospitals ($p < 0.01$). Our estimates of Equation (2) presented in Appendix Table 3 illustrate that there were no statistically significant differences in the trends of the case mix index between treated and untreated hospitals before hospitals were granted 508 waivers in 2005, but there was a statistically significant increase from 2005 onwards.

Collectively, the Medicare payment increases generated by the Section 508 program induced a large increase in Medicare inpatient spending at treated hospitals. The increases in Medicare inpatient spending are visible at high-treatment and low-treatment hospitals immediately after the 508 program was introduced in 2005 (Panel C of Figure 2). In Column (3) in Table 2, we observe that high-treatment hospitals experienced a $3.15 million increase in Medicare inpatient spending in 2005 and $5.32 million per year from 2006 to 2010 off mean inpatient spending at high-treatment hospitals in 2004 of $38.69 million ($p < 0.05$). We also observe that Medicare inpatient spending increased $3.25 million per year from 2006 to 2010 at low-treatment hospitals ($p < 0.05$). Our Medicare inpatient spending results are robust when they are measured in logs (see Appendix Table A.2) and imply that the receipt of a 508 waiver raised Medicare inpatient spending at treated hospitals by

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[13]Versions of Figure 2 with logged dependent variables are presented in Appendix Figure 1.

approximately 8 percent per year ($p < 0.01$). As we illustrate in Appendix Table A.3, we do not find any differences in the trends in Medicare inpatient spending at treated and untreated hospitals prior to 2005.[14]

Collectively, we find that each high-treatment 508 recipient hospital had approximately $30 million in additional Medicare inpatient spending ($3.15\,\mathrm{m} + 5 * \$5.32\,\mathrm{m}$) in the post treatment period from 2005 to 2010 because of the program. Collectively, this resulted in more than $1.3 billion in additional spending from 2005 to 2010 ($44 * \$30\,\mathrm{million}$). The increase in inpatient spending at low-treatment hospitals post reform was more than $715 million ($\$3.25\,\mathrm{million} * 5 * 44$). As a result, across both high and low-treatment hospitals, the 508 program resulted in more than $2 billion in excess Medicare inpatient spending ($1.3\,\mathrm{billion} + \$715\,\mathrm{million}$). This amount is notable because the original legislative language in Section 508 of the MMA only authorized $900 million in spending on the program.

6.1   Section 508 Waivers and the Labor Market

We also find evidence that the Section 508 program impacted local labor markets (see Panels D and E of Figure 2). In Column (4) of Table 2, while our point estimates are not precisely estimated, based on data from the AHA, we see suggestive evidence that hospitals that received a 508 waiver increased their payrolls after their payment rates increased. We also observe that counties with a 508-recipient hospital experienced a statistically significant spike in hiring in 2005, the year the payment increases they received took effect. As we illustrate in Column (5) of Table 2, based on data from the Census Bureau's Quarterly Workforce Indicators data, low treatment hospitals saw an increase in hiring in 2005 of 256 jobs ($p < 0.01$). High treatment hospitals experienced a 284.75 increase in county hiring, although this was not precisely estimated. In our logged specification in Appendix A.2, we also find a large and significant increase in hiring in counties with hospitals that received a Section 508 waiver.

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[14]In Appendix Table A.4, we calculate the spending increases the 508-recipient hospitals would have made if they simply received a price increase, but did not change the mix and volume of care they offered. We estimate that absent any chances in case mix or volume, the payment increases generated by the 508 program would have increased hospital inpatient spending in 2005 by $760 thousand at low-treatment hospitals and $1.32 million at high-treatment hospitals and by $730 thousand and $320 thousand per year at high and low treated hospitals, respectively, from 2006 to 2010. These increases are less than a third of the total spending increases that hospitals in our high-treatment group experienced.

7 Section 508 Waivers and Political Donations

7.1 Background, Data, and Estimation

In this section, we test whether the members of Congress who had a hospital in their district that received a 508 waiver received larger campaign donations after the 508 program was introduced. This question is directly related to the wider political science literature that analyzes whether members of Congress receive benefits in the form of votes or donations when they use distributive policies to steer funds to their district. As Levitt and Snyder Jr (1997) note, it is widely accepted by academics, the media, and politicians that members of Congress are rewarded for bringing additional federal funding to their districts. However, few studies have established a causal link between distributive policies championed by members of Congress and changes in fundraising or votes. We offer some of the first causal evidence linking distributive policies and subsequent campaign donations.

It is possible that there is simply not a causal link between bringing funding and benefits to a district and increases in political donations and vote margins for members of Congress. For politicians to be rewarded, voters must be both aware of the benefits brought by their member of Congress and have the ability infer and assign credit to members for bringing home the funds (Samuels 2002; Rocca and Gordon 2013). Likewise, an absence of evidence could also be a function of the challenge of identifying the causal effect donations and legislators' behavior. From an identification perspective, establishing a causal link between donations and distributive policies is challenging because donations could lead members to push for specific policies that benefit donors, and simultaneously, distributive policies could lead individuals to make donations.

Two studies have used instrumental variable (IV) analysis to get around endogeneity issues and have found a causal link between federal funding and donations and federal funding and votes. Rocca and Gordon (2013) analyze whether representatives who allocate more defense-related earmarks receive more donations from political action committees (PACs) representing defense manufacturers. The authors instrument for defense industry earmarks using the total number of earmarks a representative makes, and they find that every \$10,000 in defense earmarks raises PAC campaign contributions by \$3.00.[15] Levitt and Snyder Jr (1997)) analyze whether increasing federal funding for a district raises

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[15]It is debatable whether instrumenting for defense earmarks using total earmarks (including defense earmarks) satisfies the exclusion restriction. As Rocca and Gordon (2013) note, they "study defense because it represents a huge percentage of all earmarks distributed by Congress. Indeed, the industry received 60% of all earmark dollars from the 111th Congress" (pg. 245).

vote margins for the incumbent. The authors instrument for federal funding in the district using federal spending outside the district but inside the state and find that a \$100 increase in per-capita federal spending (approximately \$50 million per district) leads to a 2% gain in the popular vote for incumbents. We add to this literature by analyzing the impact of the Section 508 program on campaign contributions.

The Section 508 program offers a unique opportunity to test the link between campaign contributions and targeted distributive policies. Lee (2003a) and Rocca and Gordon (2013) have argued the extent to which a particular distributive policy will yield electoral gains and higher donations to a legislator will be a function of the extent to which the legislator can credit claim for the benefit (e.g. whether his or her efforts are salient to voters). However, formula-based distributive policies, such as the 508 program, in which a member of Congress lobbies for a specific formula or a change to an existing formula may not allow legislators the opportunity to claim credit (Lee 2003a; Rocca and Gordon 2013). As Rocca and Gordon (2013) note, with formula-based distributive policies, "credit claiming is difficult in these circumstances because while the legislator may have pushed hard for a formula that increased the allocation to his state, explaining to voters the intricacies of that process and the MC's role in it is virtually impossible" (pg. 242–243).

The 508 program was designed to expire three years after it was introduced. However, once hospitals received the 508 funds, the recipient hospitals and their constituents had a strong motivation to extend the program beyond its slated 2007 expiration. That the 508 program needed to be reauthorized by votes in the House of Representatives created a very clear link between legislators' actions and the financing of hospitals in their district. To that end, there is evidence that politicians were aware of the 508 program and that they viewed supporting it as politically advantageous. As the 508 program was coming up for a reauthorization vote in 2007, Senator Charles Schumer's office issued a press release that stated, "In light of todays [sic] announcement that Senate leaders will pursue an extension of Section 508 of the Medicare Modernization Act, US Senator Charles E. Schumer, a member of the Senate Finance Committee, pledged today to work to include all New York Section 508 hospitals..." (Office of Senator Charles Schumer 2006). In the remainder of the statement, the senator's office reiterated his commitment to increasing funding for New York hospitals. As a result, we should expect that donations to legislators would increase in the 2005-2006 and 2007–2008 congressional cycles as hospitals lobbied for the 508 program to be extended and politicians sought to curry favor with their constituents.

We begin by analyzing whether members of Congress were lobbied to extend the 508 program. To do so, we use data on lobbying spending by the Section 508 Hospital Coalition from the Center for Responsive Politics to track their lobbying spending over time (for more details on this dataset, see Appendix A.1). We also use data on political donations and the number of donors per year from the DIME database to test whether members located in congressional districts that had a 508 hospital received higher donations after funding for those hospitals increased.[16] The DIME data include detailed information on campaign contributions from the Federal Elections Commission (FEC) (more information on the DIME data is provided in Appendix A.1).

In practice, we identify campaign contributions to members of Congress from all donors and from individuals who work in the health care industry before and after the 508 program was introduced. To do so, we estimate:

$$Outcome_{d,t} = \beta_{1,t} High\_Recipient\_508_d + \beta_{2,t} Low\_Recipient\_508_d + \tau_t + \propto_d + \varepsilon_{d,t,} \qquad (3)$$

where we observe a range of outcomes $Outcomes_{d,t}$ that include the logged and unlogged dollars of donations made to a member of Congress located in congressional district d, in two-year election cycle t. We include a vector of election cycle fixed effects Γ_t and a vector of congressional district fixed effects $\propto_d$. We limit our analysis to members of Congress who had a hospital in their district and were in office in 2003. We focus on the 2001–2002, 2003–2004, 2005–2006, 2007–2008, and 2009–2010 election cycles and interact two-year election cycle fixed effects with indicators for whether a hospital was in high or low-treatment groups. We use the election cycle before the MMA vote (the 2003–2004 election cycle) as the reference category. We focus on donations made to members of Congress from across the country and donations to members of Congress from individuals living in a member's home state. We examine the impact of the 508 program on total donations and donations from individuals working in the health care industry. We also introduce a placebo test and examine whether after the MMA vote, members of Congress who had hospitals in their district that received a 508 waiver had an increase in donations from individuals working in several unrelated industries (the oil and gas industry, the automobile industry, and the liquor and alcohol industry).

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[16]Bonica, Adam. 2013. Database on Ideology, Money in Politics, and Elections: Public version 1.0. Stanford, CA: Stanford University Libraries. `http://data.stanford.edu/dime`.

7.2 Estimating the Gains from the 508 Program to Members of Congress

The Section 508 Hospital Coalition was formed in 2005 to promote the interests of hospitals that received a Section 508 Waiver. We obtained the amount the Section 508 Hospital Coalition spent lobbying members of Congress each year from 2005 through 2012 (see Appendix Figure A.2). In 2005, the first year the 508 program took effect, the coalition spent \$15,000 lobbying members of Congress. Over the next five years, annual spending increased substantially and, by 2010, the coalition spent \$1,025,477 on lobbying members of Congress. Rocca and Gordon (2013) note that although individual voters may not observe and reward members of Congress for contributing to distributive policies that benefit their district, interest groups, such as the Section 508 Hospital Coalition can sharpen the incentives for members of Congress to act.

In the 2005–2006 congressional cycle, based on analysis of the DIME, the average member of Congress raised \$1.3 million in donations. Approximately 37 percent of these donations came from donors in the representative's state and 5.43 percent of a member of Congress's donations came from individuals working in the health care industry. Figure 3 shows donations to members of Congress representing a 508-recipient hospital from all donors nation-wide (Panel A) and in the same state (Panel C)). Both show that after the 508 waivers were granted, there was a large increase in donations in the 2005–2006, 2007–2008, and 2009/10 election cycles to members with a 508-recipient hospital in their district.[17]

In Column (1) of Table 3, we present estimates of Equation (3) and analyze the total campaign contributions to members of Congress that had a 508-recipient hospital in their district. Results from Column (1) in Table 3 illustrate that members with a 508 hospital in their district saw a \$736 thousand increase in total donations from all their donors in the 2007/2008 congressional cycle ($p < 0.5$). In the logged specification presented in Column (1) in Appendix Table A.6, we observe a 22 percent increase in total donations in the 2005–2006 cycle ($p < 0.05$). It is notable that the increase in donations occurred after hospital payment rates increased but before the votes to reauthorize the Section 508 program occurred.

As we illustrate in Panels B and D of Figure 3, we also observe that members of Congress with a 508-recipient hospital in their district received a sharp increase in donations from donors working in the health care industry. In Column (4) of Table 3, we observe that health sector donors from the members' home states donated an additional \$6.85 thousand to members of Congress with a

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[17]We present versions of these figures with logged dependent variables in Appendix Figure A.3

508-recipient hospital after the vote authorizing 508 waivers. In our logged specification (Appendix Table A.5), we find that there was a 42 percent increase in donations from health sector works to members of Congress with a 508 in their district in the 2007/2008 election cycle.

In Table 4, we present results from a placebo test to see whether members of Congress who had 508 hospitals in their district received an increase in donations from three unrelated industries: the oil and gas sector, the transportation sector, the construction sector, and the television industry. Across those three industries, we see no statistically significant changes in donations after hospitals received 508 funds. We chose these industries because we would not expect increases in Medicare payment rates to directly influence the political donations of individuals working in these sectors.

8   Conclusion

In the long term, improving the productivity of spending on the Medicare program represents one of the most significant policy priorities in the US. Until now, most analysis of health care spending has focused on the role that financial incentives, the adoption and diffusion of new technology, and differences in patient characteristics play in driving variation and growth in health care spending. In this paper, we present the first work that formally assesses how political dynamics in the US influence health care spending.

Legislators struggled to pass the Medicare program in 1965, and in the ensuing decades, there have been numerous political fights over altering and expanding the program (Marmor 2000). The pressure members of Congress face to be re-elected makes it challenging for the House of Representatives to pass large pieces of sweeping legislation (Mayhew 1974). Evans (2004) argues that logrolling is imperative to pass sweeping legislation in Congress. Nowhere was the role of logrolling more visible than in efforts to pass the MMA of 2003 (Lee 2003a). We study how one distributive policy added to the MMA of 2003 – the Section 508 program – affected hospital behavior and health spending and influenced campaign contributions.

We show that hospitals represented by a member of Congress of voted 'Yea' to the MMA were more likely to receive a Section 508 waiver. Section 508 waivers increased hospitals' Medicare reimbursement rates substantially. In turn, we observe that hospitals that received a waiver increased their activity and shifted towards more complex care. This led hospitals that received a 508 waiver to dramatically increase their Medicare inpatient spending in the six years after the program was

introduced. The Section 508 program also led to more job hiring in the counties where 508 hospitals were located. Once hospitals received a 508 waiver, we found that they spent significant resources lobbying members of Congress to preserve their benefits. Finally, we show that members of Congress who had a 508 waiver hospital in their district received a large increase in campaign contributions after the MMA was passed in 2003, but before the vote to extend the Section 508 program.

Rather than focusing on assessing the direct impact of expanding the Medicare program via the introduction of Medicare Part D, this project explores the knock-on effects of the political process necessary to pass health care laws in the US. This analysis offers a new lens through which to view domestic health care spending. When legislators add distributive policies to sweeping legislation and use logrolling to form the coalitions necessary expand health coverage, it can seem, at first blush, as though everyone wins. In the case of the passage of the MMA, seniors got prescription drug coverage, hospitals received higher payments, jobs were created, and legislators representing 508-recipient hospitals received increased donations. However, in the long term, these types of spending increases need to be financed, and their impact on health care spending, as we demonstrate, is non-trivial. Nearly a billion dollars was initially allocated to fund the Section 508 program. However, our results suggest that the 508 program resulted in more than $2 billion in spending from 2005 to 2010. Moreover, these types of policies can be hard to eliminate because, as we demonstrate, the beneficiaries of the policies lobby members of Congress to have their gains preserved.

The critical finding from this work is that there is a close link between electoral politics and the Medicare program. While focus on a narrow program that was inserted into the MMA to illustrate the relationship between politics and health spending, the type of provision we analyzed in this paper is present in virtually every piece of major health care legislation. Moreover, while we focus this analysis on the impact of politics on spending in the Medicare program, lawmakers vote on provisions that impact private insurance markets, the pricing of pharmaceuticals, and the regulation of medical devices. As a result, there is scope for politics to have a large impact on US health spending in aggregate. Going forward, we hope this paper motivates future work in this area, including testing how lobbying dollars influence health care spending, examining which stakeholders benefit from health care spending growth, and considering how the role that Congress plays in defining the scope structure of the health system impacts health care outcomes and health care spending variation and growth across the nation.

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Table 1: Congressional Votes for the Medicare Modernization Act of 2003 and the 508 Program

	Hospitals Represented by All Members of Congress			Hospitals Represented by Republicans			Hospitals Represented by Democrats		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Yea	Nay	Yea-Nay	Yea	Nay	Yea-Nay	Yea	Nay	Yea-Nay
Eligible Hospitals									
Share of 508 Recipient Hospitals	0.059	0.042	0.017*	0.056	0.008	0.048***	0.11	0.046	0.064*
# of 508 Recipient Hospitals	71	47	-	62	1	-	9	45	-
Total Hospitals	1,193	1,111	-	1,111	121	-	82	982	-
Votes	198	184	-	189	19	-	9	165	-
Applied Hospitals									
	Yea	Nay	Yea-Nay	Yea	Nay	Yea-Nay	Yea	Nay	Yea-Nay
Share of 508 Recipient Hospitals	0.276	0.199	0.077**	0.263	0.067	0.196**	0.429	0.206	0.222*
# of 508 Recipient Hospitals	71	47	-	62	1	-	9	45	-
Total Hospitals	257	233	-	236	15	-	21	218	-
Votes	116	105	-	110	8	-	6	97	-
Hospitals Receiving 508 Waiver									
	Yea	Nay	Yea-Nay	Yea	Nay	Yea-Nay	Yea	Nay	Yea-Nay
Size of PPS Payment Gains through 508 ($)	396.89	361.03	35.86	392.41	0	392.41***	511.14	354.47	156.67***
Total Hospitals	53	34	-	51	1	-	2	32	-
Votes	28	19	-	27	1	-	1	17	-

Share of all hospitals that received a Section 508 waiver: 0.032   Mean base PPS payment rate of 508 hospitals in 2004: $5278.32
Share of eligible hospitals that received a Section 508 waiver: 0.058   Mean PPS payment increase from Section 508 waiver receipt: $388.09

Notes: $*p < 0.10$, $**p < 0.05$, $***p < 0.01$. Roll call vote 332 passed 216 to 215, with 207 Republicans voting 'Yea,' 19 Republicans voting 'Nay,' 3 Republicans abstaining, 9 Democrats voting 'Yea,' 195 Democrats voting 'Nay,' 1 Democrat abstaining, and 1 Independent voting 'Nay.' In comparing the fraction of hospitals that received a 508 waiver, we include all hospitals in our data except those where the member of Congress abstained from voting (2 of the 120 hospitals that received a Section 508 waiver in 2004; 1 of the 88 hospitals in our analytic sample of 88 Section 508 hospitals). We lose an additional hospital in Columns (4), (5), (7), and (8) because it is represented by a member of Congress registered as an Independent.

Table 2: The Impact of Medicare Payment Increases on Hospitals' Inpatient Spending, Inpatient Admissions, Case Mix Index, and the Labor Market

	Inpatient Quantities (1)	Case Mix Index (2)	Inpatient Spending ($ Millions) (3)	Hospital Payroll ($ Millions) (4)	County-Level Hiring (5)
High 508 Recipient∗2005	162.21	0.09*	3.15**	3.38	284.75
	(110.47)	(0.05)	(1.59)	(4.88)	(177.08)
High 508 Recipient∗2006–2010	403.94***	0.12	5.32**	6.169	95.92**
	(146.60)	(0.10)	(2.48)	(7.45)	(39.75)
Low 508 Recipient∗2005	133.26	0.04	2.51	−3.36	256.23*
	(88.44)	(0.03)	(1.71)	(2.05)	(143.59)
Low 508 Recipient∗2006–2010	157.04	0.14	3.25*	4.97	152.53***
	(117.01)	(0.11)	(1.80)	(11.81)	(37.06)
Hospital Fixed Effects	X	X	X	X	X
Year Fixed Effects	X	X	X	X	X
N	3,348	3,337	3,339	3,348	3,198

Mean of the Dependent Variable in 2004

High 508 Hospitals	4,248.72	0.23	38.69	75.3	1,511
Low 508 Hospitals	4,408.86	0.26	34.97	62.5	854
Control Hospitals	4,320.36	0.34	36.46	70.3	1,328

Notes: $*p < 0.10$, $**p < 0.05$, $***p < 0.01$. We present estimates of Equation (1). Wild-bootstrapped standard errors are clustered around hospitals. Observations (N) are hospital-years. Control hospitals include those that applied for a Section 508 waiver but were rejected. We have fewer observations in Column (5) because there are ten counties (15 providers) with missing data in the Quarterly Workforce Indicators.

Table 3: The Impact of 508 Receipt on Campaign Donations

Campaign Contributions to 108th House Representatives:	From All Donors	From Donors Working in Health Sector	From All Donors in Same State	From Donors in Same State Working in Health Sector
	(1)	(2)	(3)	(4)
		($ Thousands)		
High 508 Recipient	118.05	−8.86	8.00	−1.68
District*2001/2 Elec. Cycle	(121.96)	(9.05)	(52.44)	(3.17)
	Omitted Category 2003/2004	*Omitted Category 2003/2004*		
High 508 Recipient	278.14	34.49	60.13	6.85**
District*2005/6 Elec. Cycle	(175.83)	(31.42)	(51.07)	(2.93)
High 508 Recipient	735.35**	0.02	187.72***	4.41
District*2007/8 Elec. Cycle	(332.72)	(28.60)	(70.92)	(6.91)
High 508 Recipient	451.30	−4.66	65.59	0.16
District*2009/10 Elec. Cycle	(351.28)	(30.79)	(92.29)	(6.92)
Low 508 Recipient	55.56	5.39	1.01	−1.77
District*2001/2 Elec. Cycle	(215.26)	(15.13)	(77.33)	(5.41)
	Omitted Category 2003/2004	*Omitted Category 2003/2004*		
Low 508 Recipient	478.32	19.18	72.02	2.91
District*2005/6 Elec. Cycle	(358.90)	(24.90)	(144.25)	(5.00)
Low 508 Recipient	299.09	−11.41	−2.43	−5.57
District*2007/8 Elec. Cycle	(231.81)	(19.84)	(63.35)	(5.06)
Low 508 Recipient	−2.44	−22.72	−9.28	−8.98
District*2009/10 Elec. Cycle	(389.42)	(22.38)	(131.64)	(7.52)
District Fixed Effects	X	X	X	X
Year Fixed Effects	X	X	X	X
N	980	980	980	980
Mean of Dependent Variable in 2003/2004 Election Cycle				
High 508 Recipient Districts	952.56	34.72	289.24	6.49
Low 508 Recipient Districts	952.60	65.05	316.86	16.20
Control Districts	1124.17	64.87	439.47	23.56

Notes: $*p < 0.10$, $**p < 0.05$, $***p < 0.01$. We present estimates of Equation (3). Wild-bootstrapped standard errors are clustered around hospitals. High treatment districts are those with a hospital in our high treatment group. Low treatment districts are those with only 508 recipient hospitals in our low treatment group. Control districts are those have hospitals that applied for a Section 508 waiver but were rejected and exclude treated districts.

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Table 4: Placebo Test Estimating the Impact of the 508 Program on Campaign Donations from Unrelated Industries

Campaign Contributions to 108th House Representatives:	From Donors in Same State Working in Oil and Gas Sector (1)	From Donors in Same State Working in Transportation Sector (2)	From Donors in Same State Working in Construction Sector (3)	From Donors in Same State Working in TV Sector (4)
High 508 Recipient	0.36	−0.24	−1.83	−0.71
District*2001/2 Election Cycle	(1.28)	(0.20)	(2.78)	(1.13)
	Omitted Category 2003/2004	*Omitted Category 2003/2004*		
High 508 Recipient	−1.44	0.15	1.26	−0.10
District*2005/6 Election Cycle	(1.21)	(0.22)	(2.32)	(0.69)
High 508 Recipient	−1.07	−0.05	1.53	−0.21
District*2007/8 Election Cycle	(1.15)	(0.32)	(2.78)	(1.08)
High 508 Recipient	0.25	−0.17	0.73	−1.37
District*2009/10 Election Cycle	(1.37)	(0.37)	(3.55)	(1.75)
Low 508 Recipient	−0.86	−0.09	−5.69	−0.01
District*2001/2 Election Cycle	(2.39)	(0.17)	(6.72)	(1.33)
	Omitted Category 2003/2004	*Omitted Category 2003/2004*		
Low 508 Recipient	2.23	0.15	−2.86	0.39
District*2005/6 Election Cycle	(2.44)	(0.23)	(5.09)	(1.02)
Low 508 Recipient	−4.34	−0.18	−10.19	0.57
District*2007/8 Election Cycle	(4.07)	(0.68)	(7.67)	(1.37)
Low 508 Recipient	−7.06	−0.28	−11.28	−0.56
District*2009/10 Election Cycle	(5.76)	(0.90)	(8.58)	(1.44)
Hospital Fixed Effects	X	X	X	X
Year Fixed Effects	X	X	X	X
N	980	980	980	980

Mean of Dependent Variable in 2003/2004 Election Cycle

	(1)	(2)	(3)	(4)
High 508 Recipient Districts	2.50	491.67	19.01	3.91
Low 508 Recipient Districts	3.76	1,516.67	13.98	3.29
Control Districts	5.58	2,098.45	17.95	5.78

Notes: $*p < 0.10$, $**p < 0.05$, $***p < 0.01$. We present estimates of Equation(3). Wild-bootstrapped standard errors are clustered around hospitals. High treatment districts are those with a hospital in our high treatment group. Low treatment districts are those with only 508 recipient hospitals in our low treatment group. Control districts are those have hospitals that applied for a Section 508 waiver but were rejected and exclude treated districts.

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Figure 1: The Impact of Medicare Payment Increases on Hospitals' Base PPS Payment Rates

(A) PPS Base Payment Rates
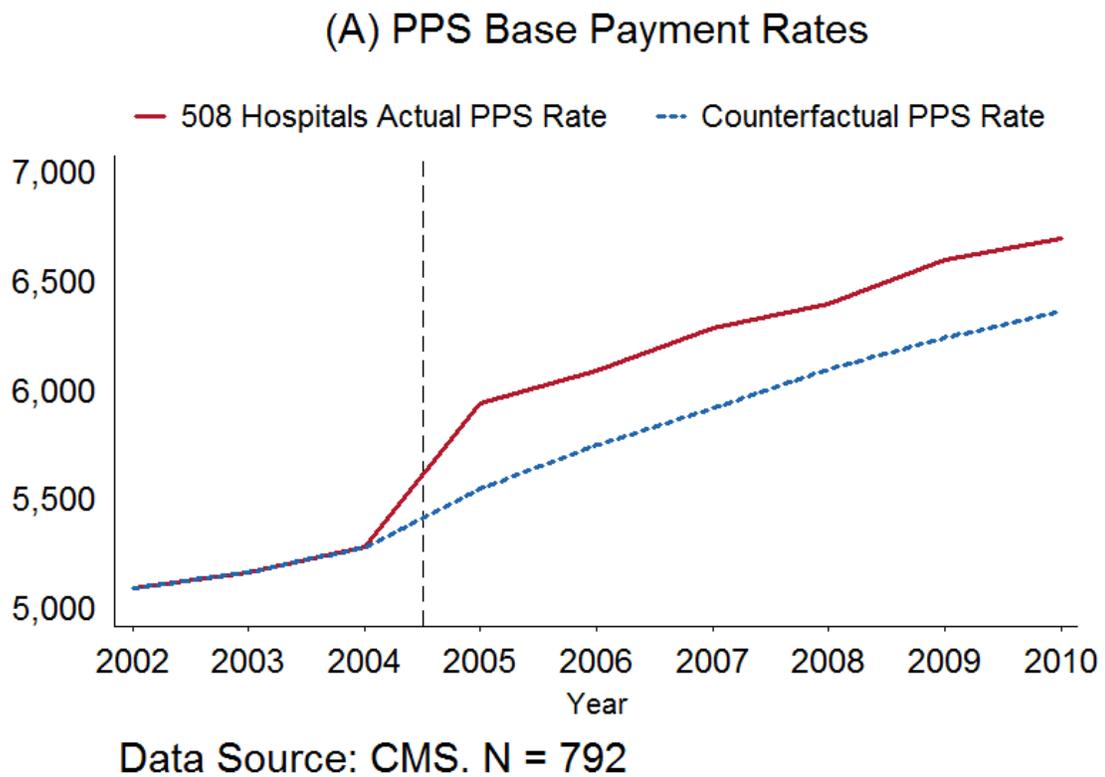
This figure plots the mean PPS base payment rate for the 88 hospitals that received a 508 waiver and were in our sample from 2002 to 2010. The base payment rate is akin to what hospitals would be paid for a case where the DRG weight was equal to one. We present hospitals' base payment rates with and without the wage index change generated by the 508 program. The blue dashed line shows 508-recipient hospitals' mean PPS base payment rate without the wage index change generated by the 508 program. The solid red line graphs the mean of recipient hospitals' actual PPS payment rates and includes the wage index change generated by the 508 program.

Figure 2: The Impact of Medicare Payment Increases on Hospitals' Inpatient Spending, Inpatient Admissions, and Case Mix Index
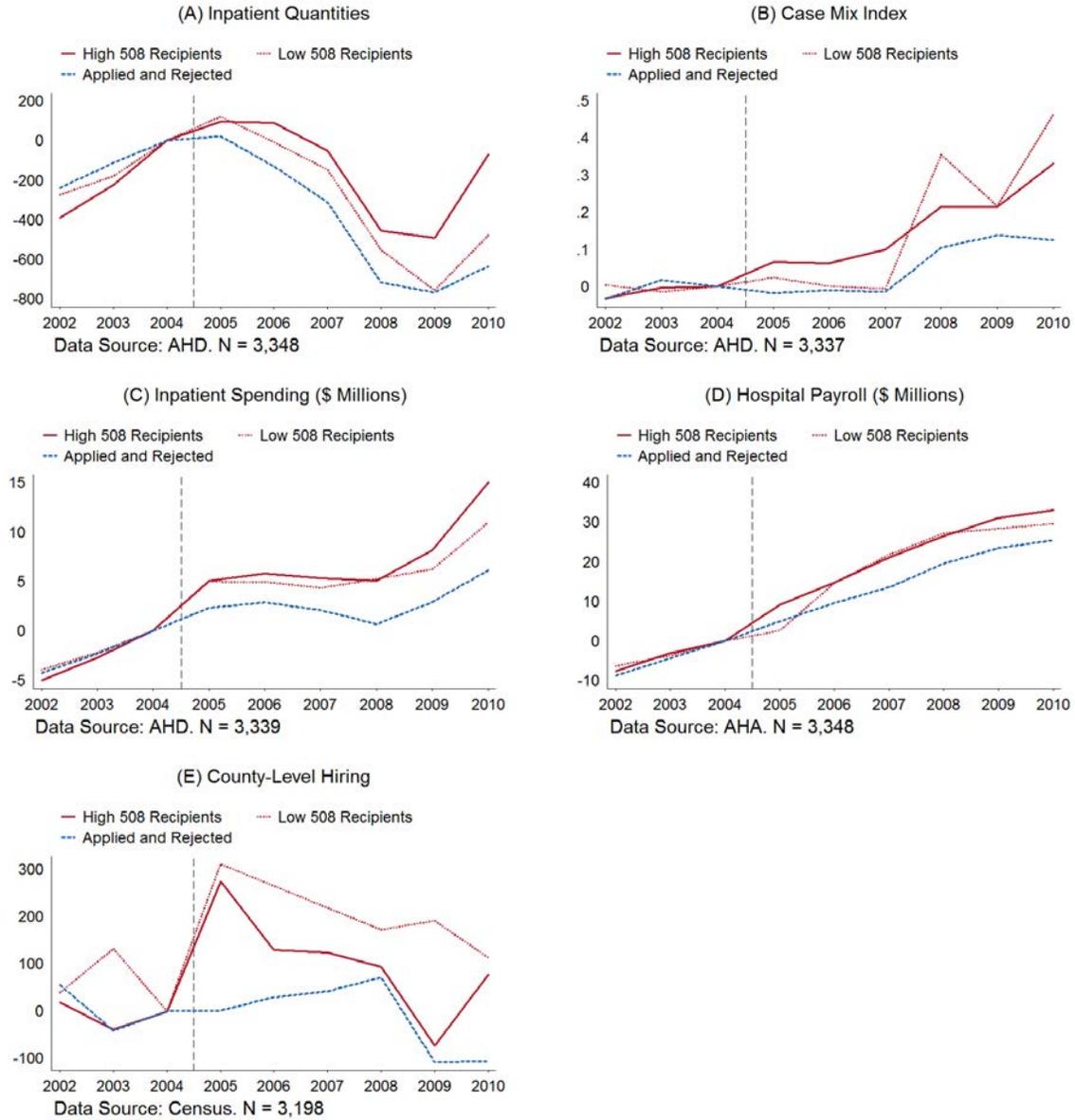
Notes: These figures are estimates of Equation (2). We regress hospital outcomes on a vector of hospital fixed effects, year dummies, and interactions between the high 508 hospital indicator and year dummies. The regression is normalized to 2004. Control hospitals include those that applied for a Section 508 waiver but were rejected.

Figure 3: The Impact of 508 Receipt on Campaign Donations
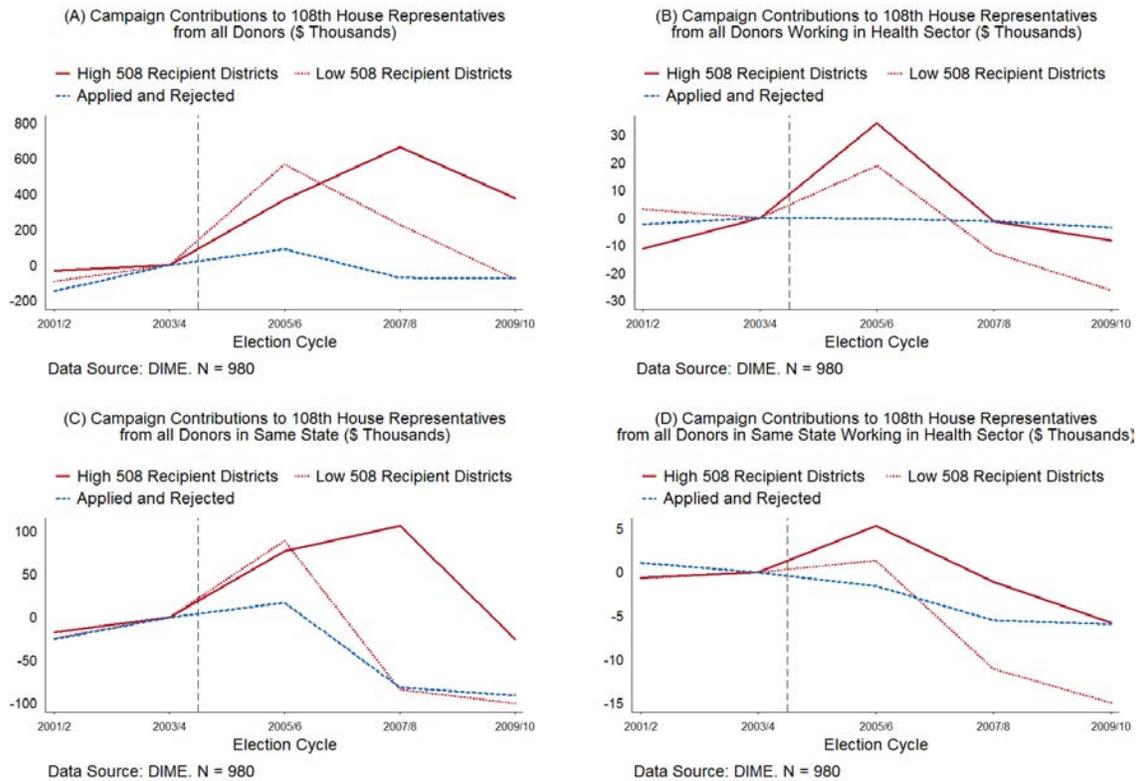
Notes: This figure presents estimates from Equation (3). We regress district campaign donations on a vector of election-year dummies, district fixed effects and interactions between districts with a high treatment hospital and year dummies. Each observation is the sum of donations to the member of Congress representing the district where the hospital is located during a two-year election cycle. Control districts are those have hospitals that applied for a Section 508 waiver but were rejected and exclude treated districts.

Appendix – For Online Publication

Appendix A   Description of Data and Data Cleaning

A.1   Datasets and Sources

American Hospital Association Annual Survey: We obtained data on hospital staffing from the American Hospital Association (AHA) annual survey. The AHA has surveyed hospitals annually since 1946. More information on the AHA survey data can be viewed at: `http://www.ahadataviewer.com/book-cd-products/AHA-Survey/`.

American Hospital Directory Data: We use data on hospitals' Medicare activity that we obtained from the American Hospital Directory (AHD). The AHD is a for-profit data vendor that sells cleaned Medicare claims data derived from the Medicare Provider Analysis and Review limited access database. This includes claims records for 100% of Medicare fee-for-service inpatient claims. Details on the AHD data can be found at `www.ahd.com`.

Center for Responsive Politics Data: We identified the Section 508 Coalition via data on congressional lobbying presented by the Center for Responsive Politics `https://www.opensecrets.org/lobby/clientsum.php?id=D000056560&year=2009`.

Database on Ideology, Money in Politics, and Elections (DIME) Database: We accessed data on campaign contributions from the DIME database. The database was constructed by Adam Bonica. More information on the data is available at `https://data.stanford.edu/dime`. Their information on campaign contributions was collected from the Federal Election Commission.

Freedom of Information Act Request: We filed a Freedom of Information Act (FOIA) request to the Centers for Medicare and Medicaid Services to obtain a list of hospitals that applied for a Section 508 waiver, a list of applications that had their applications approved, and the criteria on which hospitals' applications were judged. Our FOIA request was filed on December 1, 2014. We received a reply on March 3, 2015.

The United States Census Quarterly Workforce Indicators: We accessed data on county-level job hiring annually from the Quarterly Work Force Indicators dataset. The data itself and more information is available at `https://www.census.gov/data/developers/data-sets/qwi.html`.

Voteview Database: We accessed data on the votes by members of Congress for the Medicare Modernization Act from the Voteview database. The database includes roll call votes for every vote

taken by Congress and can be accessed at voteview.com. The database is hosted and maintained by UCLA's Department of Political Science.

A.2 Calculating Medicare PPS Payment Rates

To calculate payments, we followed payment rules outlined each year in the Federal Register. We began by calculating the PPS operating payments and the PPS capital payments, which were adjusted using the hospital operating wage index, non-labor share, operating cost-of-living adjustment, disproportionate share payments, indirect medical education payments, geographic adjustment factors, and capital cost of living adjustments. We then used diagnosis related group (DRG) and ambulatory payment classification (APC) weights to calculate the standard payment amount for each inpatient and outpatient case exclusive of outlier payments. Outlier payments are additional payments made to hospitals if specific cases involve atypically long stays in the hospital.

A.3 Calculating Hospitals' Case Mix Index

The Case Mix Index (CMI) is the average diagnosis-related group (DRG) weight of a hospital's inpatient discharges. We calculate a CMI for each hospital by summing the DRG weights per case at a hospital and then dividing the sum by the number of cases that were delivered. We used Medicare claims data from the American Hospital Directory to calculate a CMI for each hospital in each year in our sample period. The higher the CMI, the higher the average complexity and resource-intensive care provided by the hospital. For more information on the CMI, see `https://healthdata.gov/dataset/case-mix-index`.

Table A.1: Characteristics of All AHA Hospitals, Hospitals that Applied for a 508 Waiver But Were Rejected, and 508-Receipient Hospitals

	All AHA Hospitals	All 508 Recipient Hospitals	Applied and Rejected Hospitals	Difference between (2)–(3)
	Mean	Mean	Mean	
Medicare Discharges	4,245	5,022	5,498	−476
Medicaid Discharges	1,825	1,681	2,105	−423.18*
For-Profit Hospitals	0.16	0.06	0.21	−0.15***
Not-for-Profit Hospitals	0.66	0.88	0.69	0.18***
Teaching Hospitals	0.28	0.40	0.38	0.02
Beds	218	235	274	−38.82*
Urban Area	0.68	0.81	0.79	0.01
N	2,275	88	284	

Notes: Means and standard deviations of hospital characteristics are calculated using 2004 values. We exclude critical access hospitals.

Table A.2: The Impact of Medicare Payment Increases on Hospitals' Inpatient Spending, Inpatient Admissions, Case Mix Index, and the Labor Market (Logged Dependent Variables)

	Inpatient Quantities	Case Mix Index	Inpatient Spending ($ Millions)	Hospital Payroll	County-Level Hiring
	(1)	(2)	(3)	(4)	(5)
High 508 Recipient*2005	0.06**	0.16***	0.10***	0.001	0.07
	(0.02)	(0.06)	(0.03)	(0.018)	(0.04)
High 508 Recipient*2006-2010	0.07	0.11	0.04	0.021	0.05**
	(0.04)	(0.09)	(0.05)	(0.030)	(0.02)
Low 508 Recipient*2005	0.05**	−0.01	0.08***	−0.027*	0.14*
	(0.02)	(0.07)	(0.02)	(0.015)	(0.08)
Low 508 Recipient*2006-2010	0.03	0.04	0.10***	−0.028	0.10***
	(0.03)	(0.09)	(0.04)	(0.034)	(0.03)
Hospital Fixed Effects	X	X	X	X	X
Year Fixed Effects	X	X	X	X	X
N	3,348	3,337	3,339	3,348	3,178

Mean of the Dependent Variable in 2004

High 508 Hospitals	4,248.72	0.23	38.69	75.3	1,511
Low 508 Hospitals	4,408.86	0.26	34.97	62.5	854
Control Hospitals	4,320.36	0.34	36.46	70.3	1,328

Notes: $*p < 0.10$, $**p < 0.05$, $***p < 0.01$. We present estimates of Equation (1). Wild-bootstrapped standard errors are clustered around hospitals. Observations (N) are hospital-years. Control hospitals include those that applied for a Section 508 waiver but were rejected. We have fewer observations in Column (5) because the Quarterly Work Force Indicator data does not observations for 10 counties, which include 15 providers (150 total observations).

Table A.3: The Impact of Medicare Payment Increases on Hospitals' Inpatient Spending, Inpatient Admissions, Case Mix Index, and the Labor Market (Logged Dependent Variables)

	Inpatient Quantities	Case Mix Index	Inpatient Spending ($ Millions)	Hospital Payroll	County-Level Hiring
	(1)	(2)	(3)	(4)	(5)
High 508 Recipient*2002	−149.67	0.00	−0.77	1.10	−36.57
	(144.07)	(0.04)	(1.40)	(4.92)	(58.53)
High 508 Recipient*2003	−112.28	−0.02	−0.38	1.22	1.70
	(119.22)	(0.03)	(0.95)	(0.97)	(35.50)
	Omitted Category 2004				
High 508 Recipient*2005	74.89	0.08*	2.77***	4.16	273.25
	(49.15)	(0.05)	(1.03)	(5.71)	(171.85)
High 508 Recipient*2006	221.15***	0.07	2.92***	5.07	100.10
	(80.35)	(0.05)	(1.36)	(5.90)	(75.42)
High 508 Recipient*2007	261.48***	0.11*	3.22***	7.55	81.924*
	(88.69)	(0.06)	(1.44)	(7.18)	(49.74)
High 508 Recipient*2008	260.88**	0.11	4.41***	7.01	22.03
	(101.67)	(0.12)	(1.74)	(7.65)	(57.29)
High 508 Recipient*2009	274.80**	0.08	5.23***	7.56	34.60
	(110.11)	(0.10)	(2.26)	(9.05)	(57.84)
High 508 Recipient*2010	564.80***	0.21	8.89***	7.52	183.48***
	(180.36)	(0.14)	(3.62)	(9.84)	(69.24)
Low 508 Recipient*2002	−34.00	0.04	0.321***	2.44	−16.22
	(103.31)	(0.03)	(1.03)	(2.09)	(55.10)
Low 508 Recipient*2003	−67.33	−0.03	0.137***	0.69	173.16
	(67.55)	(0.04)	(0.70)	(1.05)	(125.73)
	Omitted Category 2004				
Low 508 Recipient*2005	99.48**	0.04	2.66***	−2.31	310.13**
	(48.63)	(0.03)	(1.23)	(1.43)	(122.86)
Low 508 Recipient*2006	121.79*	0.01	2.06***	5.05	235.58*
	(62.33)	(0.04)	(1.23)	(8.89)	(129.51)
Low 508 Recipient*2007	164.45*	0.01	2.253***	8.21	176.81***
	(88.75)	(0.03)	(1.17)	(10.51)	(54.41)
Low 508 Recipient*2008	164.74	0.25	4.56***	7.69	100.93
	(127.58)	(0.16)	(1.46)	(12.24)	(85.13)
Low 508 Recipient*2009	10.32	0.08	3.329***	4.93	299.57***
	(156.72)	(0.10)	(1.59)	(11.55)	(43.90)
Low 508 Recipient*2010	155.05	0.34	4.830**	4.19	219.30***
	(136.39)	(0.26)	(2.27)	(12.06)	(41.80)
Hospital Fixed Effects	X	X	X	X	X
Year Fixed Effects	X	X	X	X	X
N	3,348	3,337	3,339	3,348	3,198
	Mean of the Dependent Variable in 2004				
High 508 Hospitals	4,248.72	0.23	38.69	75.3	1,511
Low 508 Hospitals	4,408.86	0.26	34.97	62.5	854
Control Hospitals	4,320.36	0.34	36.46	70.3	1,328

Notes: *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$. We present estimates of Equation (1). Wild-bootstrapped standard errors are clustered around hospitals. Observations (N) are hospital-years. Control hospitals include those that applied for a Section 508 waiver but were rejected. We have fewer observations in Column (5) because the Quarterly Work Force Indicator data does not observations for 10 counties, which include 15 providers (150 total observations).

Table A.4: The Impact of Medicare Payment Increases on Hospitals'
Quantity-Fixed Inpatient Spending

	Quantity-Fixed Inpatient Spending (1)
High 508 Recipient*2005	1.32***
	(0.17)
High 508 Recipient*2006-2010	0.73***
	(0.14)
Low 508 Recipient*2005	0.76***
	(0.21)
Low 508 Recipient*2006-2010	0.32**
	(0.12)
Hospital Fixed Effects	X
Year Fixed Effects	X
N	3,348

Mean of the Dependent Variable in 2004

High 508 Hospitals	25.61
Low 508 Hospitals	23.74
Control Hospitals	23.66

Notes: $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. We present estimates of
Equation (1). Wild-bootstrapped standard errors are clustered around
hospitals. Observations (N) are hospital-years. Control hospitals in-
clude those that applied for a Section 508 waiver but were rejected.

Table A.5: The Impact of Medicare Payment Increases on Hospital Staffing

	Total FTEs (1)	FTE Doctors (2)	FTE Nurses (3)
High 508 Recipient*2005	−14.66	7.95	8.04
	(42.15)	(6.38)	(17.64)
High 508 Recipient*2006-2010	24.39	26.65	−0.28
	(86.81)	(22.74)	(30.29)
Low 508 Recipient*2005	−56.30	−4.32	−15.79
	(36.31)	(4.19)	(15.83)
Low 508 Recipient*2006-2010	−87.10	15.09	−31.61
	(97.99)	(12.88)	(25.71)
Hospital Fixed Effects	X	X	X
Year Fixed Effects	X	X	X
N	3,337	3,337	3,337

Mean of the Dependent Variable in 2004

	Total FTEs	FTE Doctors	FTE Nurses
High 508 Hospitals	1,425	78	386
Low 508 Hospitals	1,373	73	379
Control Hospitals	1,511	80	445

Notes: $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$. We present estimates of Equation (1). Wild-bootstrapped standard errors are clustered around hospitals. Observations (N) are hospital-years. Control hospitals include those that applied for a Section 508 waiver but were rejected.

Table A.6: The Impact of 508 Receipt on Campaign Donations (Logged Dependent Variables)

Campaign Contributions to 108th House Representatives:	From All Donors	From Donors Working in Health Sector	From All Donors in Same State	From Donors in Same State Working in Health Sector
	(1)	(2)	(3)	(4)
High 508 Recipient	0.14	0.12	0.11	0.32**
District*2001/2 Elec. Cycle	(0.10)	(0.16)	(0.10)	(0.14)
Omitted Category 2003/2004				
High 508 Recipient	0.22**	0.10	0.23**	0.09
District*2005/6 Elec. Cycle	(0.09)	(0.12)	(0.12)	(0.15)
High 508 Recipient	0.23	0.42**	0.18	0.39
District*2007/8 Elec. Cycle	(0.32)	(0.19)	(0.31)	(0.26)
High 508 Recipient	0.03	−0.11	−0.10	0.31
District*2009/10 Elec. Cycle	(0.47)	(0.29)	(0.53)	(0.29)
Low 508 Recipient	0.25	0.17	0.21	0.05
District*2001/2 Elec. Cycle	(0.21)	(0.19)	(0.22)	(0.19)
Omitted Category 2003/2004				
Low 508 Recipient	0.27	0.00	0.05	−0.06
District*2005/6 Elec. Cycle	(0.23)	(0.22)	(0.31)	(0.20)
Low 508 Recipient	0.36	−0.08	−0.06	−0.20
District*2007/8 Elec. Cycle	(0.32)	(0.24)	(0.42)	(0.33)
Low 508 Recipient	0.12	0.19	0.71**	−0.15
District*2009/10 Elec. Cycle	(0.84)	(0.25)	(0.30)	(0.32)
District Fixed Effects	X	X	X	X
Year Fixed Effects	X	X	X	X
N	850	817	844	800

Mean of Dependent Variable in 2003/2004 Election Cycle

High 508 Recipient Districts	952.56	34.72	289.24	6.49
Low 508 Recipient Districts	952.60	65.05	316.86	16.20
Control Districts	1124.17	64.87	439.47	23.56

Notes: $*p < 0.10$, $**p < 0.05$, $***p < 0.01$. We present estimates of Equation (3). Wild-bootstrapped standard errors are clustered around hospitals. Control districts include those that have hospitals that applied for a Section 508 waiver but were rejected and do not contain treated hospitals.

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Figure A.1: The Impact of Medicare Payment Increases on Hospitals' Inpatient Spending, Inpatient Admissions, and Case Mix Index (Logged Dependent Variables)
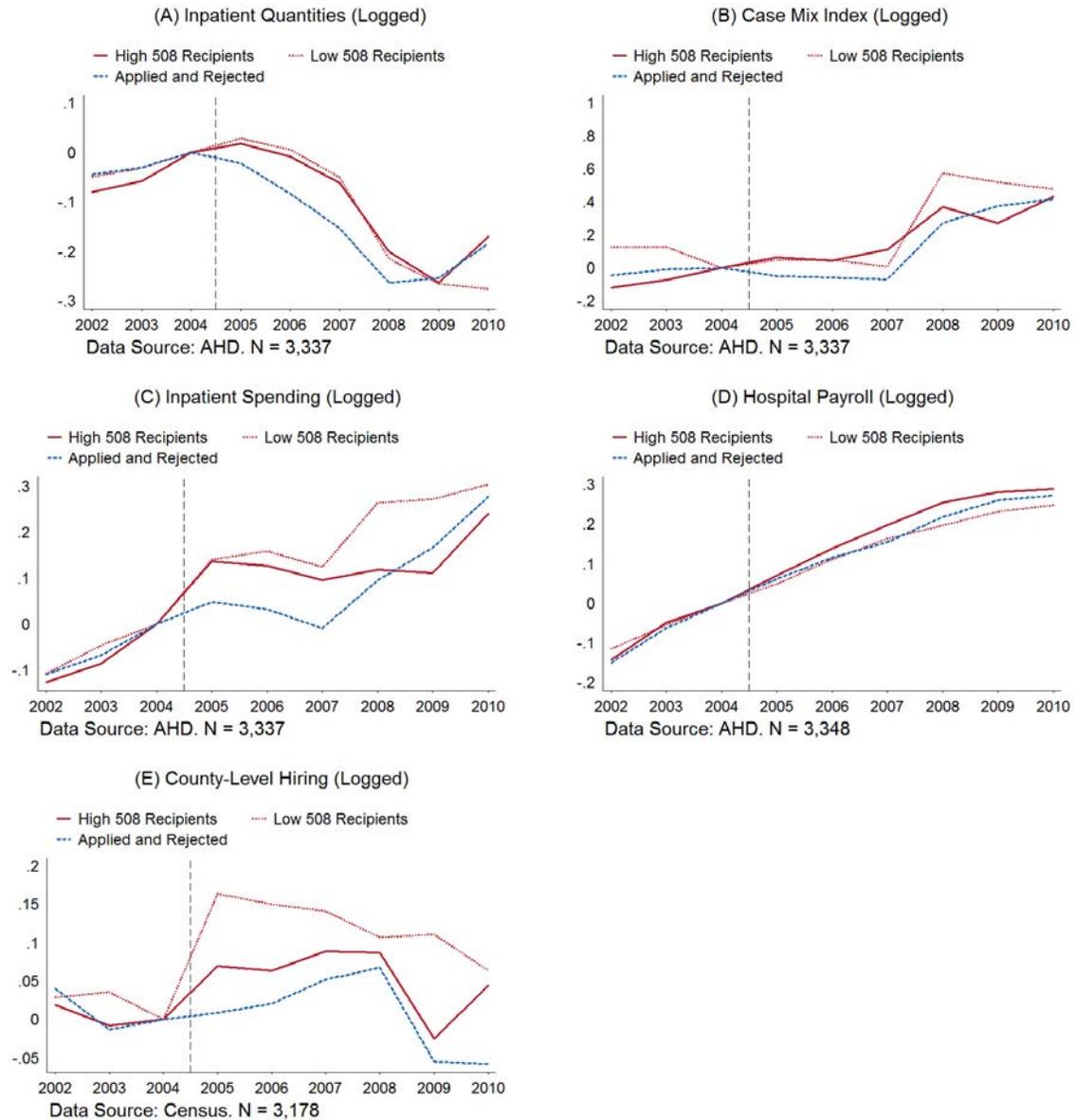
Notes: These figures are estimates of Equation (2). We regress hospital outcomes on a vector of hospital fixed effects, year dummies, and interactions between the high 508 hospital indicator and year dummies. Control hospitals include those that applied for a Section 508 waiver but were rejected. Full results from these regressions are presented in Appendix Table A.3.

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Figure A.2: The Impact of Medicare Payment Increases on Hospital Staffing
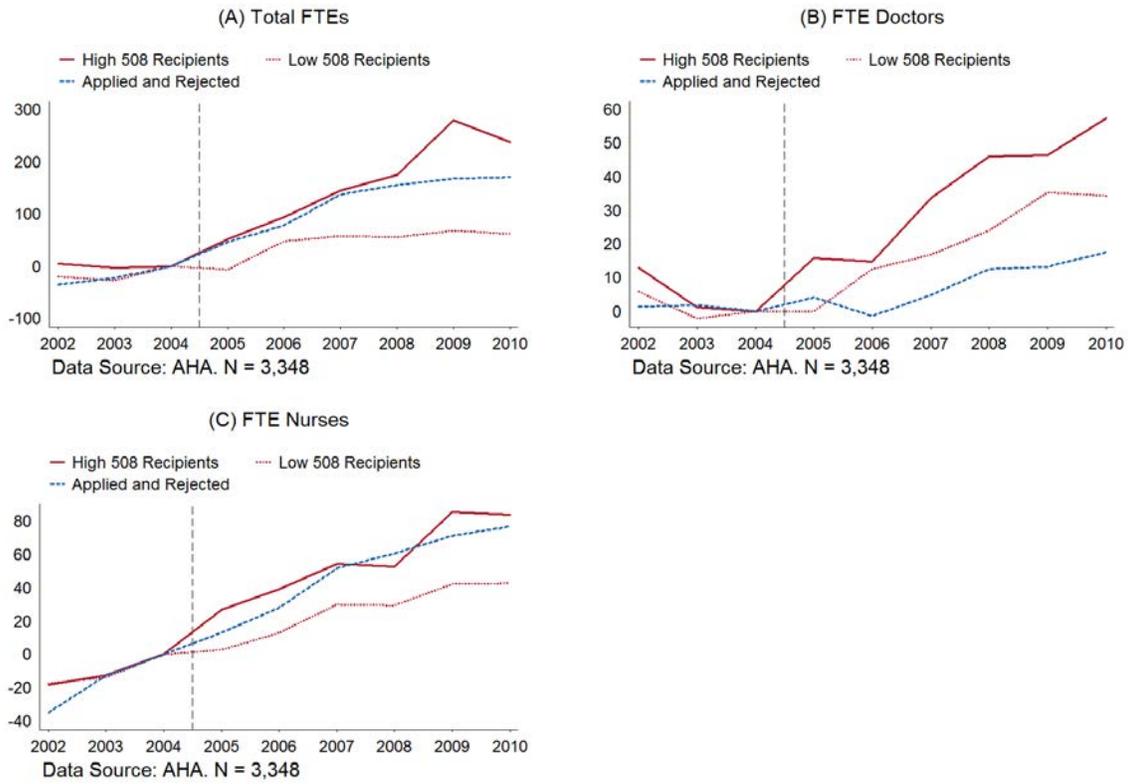
Notes: These figures are estimates of Equation (2). We regress hospital outcomes on a vector of hospital fixed effects, year dummies, and interactions between the high 508 hospital indicator and year dummies. The regression is normalized to 2004. Control hospitals include those that applied for a Section 508 waiver but were rejected.

Figure A.3: Annual Lobbying Dollars from Section 508 Coalition
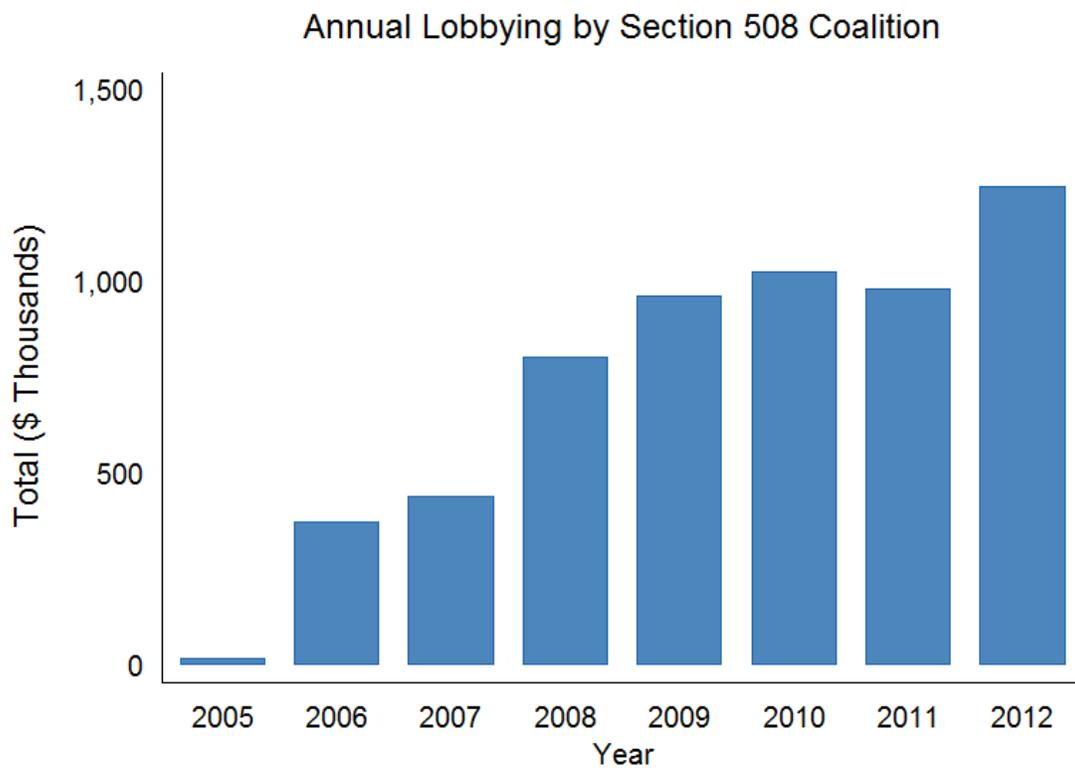
Notes: We plot the total amount of lobbying dollars spent by the Section 508 Coalition from 2005 to 2012. Data are from opensecrets.org.

Figure A.4: The Impact of 508 Receipt on Campaign Donations (Logged Dependent Variables)
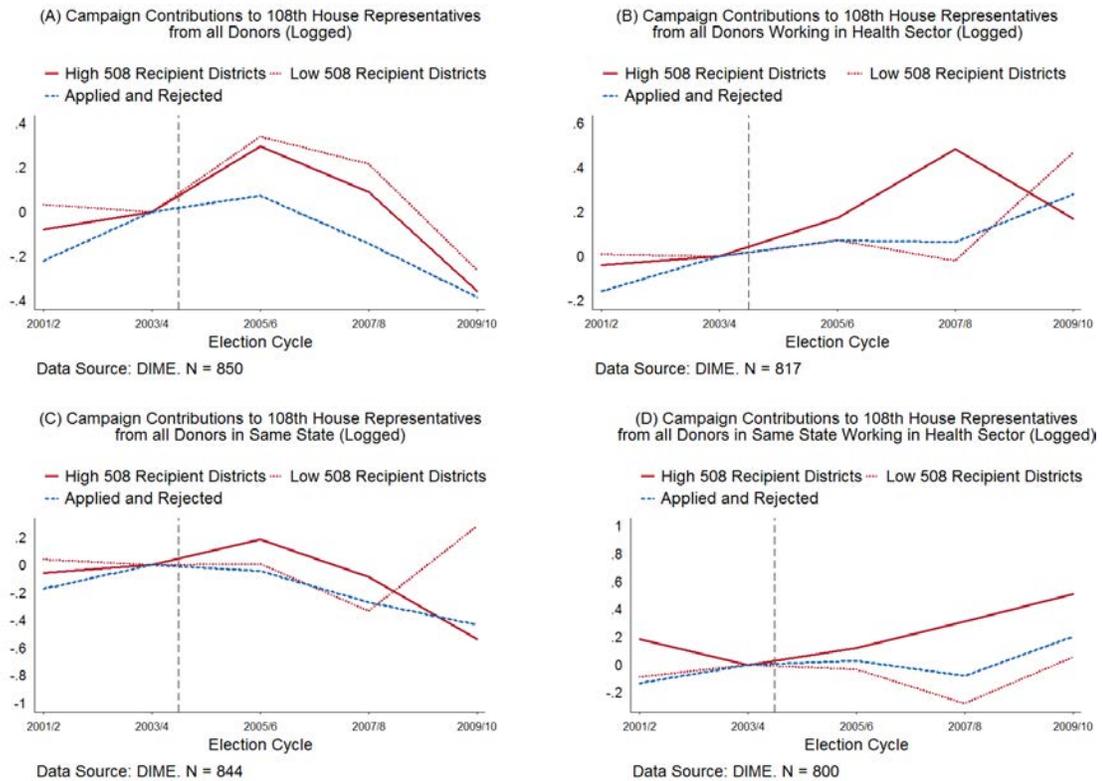
Notes: This figure presents estimates from Equation (3). We regress district campaign donations on a vector of election-year dummies, district fixed effects and interactions between districts with a high treatment hospital and year dummies, with wild-bootstrapped standard errors clustered around districts. Each observation is the sum of donations to the member of Congress representing the district where the hospital is located during a two-year election cycle. Control districts are those have hospitals that applied for a Section 508 waiver but were rejected and exclude treated districts.