Do Larger Health Insurance Subsidies Benefit Patients or Producers? Evidence from Medicare Advantage

Online Appendix

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A.1 Background on MA Capitation Payments

Medicare Advantage (MA) insurance plans are given monthly capitated payments for each enrolled Medicare beneficiary. These county-level payments are tied to historical Traditional Medicare (TM) costs in the county, although the exact formula determining payments varied over time.[1] Between the start of the MA program (formerly Medicare+Choice) in 1985 and the end of our study period, there were three distinct regimes determining capitation payments.

1. From 1985 to 1997, MA capitation payments were set at 95% of the Average Adjusted Per Capita Cost (AAPCC). The AAPCC was an actuarial estimate intended to match expected TM expenditures in the county. TM costs were adjusted for local demographic factors so that payments reflected local TM costs for the "national average beneficiary."

2. From 1998 to 2000, county payments were updated via a complex formula created by the Balanced Budget Act (BBA) of 1997. Specifically, plans were paid the maximum of (i) a blended rate, which was a weighted average of the county rate and the national rate, subject to a budget neutrality condition; (ii) a minimum payment floor implemented in the BBA and updated annually, and (iii) a 2% "minimum update" over the prior year's rate, applying in 1998 to the 1997 AAPCC rate. Because of a

[1] Pope et al. (2006) provides a detailed description of the payment regimes.

binding budget neutrality condition in 1998 and 1999, blended payments in practice applied only to year 2000.

3. From 2001 to 2003, county payments were set as the maximum of a 2% minimum update and a payment floor created by the Benefits Improvement and Protection Act (BIPA) of 2000. (For updating the 2001 rate only, there was an additional 1% increase mid-year.) Unlike the BBA 1997 floor, BIPA floors varied with each county's rural/urban status. The floors were indexed to medical expenditure growth via the national per capita Medicare+Choice growth percentage. For 2002 only, these Medicare+Choice growth percentage adjustments exceeded the 2% minimum update applied to the prior year's floors. For 2003, the 2% minimum update applied to the prior year's floors exceeded the floor levels determined by the Medicare+Choice growth percentage, and therefore the minimum update was the binding increase for floor counties.

After 1997, there was no explicit link between TM costs and MA payment updates. However, in practice, MA payments continued to be linked to historical TM costs since the rate that formed the basis to which all annual updates and floors were applied was the 1997 AAPCC.

The BBA payment floor referenced above was set at $387 in 1998. The floor impacted 1,098 mainly rural counties, most of which never had an MA plan during our time period. Among counties with an MA plan (which is the relevant sample for our analysis), the BBA floor impacted only 11.0% of counties and 3.2% of Medicare beneficiaries.

In addition to the formulas, the Balanced Budget Refinement Act (BBRA) of 1999 created a temporary system of bonuses (5% in the first year and 3% in the second) for plans entering "underserved" counties. Underserved counties were those in which an MA plan had not been offered since 1997 or from which, as of October 13, 1999 (the day prior to BBRA's introduction in Congress), all insurers had declared exit. Thus, plans reversing their exit decisions could receive the bonus. These payments did not directly affect capitation rates but rather provided temporary bonuses in addition to the capitation payments.

A.2 Detailed Timing of Response to BIPA

Congress passed BIPA in December of 2000. In a typical year, plan characteristics including premiums, cost sharing, and supplemental benefits would have been submitted to the Secretary of HHS for approval by the middle of the year preceding the relevant plan year. Therefore, plan characteristics for 2001 would have been fixed prior to BIPA's passage in December 2000.

However, following the passage of BIPA in December 2000, the regulator *required* plans to submit new premiums and benefits to HHS by January 18, 2001. Any changes became effective in February 2001. From *Green Book, 2004: Background Material and Data on Programs Within the Jurisdiction of the Committee on Ways and Means*: "Because BIPA was enacted after the July deadline, there was a special timeline for 2001... Any M+C organization that would receive higher capitation payments as a result of BIPA was required to submit revised ACR information by January 18, 2001."

The annual data used in our main analysis are based on mid-year (July) premiums, and so it is this July-to-July change we measure in Figure 4, which shows a premium response in 2001. To demonstrate that the detailed timing of effects we measure is consistent with the policy, in Appendix Figure A7 we display a monthly sequence of our coefficient estimates on premiums. Monthly data are not available for all plan years that comprise our main analysis. Nonetheless, for 2000 to 2001, these data show a sharp drop in premiums in February 2001, consistent with plans responding in premium-setting at the first opportunity.[2] In contrast to the 2001 premium effects, the annual benefits data show no response in plan design until the 2002 plan year, suggesting that compressing a benefits redesign process from the typical months-long process into the few weeks following BIPA's passage in December 2000 wasn't feasible for most plans.

A.3 Robustness of Premium Pass-Through Estimates

A.3.1 Robustness Analysis: Tobit Estimation

In Section III, we showed that the premium pass-through results are robust to specifications that isolate different subsets of the identifying variation and to specifications that examine effects on other moments of the premium distribution (median, minimum, maximum). In this section, we show that the premium pass-through results are robust to estimating Tobit specifications that explicitly account for the fact that plans could not give rebates (charge negative MA premiums to be credited to beneficiaries' Part B premiums) during our sample period.

Unlike the baseline specifications, which are estimated on data aggregated to the county $\times$ year level, the Tobit specifications are estimated on disaggregated plan-level data. Estimating a Tobit model on county-level means would be inappropriate because a county $\times$ year with at least one plan with a non-zero premium would have a non-zero mean and therefore seem unconstrained even if there were constrained plans in the county.

Table A6 shows the effect on premiums of dollar increase in payments using the plan-level data. Columns 1 to 3 show estimates from OLS specifications and columns 4 to 6 show estimates from the corresponding Tobit specifications. The OLS estimates are virtually identical to the baseline estimates (shown in column 1 to 3 of Table 4), and the Tobit estimates are only slightly larger. For example, the point estimate in column 4 indicates that three years after the reform, pass-through in a counterfactual setting where plans could offer rebates would have been 58 cents on the dollar. This is close to the OLS pass-through estimate of 45 cents on the dollar, and it is nearly equal to the combined pass-through point estimate of 54 cents on the dollar, which includes 9 cents in more generous benefits. In the counterfactual setting where premiums were not constrained, it could be the case that plans would have not adjusted plan generosity in response to the payment changes. Thus, these results suggest that the combined pass-through rate in this hypothetical unconstrained setting would lie between our combined pass-through

[2] The monthly coefficients plotted in Figure A7 match the estimates in the main analysis when the annual sample is restricted to the same time period.

estimate of 58 cents on the dollar and 67 cents on the dollar (the Tobit point estimate plus the change in benefit generosity we estimate).

The fact that the Tobit estimates are very similar to the non-Tobit estimates reveals that the non-negative premium constraint does not have a big impact on the results. To gain further intuition for why this is the case, Table A7 displays mean premiums by year for three subsets of counties: counties with no BIPA-induced payment change, counties with a payment increase of $1-$50 , and counties with a payment increase of greater than or equal to $51. There are two things to notice in the raw data. First, premiums are rapidly increasing over time. This means that our difference-in-differences analysis identifies the extent to which premiums *increased less* among counties marginal to the payment floors relative to other counties, rather than the extent to which premiums declined in absolute terms in these counties. Second, premiums are substantially higher in the markets that experienced the largest payment increases. Both of these facts imply that premiums for the "treated" counties in the "post" period are much larger than the mean premium in the pooled sample. For plans in counties with large payment increases, the mean premiums of $35 to $50 in the post period implies there is ample "room" for firms to pass-though additional premium cuts if they had chosen to do so. Thus, it is not surprising that the Tobit estimates are very similar to the non-Tobit estimates of premium pass-through.

A.3.2 Robustness Analysis: Including Additional Controls

Next, we investigate the robustness of our analysis to the inclusion of more controls. Specifically, we repeat our baseline pass-through estimation including contemporaneous per-capita TM costs as a control variable. The results are reported in Appendix Table A8. One can see that the addition of TM costs as a control has no meaningful impact on the pass-through estimate of interest. The fact that this addition does not matter is not surprising for a few reasons. First, in our analysis of selection, we find that the identifying variation is uncorrelated with contemporaneous TM costs when we look at contemporaneous TM costs as the outcome variable (see Figure 9 and Table 7 in the main text). Second, TM costs are quite persistent and all the cross-sectional variation in these costs is already soaked up by the county fixed effects included in all the specifications.

A.4 Within-Insurer Variation in Plan Characteristics

Table A9 describes the within-insurer variation in premiums and benefits across geography for the largest five insurers in the MA market in the year 2000. There is substantial within-insurer variation in premiums and copayments for specialists and physicians, and there is a moderate amount of within-insurer variation in the propensity to provide drug, dental, vision, and hearing aid coverage. Overall, the table indicates that it is common for insurers to vary premiums and benefits across geography in a given year.

A.5 Plan Benefits: Alternative Specifications

Section III describes the effect of BIPA on the generosity of plan benefits. Table 5 and Figure 5 display the results with only the baseline set of controls. Table A2 shows that these

results are robust to including controls that isolate different subsets of the identifying variation. Odd columns in the table control for quartiles of the year 2000 base payment interacted with year fixed effects. Even columns control for urban status of the county interacted with year fixed effects.

A.6 Plan Benefits: Risk Smoothing

In Section III, we showed that a $1 increase in payments raised the actuarial value of benefits by 8.7 cents. However, unlike pass-through into premiums, the change in plan generosity might vary across states of the world. In particular, if the actuarial value of the increase in benefits is larger in high OOP spending states of the world (where the marginal utility of consumption is higher) than in low OOP spending states of the world (where the marginal utility of consumption is lower), then the pass-through into benefits might have additional consumption-smoothing value to consumers which is not captured by the baseline actuarial value estimate. To quantify the potential importance of an additional consumption-smoothing value from the increase in plan generosity, we re-estimate the pass-through into plan benefits separately for individuals with different levels of out-of-pocket spending and re-weighting the plan benefits pass-through estimates by the marginal utility of consumption across these states of the world.

As discussed in Section III, we construct our measure of actuarial value using utilization data (e.g., number of office visits) on the elderly in the 2000 Medical Expenditure Panel Survey (MEPS). To allow the actuarial value to vary by the size of out-of-pocket (OOP) health shocks, we construct utilization measures for each quintile of the OOP spending distribution (e.g., number of office visits in the bottom quintile, second quintile, and so forth of overall OOP spending). We then re-estimate our actuarial value regression using these different utilization measures. In the following, Figure A10 shows plots of the effect by quintile; Table A10 shows the parameter estimates. At a three-year horizon, the effect on actuarial value ranges from 2.0 cents for the bottom quintile of realized utilization to 18.1 cents for the top. The increasing actuarial values indicate that individuals with higher out-of-pocket spending benefit more from, for example, a reduced copay or drug coverage.

The increasing actuarial values imply that the benefits expansion transfers resources from low OOP spending states of the world (where the marginal utility of consumption is lower) to high OOP spending states of the world (where the marginal utility of consumption is higher). This is valuable to risk averse individuals. If we assume that individuals have CRRA preferences, then the marginal utility of a benefits expansion at a given OOP spending quintile relative to that of receiving benefits expansion when you have average OOP spending is given by:

$$\text{Relative marginal utility of consumption} = \frac{\left(c - OOP_j\right)^{-\gamma}}{\left(c - \overline{OOP}\right)^{-\gamma}},$$

where c is consumption, OOP_j is out-of-pocket spending in quintile j, and $\overline{OOP}$ is average OOP spending.

Column 4 of Table A11 displays the relative marginal utility for each OOP spending quintile. We assume that the coefficient of relative risk aversion is $\gamma = 3$ and individuals have consumption of $26,533, the mean consumption for elderly individuals in the 2000 Consumer Expenditure Survey. For individuals in the lowest out-of-pocket spending quintile, the marginal utility of consumption is about 11% less than for those with average out-of-pocket spending; for individuals in the highest quintile, the marginal utility of consumption is 30% more than for those with average out-of-pocket spending.

Given these parameters, we can account for risk aversion by calculating the weighted average of the actuarial value estimates across quintiles, where the weights are the relative marginal utilities of consumption. Re-weighting in this manner increases the actuarial value by just over 1 cent on the dollar, from 8.7 cents to 9.8 cents. While a one cent increase is a meaningful relative to the baseline effect on the actuarial value of pass-through in benefits of 8.7 cents, this increase is small compared to baseline total pass-through in premiums and plan benefits of 54 cents.

These effects are small because given the observed OOP sending dispersion and plausible assumptions about risk aversion, the marginal utility of money varies relatively little in the range of OOP spending we observe. Generating a meaningful increase in the value of plan benefits pass-through would require an implausibly high level of risk aversion. For instance, increasing the value by 4.5 cents (or 50% of the baseline actuarial value estimate) would require a risk aversion coefficient of 10, which is well above the range of estimates in the literature.

Thus, while in principle changes to MA benefits among existing plans (or changes introduced by plan entry) could generate different value for consumers as a function of their risk aversion, in practice accounting for the marginal utility of consumption across states of the world does not importantly impact the interpretation of our pass-through effects. This is because all plans tend to offer similar protection for large financial risks, and variation in benefits occurs primarily along the margin of relatively low-cost, high probability of use items like physician copays.

A.7 Plan Quality

In Section III, we argue that focusing on premiums and benefits such as copays, drug, and dental coverage captures most of the quantitatively important changes in plan characteristics. In this section, we show that other observable measures of plan quality are not related to our identifying variation.

We begin by examining three measures of plan quality that were potentially the most salient because they were reported in the *Medicare & You* booklet that was mailed to Medicare eligibles on an annual basis during our time period (Dafny and Dranove, 2008). These are the percentage of enrollees that rate the quality of care received as a 10 out of 10, the percentage of enrollees who reported that the doctors in their plan always communicate well, and the mean mammography rate among eligible female enrollees. The first two measures are taken from an annual independent survey of Medicare beneficiaries known as the Consumer Assessment of Health Plans Survey (CAHPS). The third measure is taken from the Health Plan Employer Data and Information Set (HEDIS), which collects standardized performance measures that plans are required to report to CMS.

Following Dafny and Dranove (2008), we also create an "unreported quality composite" to capture plan quality not reported to Medicare beneficiaries. Specifically, this composite is the average z-score of three additional HEDIS measures collected by CMS but not reported to beneficiaries: the percentage of diabetic enrollees who had a retinal examination in the past year, the percentage of enrollees receiving a beta blocker prescription upon discharge from the hospital after a heart attack, and the percentage of enrollees who had an ambulatory visit or preventive care visit in the past year.

We are able to construct these plan quality measures for the years 1999 to 2003, with the exception of the mean mammography rate for which we have data going back to 1997. We repeat our main specification replacing the dependent variable with these measures of plan quality. The results are reported in Table A12 and Figure A11. For each of these measures of plan quality, we find there is no relationship with our identifying variation.

A.8 Baseline Estimation: Alternative Sample Definition

Our baseline estimates described in the text use the unbalanced sample of county-years with MA plans, including county fixed effects in all of our specifications. Figure 7, described in Section III, illustrates that there is little evidence of systematic entry or exit from the sample based on our identifying variation. Still, as a robustness check, we repeat our analysis using the balanced sample of counties that have an MA plan in every year in our sample, 1997-2003. The balanced panel has 343 counties per year. Of the counties with MA at some point during our time period, 61% are in the balanced panel. The balanced panel covers 54% of Medicare beneficiaries and 89% of MA enrollees over the pooled sample period. The results of baseline regressions repeated on the balanced panel can be found in Figures A12, A13, A14, A15, A16, A17 and Tables A13, A14, A15, A16 and A17.

A.9 Selection: Alternative Specifications

Section V investigates the role of selection in explaining our incomplete pass-through estimates. Table 7 and Figure 9 display the results with the baseline set of controls. Table A3 shows that these results are robust to including controls that isolate different subsets of the identifying variation. Columns 2, 5, and 8 in the table control for quartiles of the year 2000 base payment interacted with year fixed effects. Columns 3, 6, and 9 control for urban status of the county interacted with year fixed effects. Columns 1, 4, and 7 display the baseline specifications for comparison.

In addition to investigating the impact of alternative controls, we also investigate robustness with respect to alternative measures of utilization. Figure A18 displays the difference-in-differences results for three alternative utilization measures: Part A hospital stays, Part A hospital days, and Part B physician line-item claims. The corresponding estimates are displayed in Table A18. The point estimates confirm the main finding that there is little selection, and the standard errors allow us to rule out meaningful degrees of selection in either direction. The effect of BIPA on Part A days and Part B line-item claims is statistically indistinguishable from zero in each year. The point estimate for Part A stays is statistically indistinguishable from zero in 2001 and statistically distinguishable from zero

in 2002 and 2003; however, in all years, the magnitude is economically very small. For example, drawing on the estimates in columns 1, 4, and 7 of Table A18, the semi-elasticities of utilization with respect to MA enrollment for 2003 were 0.39 ($= \frac{0.0006}{0.0321}/4.74\%$) for Part A stays, 0.28 ($= \frac{0.003}{0.2249}/4.74\%$) for Part A days, and 0.21 ($= \frac{0.022}{2.187}/4.74\%$) for Part B claims. Overall, these elasticities are similar to the elasticity implied by our cost estimates discussed in the text.

A.10 Pass-Through Under Risk Adjustment

Equation 7 in Section IV gives the first-order condition for price setting, ignoring risk adjustment. To incorporate risk adjustment, let us define the aggregate risk adjustment function $R(Q) = \int_{v_i \geq p^{-1}(Q)} r_i$, average risk adjustment $AR(Q) \equiv \frac{R(Q)}{Q}$, and marginal risk adjustment $MR(Q) \equiv R'(Q)$. The regulator sets the subsidy equal to $b \cdot AR(Q)$ so that total payments per capita are $p + b \cdot AR(Q)$. This generates the following monopolist problem:

$$\max_p \Big[p + b \cdot AR(Q(p))\Big] Q(p) - C(Q(p)), \tag{14}$$

$$\max_p \; pQ(p) + b \cdot R(Q(p)) - C(Q(p)), \tag{15}$$

where we have substituted $AR(Q(p)) \cdot Q(p) = R(Q(p))$ between the first and second lines.

The competitive pricing problem simply equates price with average net costs $(AC(Q) - b \cdot AR(Q))$. As in the main text, we use the parameter $\theta \in [0, 1]$ to interpolate between the price-setting equations for perfect competition and monopoly, yielding

$$p = \theta\Big[\mu(p) + MC(Q) - b \cdot MR(Q)\Big] + (1 - \theta)\Big[AC(Q) - b \cdot AR(Q)\Big], \tag{16}$$

where $\mu(p) \equiv -\dfrac{Q(p)}{Q'(p)}$ denotes the standard absolute markup term and $MC(Q) - b \cdot MR(Q)$ is marginal costs net of marginal risk adjustment. Totally differentiating and rearranging Equation 16 results in the pass-through formula in Equation 10.

A.11 Pass-through in Linear Model

Suppose costs are linear, risk adjustment curves are linear, and demand is linear. In this case, our main expression for pass-through in Equation 10 simplifies to

$$\rho = (AR + \theta(MR - AR)) \times \left(\frac{1}{1 - (\frac{dAC}{dp} - b\frac{dAR}{dp})}\right) \times \frac{1}{1 + \theta}. \tag{17}$$

Putting aside the first term, which simply accounts for risk adjustment, the remaining

two terms capture the main mechanisms that determine pass-through: the second term captures the degree of selection and the third term captures the degree of market power. Thus, in the linear case, we can think about the the degree of advantageous selection proportionally scaling down the predicted pass-through for any given level of market power.

A.12 Inferring MA Costs

In Section V, we claim that the slopes of MA and TM average cost curves are of opposite sign and proportional $\left(\frac{dAC^{MA}}{dQ^{MA}} = -\phi\frac{dAC^{TM}}{dQ^{TM}}\right)$ under the assumptions that (i) MA and TM costs are proportionally constant $\left(\frac{c_i^{MA}}{c_i^{TM}} = \phi\right)$ and (ii) average costs under both plans are linear in quantity.

The proof is as follows. The assumption that costs are proportional implies that the marginal individual in MA and TM are proportionally costly: $MC^{MA}(Q^{MA}) = \phi MC^{TM}(Q^{TM})$. This implies $\frac{dMC^{MA}}{dQ^{MA}} = \phi\frac{dMC^{TM}}{dQ^{TM}}\frac{dQ^{TM}}{dQ^{MA}} = -\phi\frac{dMC^{TM}}{dQ^{TM}}$, with the last equality from the fact that $Q^{TM} = 1 - Q^{MA}$. Linearity means we can translate between the slopes of the average and marginal cost functions to get $\frac{dAC^i}{dQ^i} = \frac{1}{2}\frac{dMC^i}{dQ^i}$ for $i \in \{MA, TM\}$. Combining this, we get $\frac{dAC^{MA}}{dQ^{MA}} = -\phi\frac{dAC^{TM}}{dQ^{TM}}$.

A.13 Pass-Through by Market Concentration: Alternative Specifications

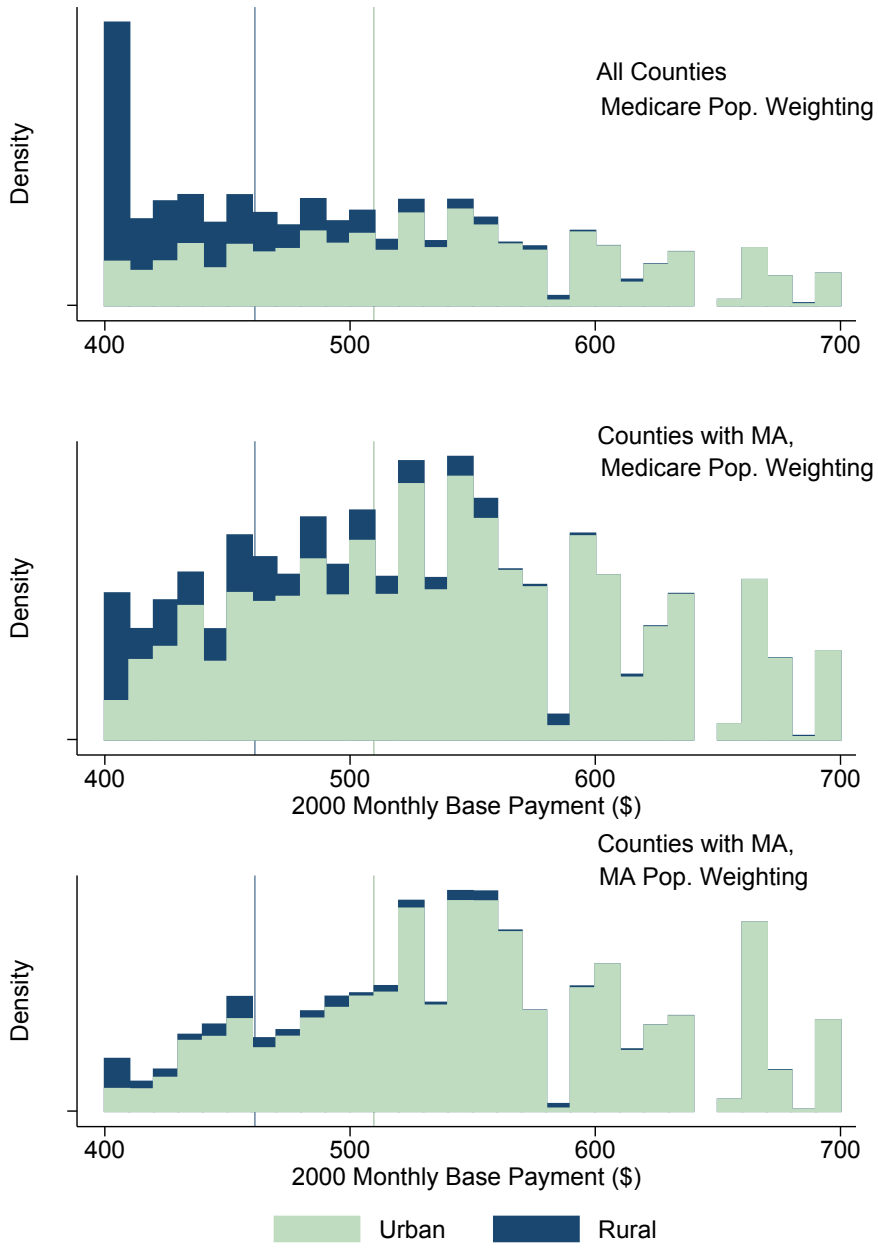
Figure 10 in the main text displays heterogeneity in our pass-through estimates by pre-reform market concentration for 2003 only. Figure A9 repeats the same analysis for all of the post-reform years. The figure displays the pass-through point estimates as well as the 95% confidence intervals. Each point represents a separate regression performed over sub-samples defined by levels of pre-reform market concentration. Table A5 displays the corresponding regression results as well as results for full-sample regressions that interact the market concentration measures with our floor distance variables (Δb_{jt}). Overall, the coefficients show a statistically significant pattern of declining pass-through with market concentration.

References

Dafny, Leemore, and David Dranove. 2008. "Do report cards tell consumers anything they don't already know? The case of Medicare HMOs." *The RAND Journal of Economics*, 39(3): 790–821.

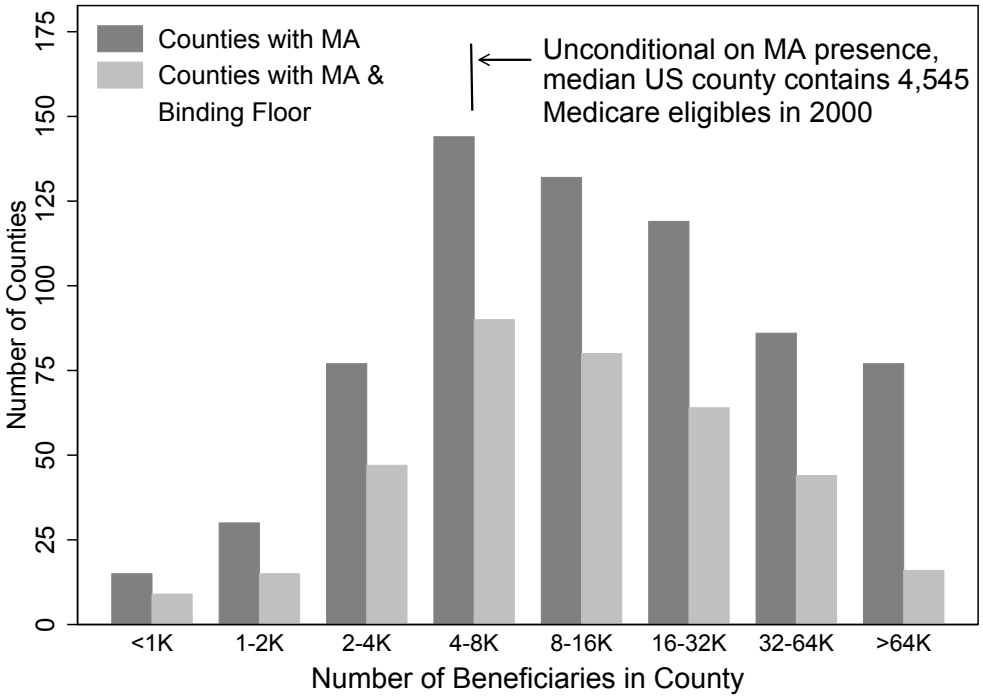
Pope, Gregory C., Leslie M. Greenwald, Deborah A. Healy, John Kautter, Eric Olmsted, and Nathan West. 2006. "Impact of Increased Financial Incentives to Medicare Advantage Plans." RTI International.

Figure A1: Payment Floors and County-Level Base Payments



Note: Figure plots histograms of the base payments in 2000, stacking rural and urban counties. Floor cutoffs at $475 (rural) and $525 (urban) are indicated with vertical lines. The top panel includes all counties and weights counties by county Medicare population. The middle panel includes only counties with an MA plan in at least one year of the 1997-2003 study period and weights counties by county Medicare population. The bottom panel includes only counties with an MA plan in 2000 and weights counties by county MA enrollment in 2000. All values are denominated in dollars per beneficiary per month. Base payments in this figure are not adjusted for inflation and are not normalized for the sample average demographic risk adjustment factor. See Figure 1 notes for additional information.

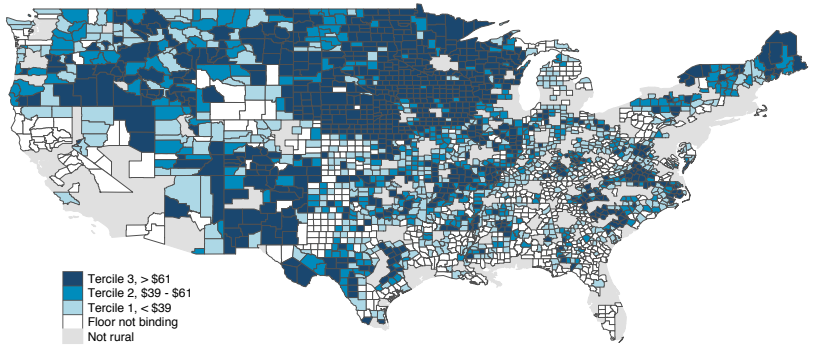
Figure A2: Distribution of Medicare Beneficiaries Across Counties



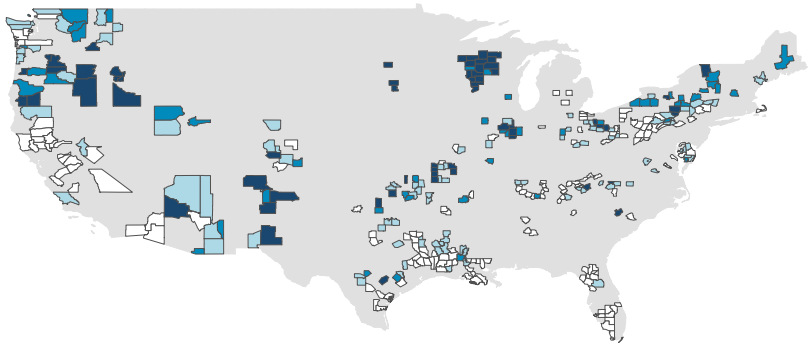
Note: Figure shows the distribution of the number of beneficiaries for counties with MA, and those additionally with binding BIPA floors. The sample is the 680 counties that include 67% of the Medicare population in 2000.

Figure A3: Effect of BIPA on County Base Payments

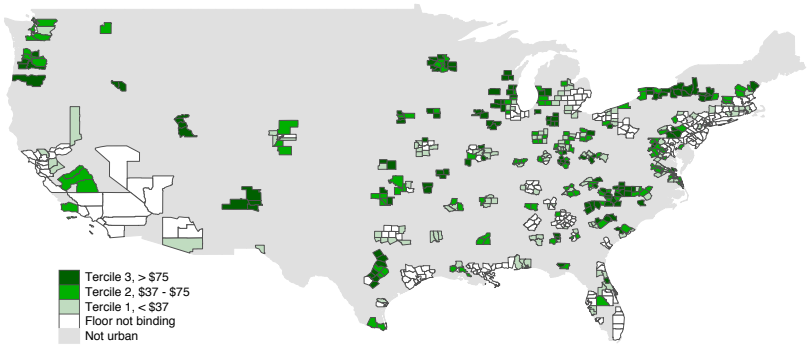
(A) Floor Distance, All Rural Counties



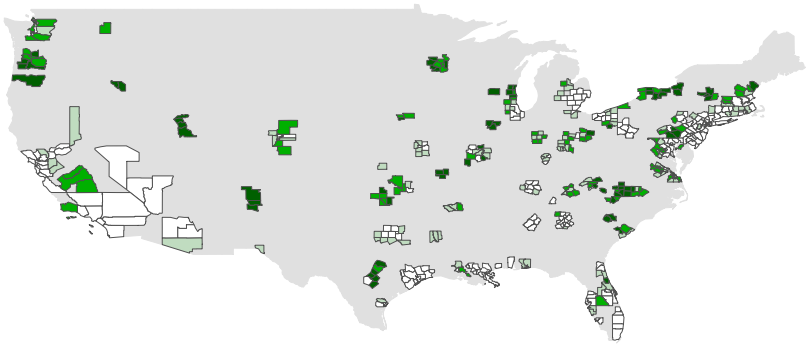
(B) Floor Distance, Rural Counties with MA



(C) Floor Distance, All Urban Counties

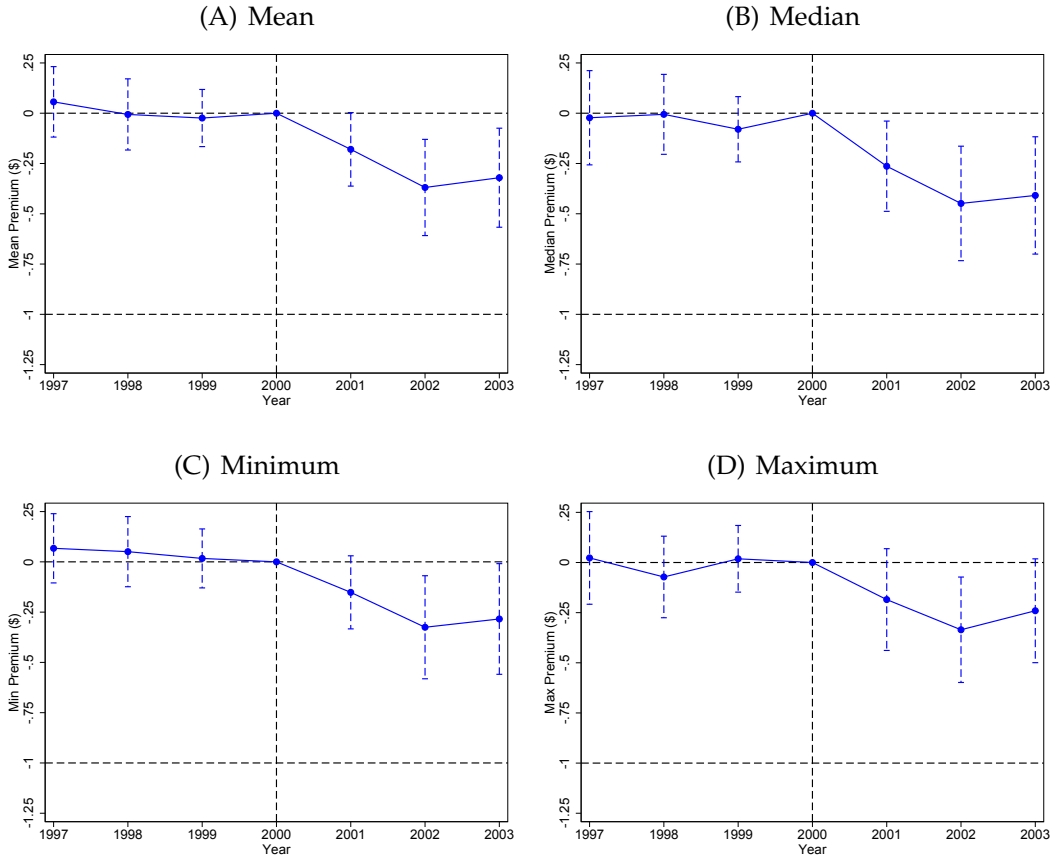


(D) Floor Distance, Urban Counties with MA



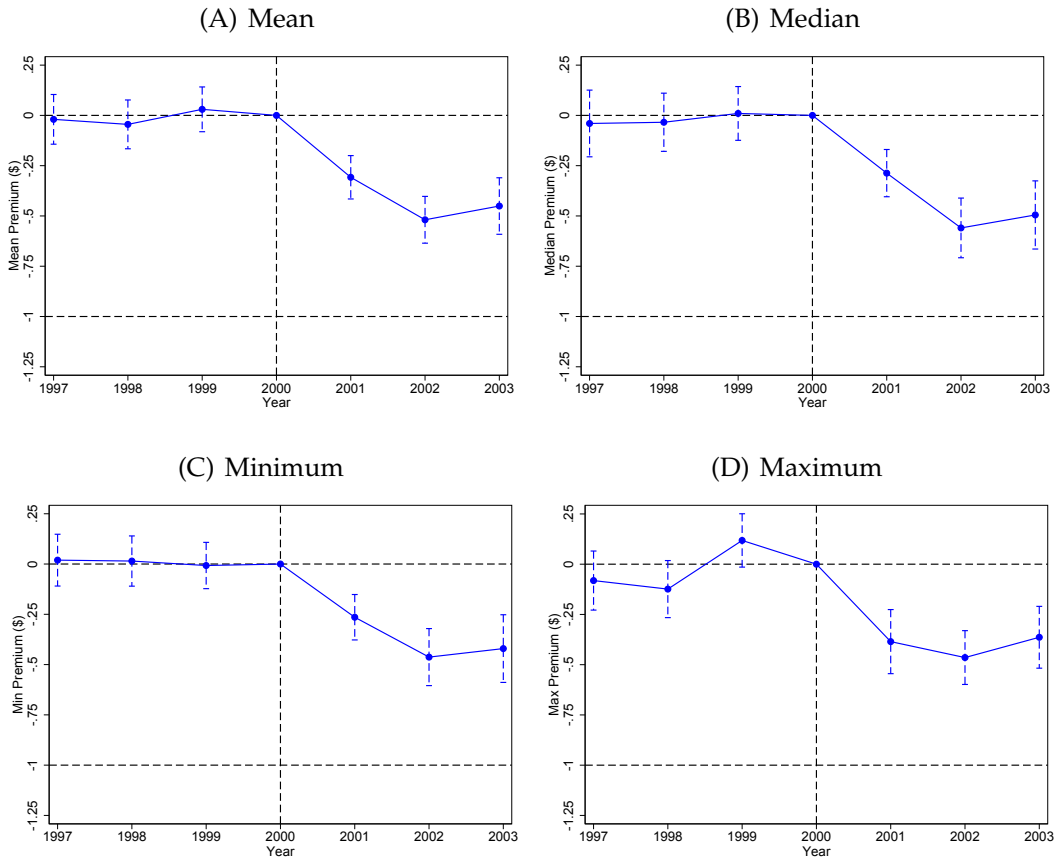
Note: Map shows the geography of the identifying variation across urban and rural counties. Counties are binned according to their tercile of distance-to-floor, separately for rural counties (Panels A and B) and urban counties (Panels C and D). Panels B and D condition on our main analysis sample, which includes counties with an MA plan in at least one year of the 1997-2003 study period. Legends indicate the bin ranges, and counties for which the floors were not binding are shaded white. The distance-to-floor variable, which describes the payment shock between 2000 and 2001, is defined precisely in Equation (2) and is graphically illustrated in the top panel of Figure 1. Base payments in this figure are not adjusted for inflation and are not normalized for the sample average demographic risk adjustment factor. Alaska and Hawaii are excluded from these maps but included in all of the other analysis. Inclusive of AK and HI, the sample in the left two panels is 3,143 counties that include 100% of the Medicare population in 2000. The sample in the right two panels is 880 counties that include 73% of the Medicare population in 2000.

Figure A4: Premium Pass-Through with Pre-BIPA Payment × Year Fixed Effects



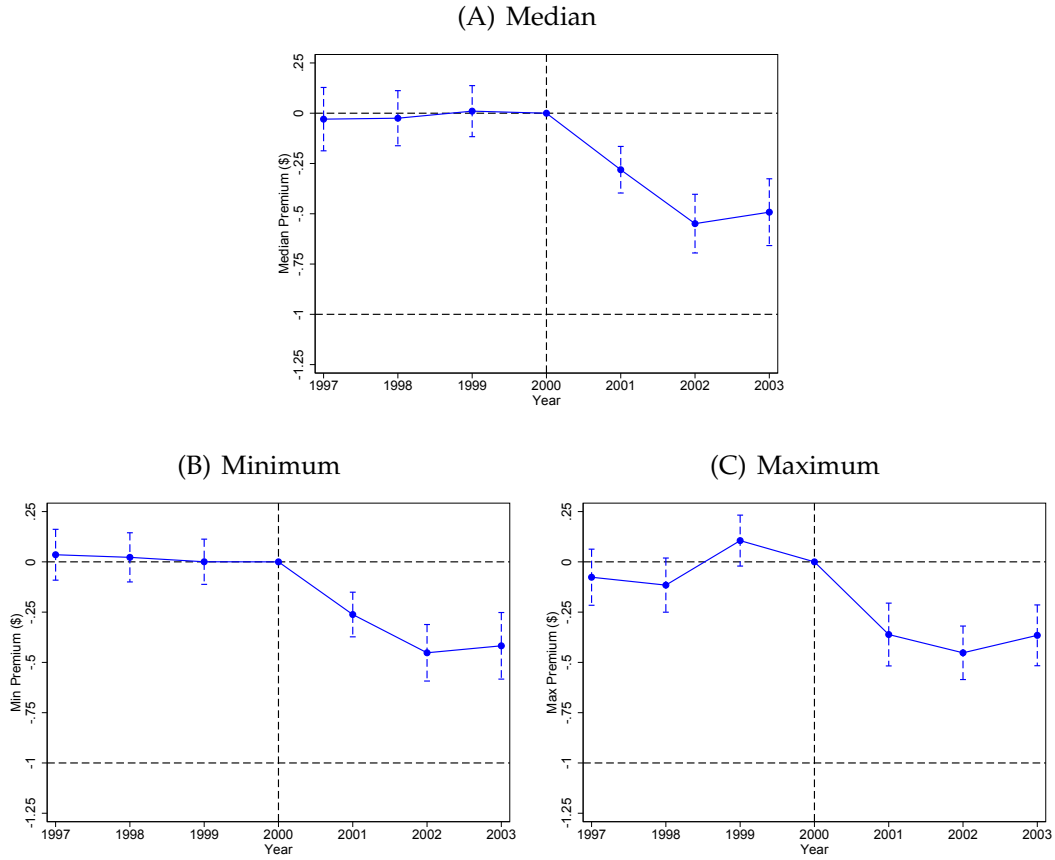
Note: Figure is identical to Figure 4 with two exceptions. First, we show specifications where dependent variables are mean monthly premiums (Panel A), median monthly premiums (Panel B), minimum monthly premiums (Panel C), and maximum monthly premiums (panel D). Second, all specifications include quartiles of year 2000 county base payments interacted with year indicators as additional controls. See Figure 4 note for more details.

Figure A5: Premium Pass-Through with Urban × Year Fixed Effects



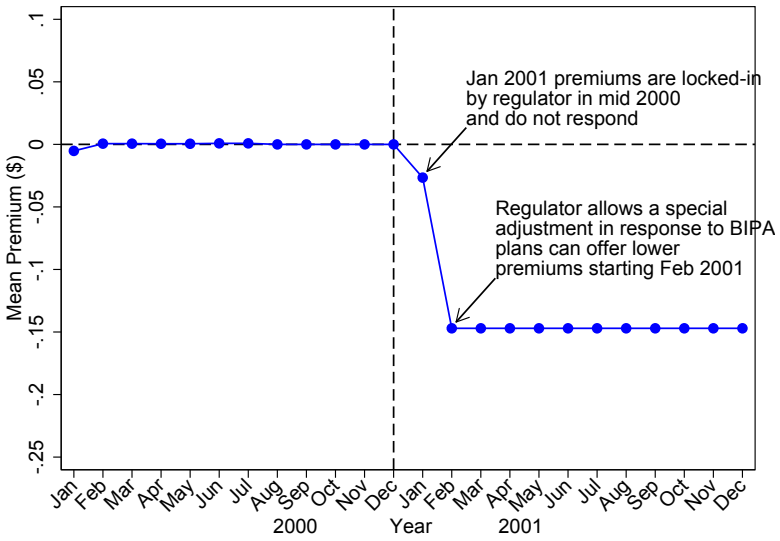
Note: Figure is identical to Figure 4 with two exceptions. First, we show specifications where dependent variables are mean monthly premiums (Panel A), median monthly premiums (Panel B), minimum monthly premiums (Panel C), and maximum monthly premiums (panel D). Second, all specifications include urban status interacted with year indicators as additional controls. See Figure 4 note for more details.

Figure A6: Premium Pass-Through (Other Measures): Impact of $1 Increase in Monthly Payments



Note: Figure shows coefficients on distance-to-floor × year interactions from difference-in-differences regressions. The first-stage results displayed in Table 3 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. The dependent variables are median monthly premiums (Panel A), minimum monthly premiums (Panel B), and maximum monthly premiums (panel C). The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. The sample is the unbalanced panel of county-years with at least one MA plan over years 1997 to 2003. This sample includes 4,262 of 22,001 possible county-years and 64% of all Medicare beneficiary-years. Controls are identical to those in Figure 3. The capped vertical bars show 95% confidence intervals calculated using standard errors clustered at the county level. Horizontal dashed lines are plotted at the reference values of 0 and -1, where -1 corresponds to 100% pass-through.

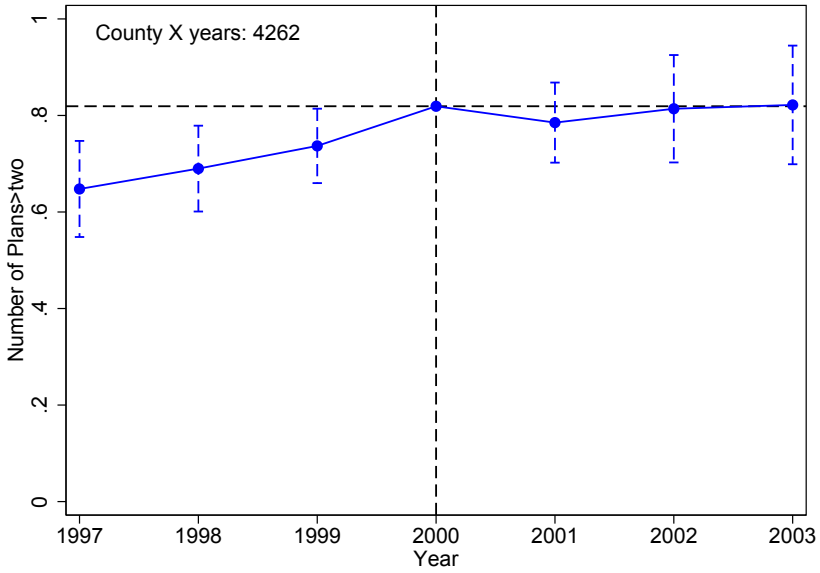
Figure A7: Premium Pass-Through: Detailed Timing of Effects



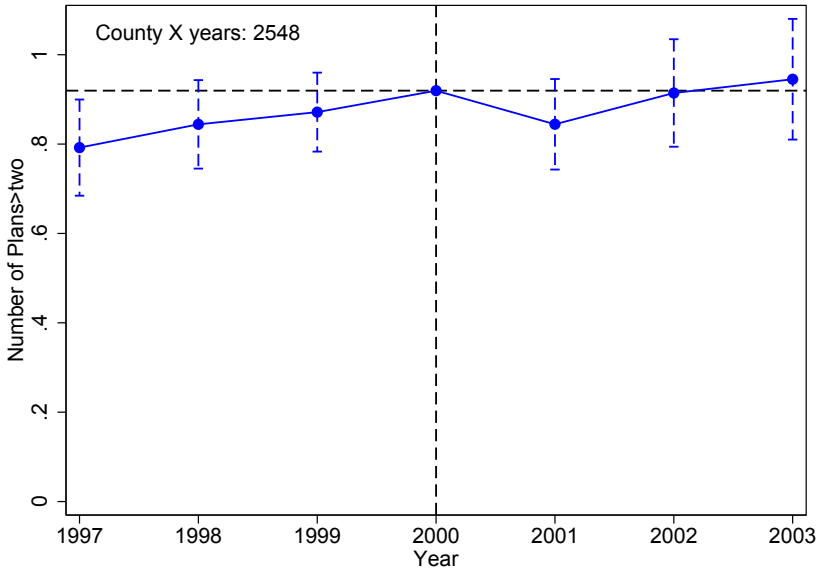
Note: Figure shows coefficients on distance-to-floor × month interactions from difference-in-differences regressions in which the dependent variable is mean premiums. The specification parallels that used in the county × year level analysis in Figure 4. The figure highlights January 2001, for which premiums were locked-in prior to the passage of BIPA in December 2000, and February 2001, for which the regulator permitted plans to revise premiums in response to BIPA. See Appendix Section A.2 for full details. The unit of observation is the county × month, and observations are weighted by the number of beneficiaries in the county. Monthly data are not available for all plan years that comprise our main analysis.

Figure A8: Availability of At Least Two Plans: Impact of $50 Increase in Monthly Payments

(A) Unbalanced Sample



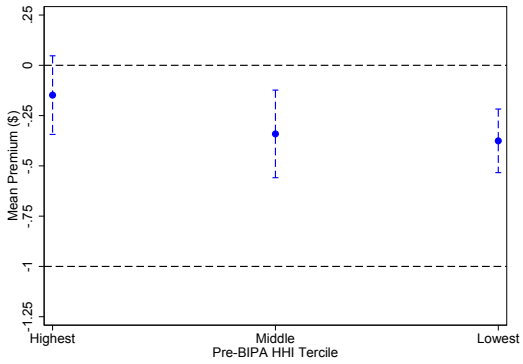
(B) Balanced Sample



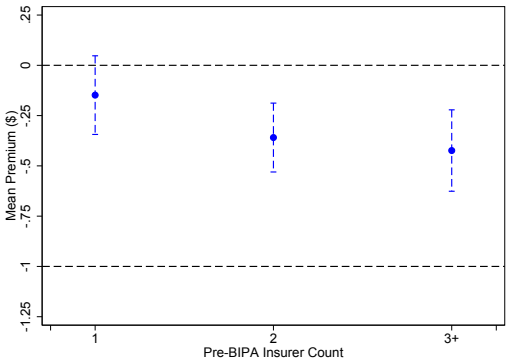
Note: Figure shows scaled coefficients on distance-to-floor × year interactions from difference-in-differences regressions. The first-stage results displayed in Table 3 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. Coefficients are scaled to reflect the impact of a $50 increase in monthly payments. The dependent variable in both panels is an indicator for at least two MA plans. The sample in Panel A is the unbalanced panel of county-years with at least one MA plan over years 1997 to 2003. This sample includes 4,262 of 22,001 possible county-years and 64% of all Medicare beneficiary-years. The sample in Panel B is the balanced panel of county-years with at least one MA plan in each year between 1997 and 2003. This sample includes 2,548 of 22,001 possible county-years and 54% of all Medicare beneficiaries. Controls are identical to those in Figure 3. The capped vertical bars show 95% confidence intervals calculated using standard errors clustered at the county level. The horizontal dashed lines are plotted at the sample means, which are added to the coefficients.

Figure A9: Pass-Through and Market Concentration, 2001 to 2003

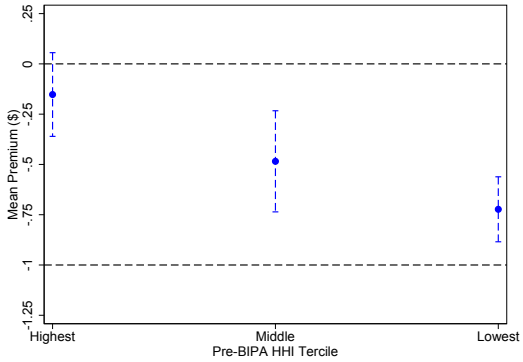
(A) By HHI, 2001



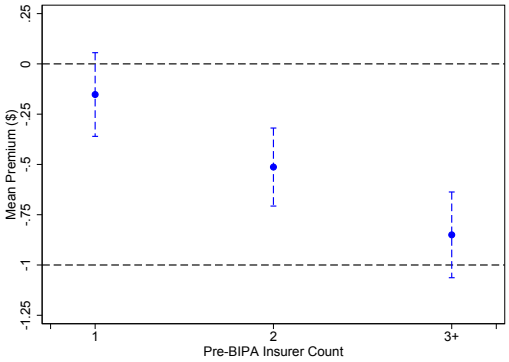
(B) By Insurer Count, 2001



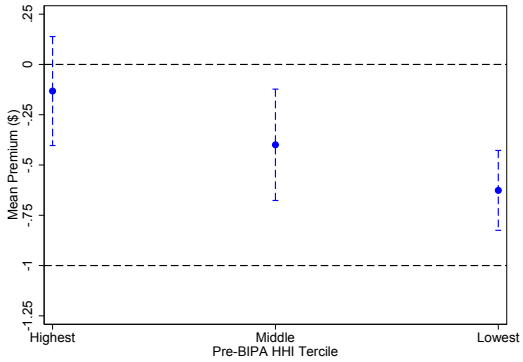
(C) By HHI, 2002



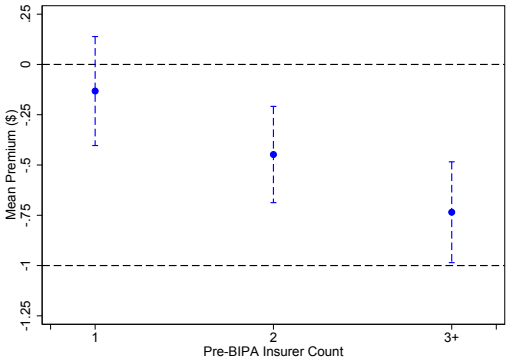
(D) By Insurer Count, 2002



(E) By HHI, 2003

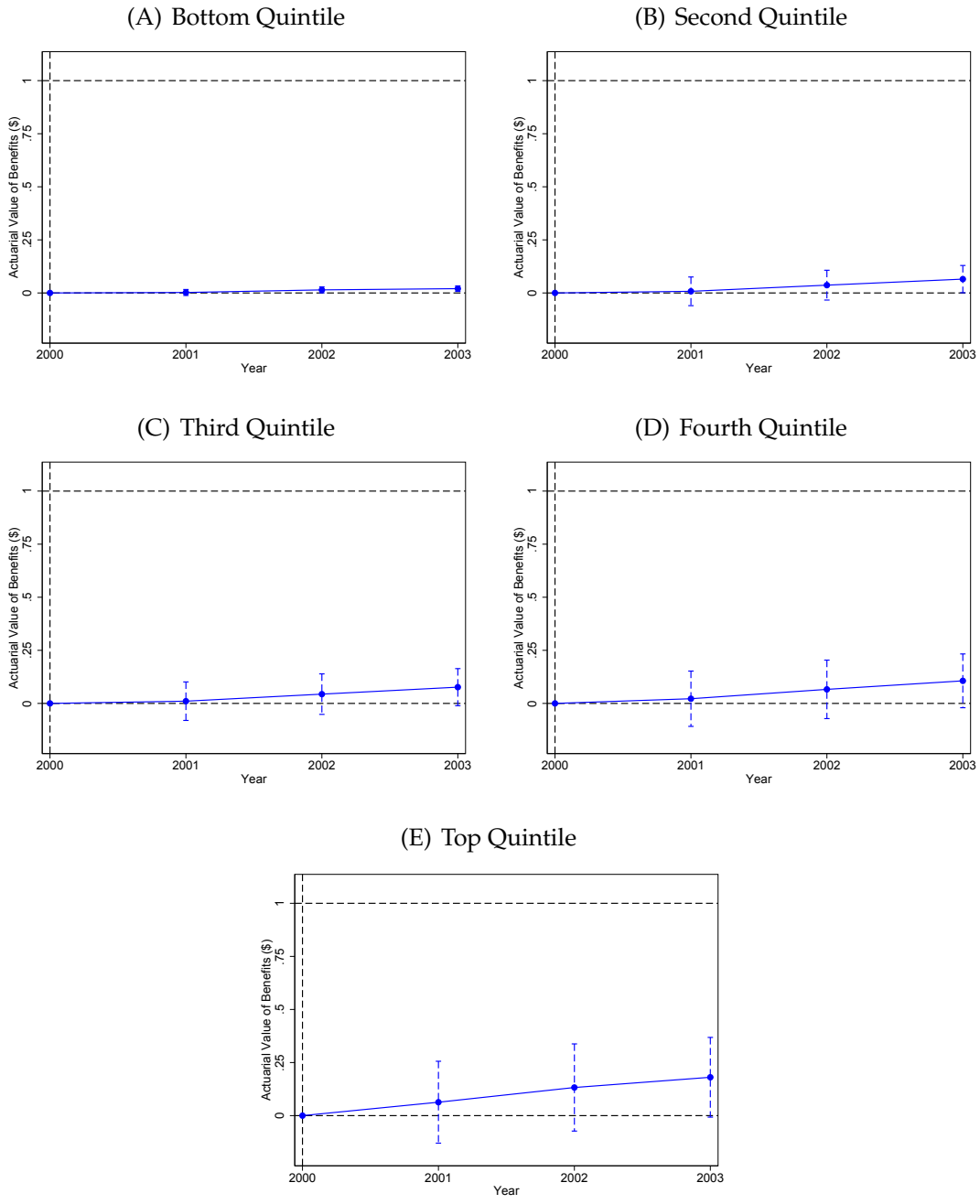


(F) By Insurer Count, 2003



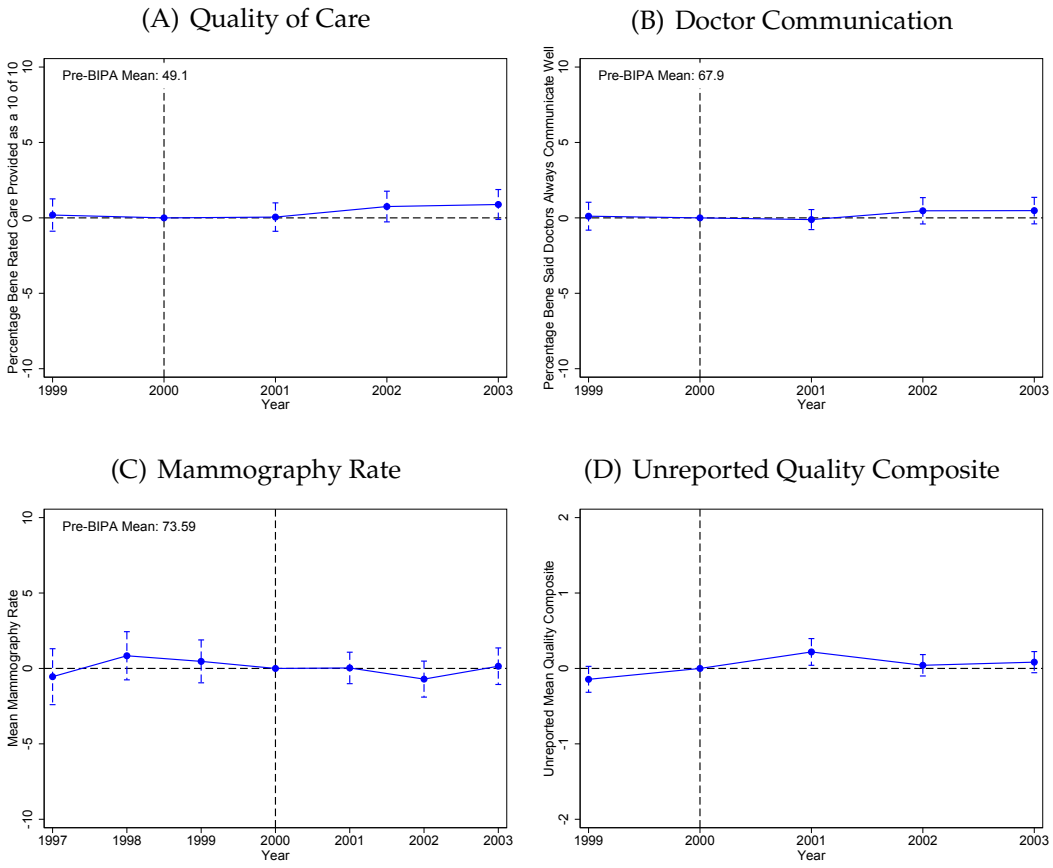
Note: Figure shows coefficients on distance-to-floor × year interactions for plan years 2001 through 2003 from several difference-in-differences regressions. The dependent variable is the mean premium defined as in Figure 4. Each point represents a coefficient from a separate regression in which the estimation sample is stratified by market concentration in the pre-BIPA period. In Panel A, counties are binned according to the tercile of insurer HHI in plan year 2000. In Panel B, counties are binned according to the number of insurers operating in the county in plan year 2000. Competition increases to the right of both panels. The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. While the analysis is conducted on segments of the data, the underlying sample is the unbalanced panel of county-years with at least one MA plan over years 1997 to 2003. This sample includes 4,262 of 22,001 possible county-years and 64% of all Medicare beneficiary-years. Controls are identical to those in Figure A12. The capped vertical bars show 95% confidence intervals calculated using standard errors clustered at the county level. Horizontal dashed lines are plotted at the reference values of 0 and -1, where -1 corresponds to 100% pass-through.

Figure A10: Actuarial Value of Benefits: Impact of $1 Increase in Monthly Payments, by Quintile of Out-of-Pocket Spending



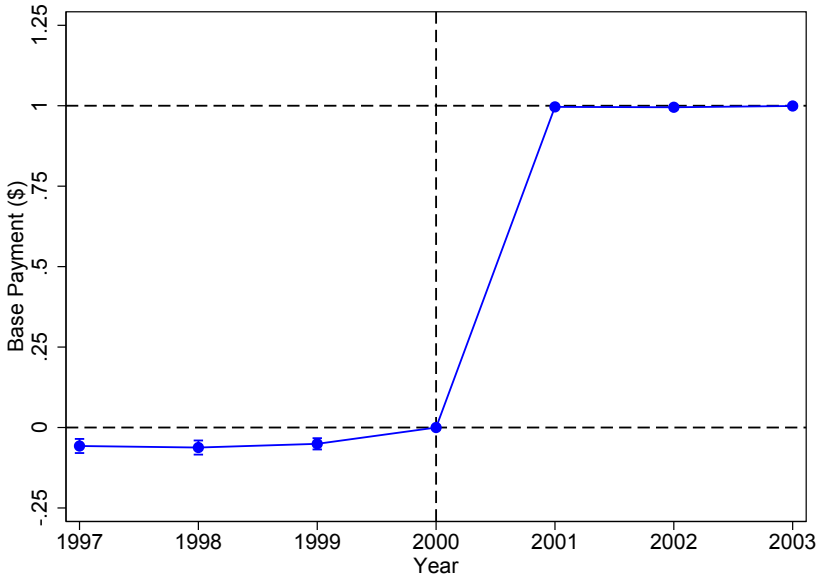
Note: Figure shows coefficients on distance-to-floor × year interactions from difference-in-differences regressions. The first-stage results displayed in Table 3 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of a $1 increase in monthly payments. The dependent variable is the actuarial value of benefits for a given quintile of out-of-pocket spending, which is constructed based on observed plan benefits in our main analysis dataset and utilization and cost data from the 2000 Medical Expenditure Panel Survey. See text for full details. The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. The sample is the unbalanced panel of county-years with at least one MA plan over years 2000 to 2003. This sample includes 2,250 of 12,572 possible county-years and 62% of all Medicare beneficiaries. Controls are identical to those in Figure 3. The capped vertical bars show 95% confidence intervals calculated using standard errors clustered at the county level. Horizontal dashed lines are plotted at 0 and 1.

Figure A11: Plan Quality: Impact of $50 Increase in Monthly Payments



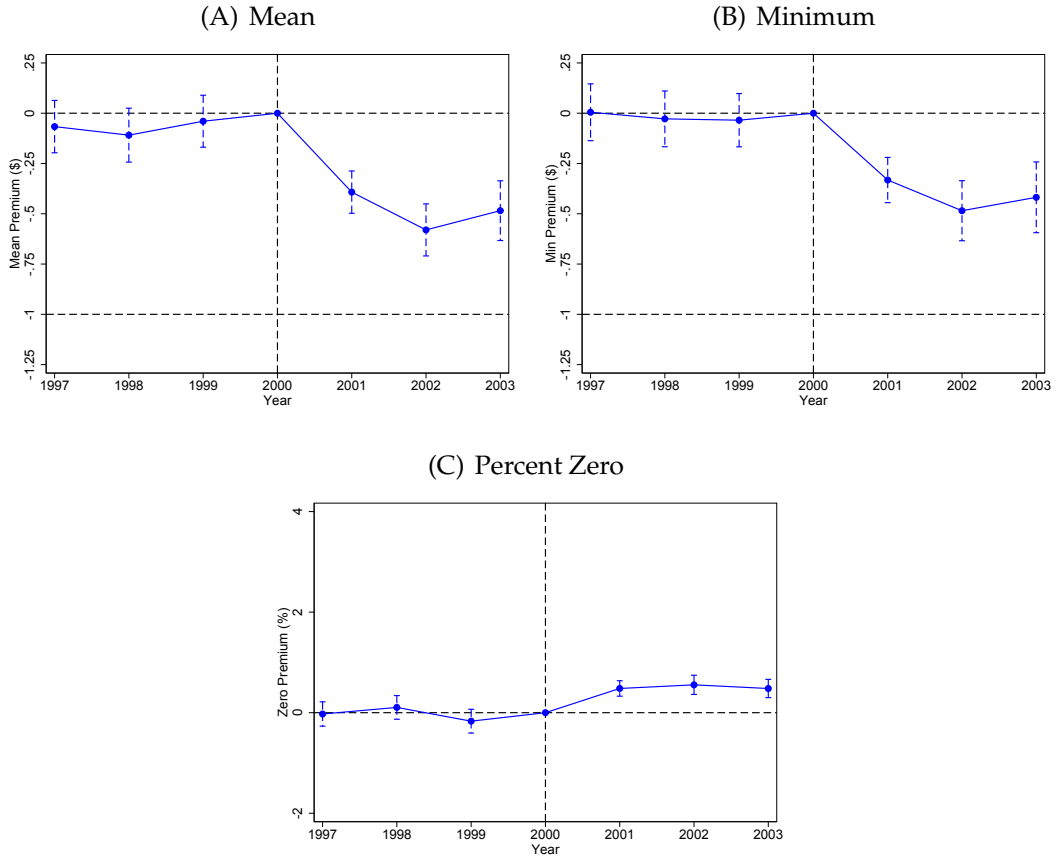
Note: Figure shows scaled coefficients on distance-to-floor × year interactions from difference-in-differences regressions. The first-stage results displayed in Table 3 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. The dependent variables are the mean percentage of beneficiaries that rate the quality of care received as a 10 out of 10 (Panel A), mean percentage of beneficiaries that report that the doctors in their plan always communicate well (Panel B), mean mammography rate (Panel C), and an unreported quality composite described in the text (Panel D). We have data on these measures from 1999 through 2003, with the exception of the mean mammography rate for which we have data going back to 1997. The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. In Panels A, B, and D, the sample is the unbalanced panel of county-years with at least one MA plan over years 1999 to 2003. This sample includes 2,892 of 15,715 possible county-years and 63% of all Medicare beneficiaries. In Panel C, the sample is the unbalanced panel of county-years with at least one MA plan over years 1997 to 2003. This sample includes 4,262 of 22,001 possible county-years and 64% of all Medicare beneficiary-years. Controls are identical to those in Figure 3. In all the panels, the vertical axes measures the effect on the dependent variable of a $50 difference in monthly payments. The capped vertical bars show 95% confidence intervals calculated using standard errors clustered at the county level. Year 2000, which is the year prior to BIPA implementation, is the omitted category. The horizontal dashed line is plotted at 0.

Figure A12: First-Stage Effect on Base Payments: Impact of $1 Increase in Distance-to-Floor, Balanced Sample of Counties



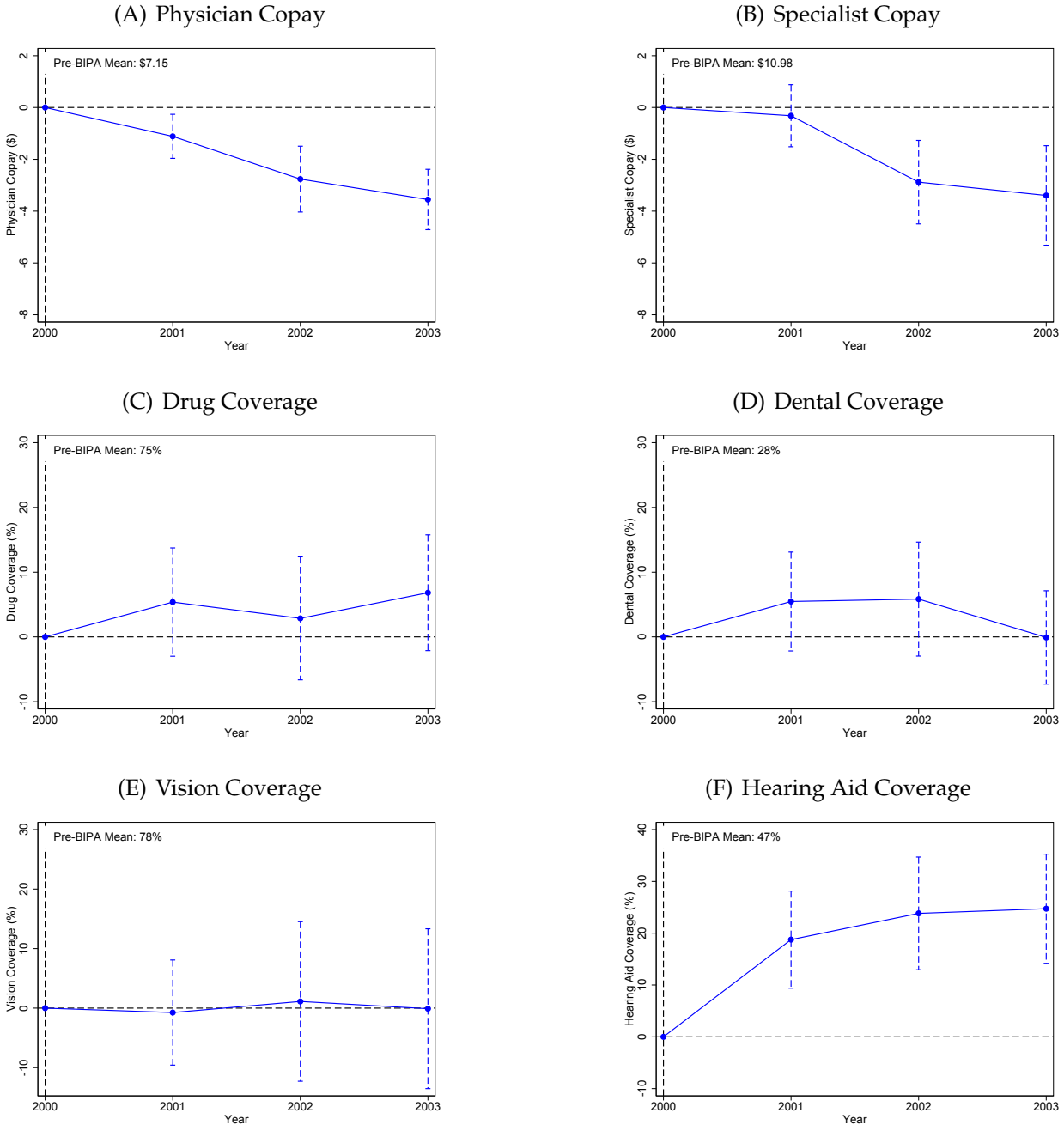
Note: Figure shows coefficients on the distance-to-floor × year interactions from difference-in-differences regressions with the monthly base payments as the dependent variable. The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. The sample is the balanced sample of county-years with at least one MA plan in each year between 1997 and 2003. This sample includes 2,548 out of 22,001 possible county-years and 54% of all Medicare beneficiaries. Controls include year and county fixed effects as well as flexible controls for the 1998 payment floor introduction and the blended payment increase in 2000. The capped vertical bars show 95% confidence intervals calculated using standard errors clustered at the county level. Year 2000, which is the year prior to BIPA implementation, is the omitted category and denoted with a vertical dashed line. Horizontal dashed lines are plotted at the reference values of 0 and 1.

Figure A13: Premium Pass-Through: Impact of $1 Increase in Monthly Payments, Balanced Sample of Counties



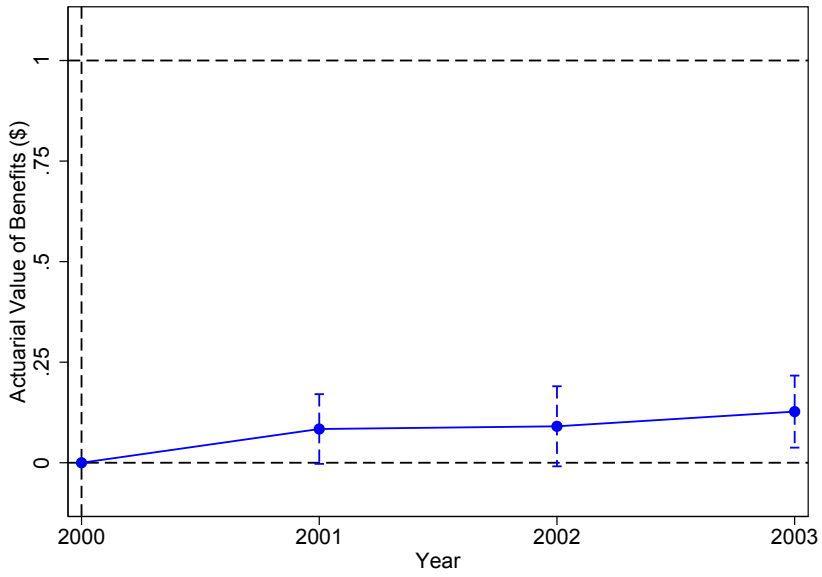
Note: Figure shows coefficients on distance-to-floor × year interactions from difference-in-differences regressions. The first-stage results displayed in Table A13 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. The dependent variables are mean monthly premiums weighted by enrollment in the plan (Panel A), minimum monthly premiums (Panel B), and the percentage of plans in the county with zero premiums (Panel C). The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. The sample is the balanced sample of county-years with at least one MA plan in each year between 1997 and 2003. This sample includes 2,548 out of 22,001 possible county-years and 54% of all Medicare beneficiaries. Controls are identical to those in Figure A12. The capped vertical bars show 95% confidence intervals calculated using standard errors clustered at the county level. Horizontal dashed lines in Panels A and B are plotted at the reference values of 0 and -1, where -1 corresponds to 100% pass-through.

Figure A14: Benefits Generosity: Impact of $50 Increase in Monthly Payments, Balanced Sample of Counties



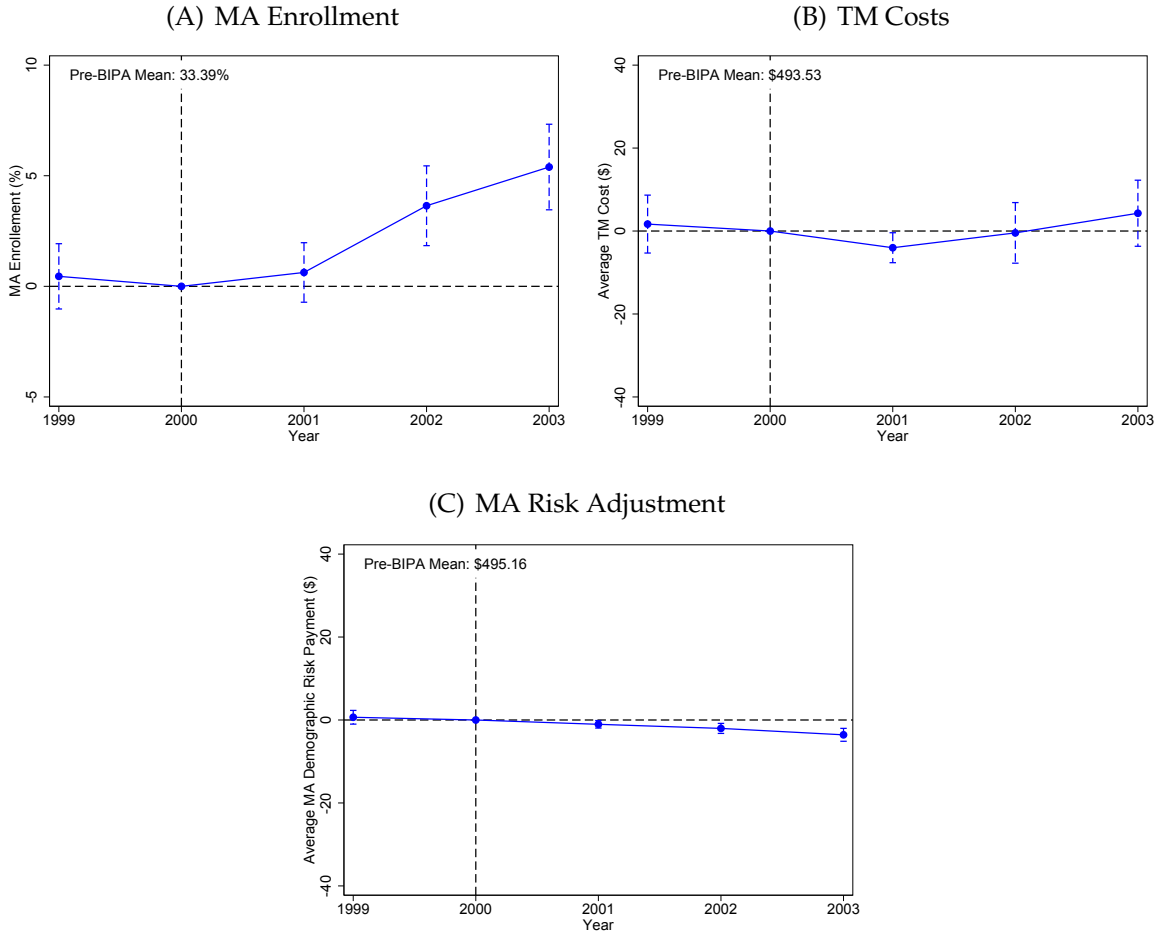
Note: Figure shows scaled coefficients on distance-to-floor × year interactions from difference-in-differences regressions. The first-stage results displayed in Table A13 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. The dependent variables are physician copays in dollars (Panel A), specialist copays in dollars (Panel B), and indicators for coverage of: outpatient prescription drugs (Panel C), dental (Panel D), corrective lenses (Panel E), and hearing aids (Panel F). The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. The sample is the balanced sample of county-years with at least one MA plan in each year between 2000 and 2003. This sample includes 1,772 out of 12,572 possible county-years and 57% of all Medicare beneficiaries. Controls are identical to those in Figure A12. In Panels A and B, the vertical axes measure the effect on copays in dollars of a $50 difference in monthly payments. In Panels C through F, the vertical axes measure the effect on the probability that a plan offers each benefit, again for a $50 difference in monthly payments. The capped vertical bars show 95% confidence intervals calculated using standard errors clustered at the county level. Year 2000, which is the year prior to BIPA implementation, is the omitted category. The horizontal dashed line is plotted at 0.

Figure A15: Actuarial Value of Benefits: Impact of $1 Increase in Monthly Payments, Balanced Sample of Counties



Note: Figure shows coefficients on distance-to-floor × year interactions from difference-in-differences regressions. The first-stage results displayed in Table A13 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. The dependent variable is the actuarial value of benefits, which is constructed based on observed plan benefits in our main analysis dataset and utilization and cost data from the 2000 Medical Expenditure Panel Survey. See text for full details. The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. The sample is the balanced sample of county-years with at least one MA plan in each year between 2000 and 2003. This sample includes 1,772 out of 12,572 possible county-years and 57% of all Medicare beneficiaries. Controls are identical to those in Figure A12. The capped vertical bars show 95% confidence intervals calculated using standard errors clustered at the county level. Horizontal dashed lines are plotted at 0 and 1.

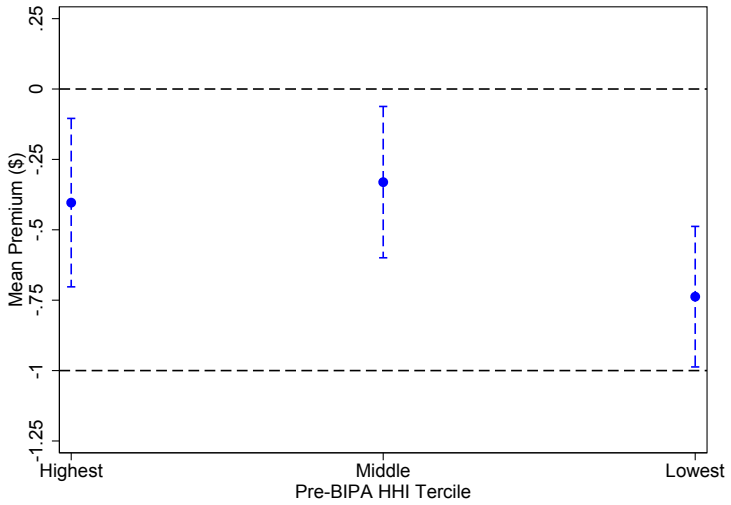
Figure A16: Selection: Impact of $50 Increase in Monthly Payments, Balanced Sample of Counties



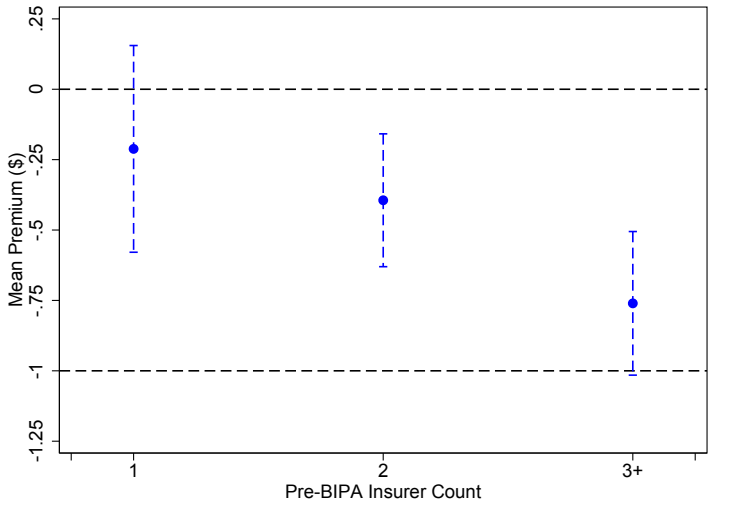
Note: Figure shows scaled coefficients on distance-to-floor × year interactions from difference-in-differences regressions. The first-stage results displayed in Table A13 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. Coefficients are scaled to reflect the impact of a $50 increase in monthly payments. The dependent variables are MA enrollment (Panel A), Traditional Medicare costs (Panel B), and mean demographic risk payments for MA enrollees (Panel C). The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. The sample is the balanced panel of county-years with at least one MA plan in each year between 1999 and 2003. This sample includes 2,055 out of 15,715 possible county-years and 56% of all Medicare beneficiaries. Controls are identical to those in Figure A12. The capped vertical bars show 95% confidence intervals calculated using standard errors clustered at the county level. The horizontal dashed lines indicate zero effects.

Figure A17: Pass-Through and Market Concentration, Balanced Sample of Counties

(A) Insurer HHI

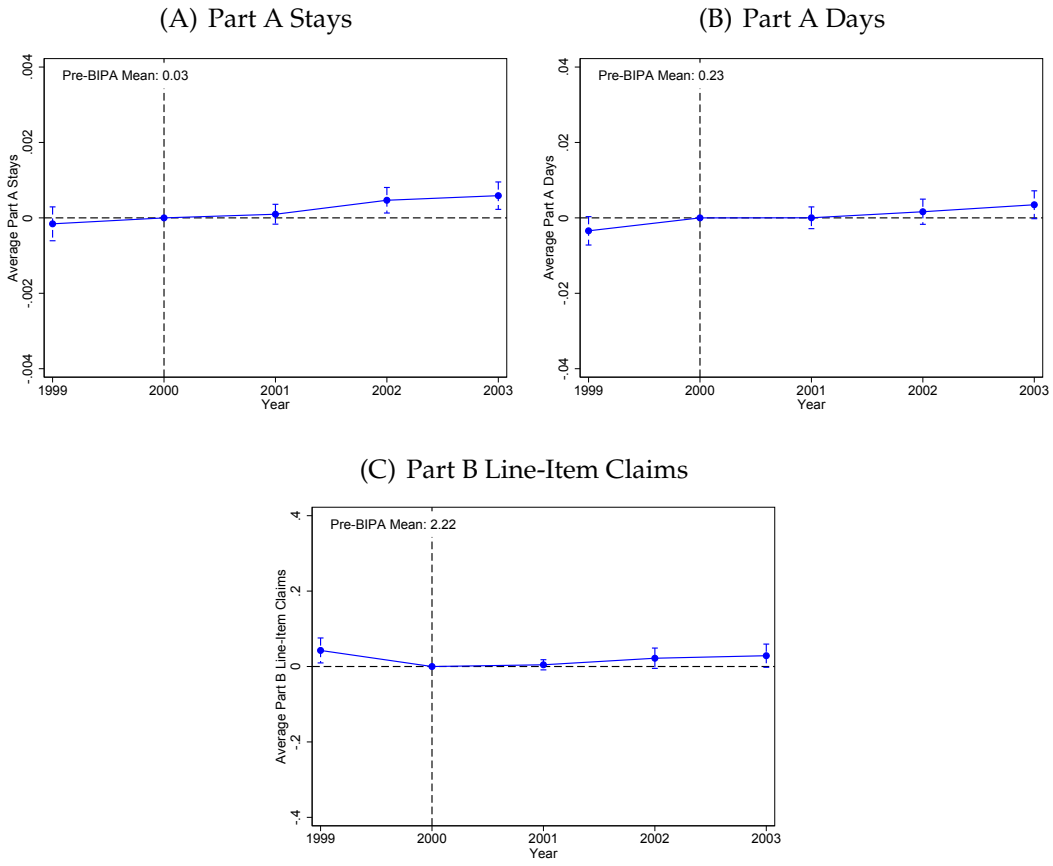


(B) Insurer Count



Note: Figure shows coefficients on distance-to-floor × year 2003 interactions from several difference-in-differences regressions. The dependent variable is the mean premium defined as in Figure 4. Each point represents a coefficient from a separate regression in which the estimation sample is stratified by market concentration in the pre-BIPA period. In Panel A, counties are binned according to the tercile of insurer HHI in plan year 2000. In Panel B, counties are binned according to the number of insurers operating in the county in plan year 2000. Competition increases to the right of both panels. The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. While the analysis is conducted on segments of the data, the underlying sample is the balanced panel of county-years with at least one MA plan in each year between 1997 and 2003. This sample includes 2,548 of 22,001 possible county-years and 54% of all Medicare beneficiaries. Controls are identical to those in Figure A12. The capped vertical bars show 95% confidence intervals calculated using standard errors clustered at the county level. Horizontal dashed lines are plotted at the reference values of 0 and -1, where -1 corresponds to 100% pass-through.

Figure A18: Utilization: Impact of $50 Increase in Monthly Payments



Note: Figure shows scaled coefficients on distance-to-floor × year interactions from difference-in-differences regressions. The first-stage results displayed in Table 3 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. Coefficients are scaled to reflect the impact of a $50 increase in monthly payments. The dependent variables are Part A hospital stays (Panel A), Part A hospital days (Panel B), and Part B physician line-item claims (Panel C). The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. The sample is the unbalanced panel of county-years with at least one MA plan over years 1999 to 2003. This sample includes 2,892 of 15,715 possible county-years and 63% of all Medicare beneficiaries. Controls are identical to those in Figure A12. The capped vertical bars show 95% confidence intervals calculated using standard errors clustered at the county level. The horizontal dashed lines indicate zero effects.

Table A1: Premium Pass-Through (Other Measures): Impact of $1 Increase in Monthly Payments

	Dependent Variable:								
	Median Monthly Premium ($)			Minimum Monthly Premium ($)			Maximum Monthly Premium ($)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Δb X 2001	-0.281	-0.264	-0.287	-0.262	-0.152	-0.264	-0.361	-0.185	-0.385
	(0.059)	(0.115)	(0.060)	(0.057)	(0.093)	(0.058)	(0.080)	(0.129)	(0.081)
Δb X 2002	-0.549	-0.449	-0.559	-0.452	-0.325	-0.463	-0.452	-0.335	-0.465
	(0.074)	(0.145)	(0.076)	(0.072)	(0.131)	(0.072)	(0.068)	(0.134)	(0.068)
Δb X 2003	-0.492	-0.409	-0.495	-0.417	-0.284	-0.420	-0.365	-0.241	-0.364
	(0.085)	(0.149)	(0.086)	(0.084)	(0.140)	(0.086)	(0.077)	(0.132)	(0.078)
Main Effects									
County FE	X	X	X	X	X	X	X	X	X
Year FE	X	X	X	X	X	X	X	X	X
Additional Controls									
Pre-BIPA Payment X Year FE		X			X			X	
Urban X Year FE			X			X			X
Pre-BIPA Mean of Dep. Var.	12.10	12.10	12.10	6.67	6.67	6.67	20.02	20.02	20.02
R-Squared	0.66	0.66	0.66	0.66	0.66	0.66	0.68	0.68	0.68

Note: Table shows coefficients on distance-to-floor × year interactions from difference-in-differences regressions. Although the estimation includes distance-to-floor interactions for all the years in our sample, we display coefficients for the post-reform years (2001-2003) above for brevity. The first-stage results displayed in Table 3 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. The county-level measures are constructed using plan-level data weighted by plan enrollment. The sample is the unbalanced panel of county-years with at least one MA plan over years 1997 to 2003. This sample includes 4,262 of 22,001 possible county-years and 64% of all Medicare beneficiary-years. Year 2000, which is the year prior to BIPA implementation, is the omitted category. Controls are identical to those in Table 3. All monetary values are inflation adjusted to 2000 using the CPI-U. Robust standard errors clustered at the county level are reported in parentheses.

Table A2: Benefits Generosity: Impact of Increase in Monthly Payments, Alternative Specifications

	Dependent Variable:													
	Physician Copay ($)		Specialist Copay ($)		Drug Coverage (%)		Dental Coverage (%)		Vision Coverage (%)		Hearing Aid Coverage (%)		Actuarial Value ($)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Δb X 2001*	0.11	-0.08	0.15	0.52	-4.30	0.67	-1.94	3.72	6.28	3.21	16.24	17.91	-0.04	0.02
	(0.93)	(0.62)	(0.98)	(0.72)	(9.57)	(4.27)	(5.28)	(3.79)	(8.33)	(4.59)	(5.75)	(4.46)	(0.10)	(0.05)
Δb X 2002*	-3.20	-1.96	-3.80	-2.81	-0.74	0.61	2.97	6.79	-0.82	3.35	18.28	22.65	0.05	0.06
	(1.12)	(0.70)	(1.18)	(0.83)	(8.38)	(4.76)	(7.22)	(4.54)	(11.09)	(6.65)	(6.85)	(5.40)	(0.09)	(0.05)
Δb X 2003*	-1.53	-2.82	-2.31	-3.35	-3.69	4.95	-2.64	1.70	0.28	2.43	22.18	23.68	-0.01	0.11
	(1.27)	(0.68)	(1.47)	(0.98)	(7.66)	(4.46)	(8.21)	(3.71)	(11.36)	(6.65)	(7.63)	(5.21)	(0.08)	(0.05)
Main Effects														
County FE	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Year FE	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Additional Controls														
Pre-BIPA Payment X Year FE	X		X		X		X		X		X		X	
Urban X Year FE		X		X		X		X		X		X		X
Pre-BIPA Mean of Dep. Var.	7.29	7.29	11.13	11.13	73.62	73.62	25.77	25.77	75.68	75.68	42.58	42.58	n/a	n/a
R-Squared	0.68	0.68	0.70	0.70	0.83	0.83	0.68	0.67	0.75	0.74	0.83	0.83	0.82	0.82

Note: Table shows scaled coefficients on distance-to-floor × year interactions from difference-in-differences regressions. Although the estimation includes distance-to-floor interactions for all the years in our sample, we display coefficients for the post-reform years (2001-2003) above for brevity. The first-stage results displayed in Table 3 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. In columns 1 to 12, the dependent variables are measures of benefit generosity, and the coefficient on distance-to-floor is scaled by $50. In columns 13 and 14, the dependent variable is the monthly actuarial value of benefits, and the coefficient on distance-to-floor is not rescaled. See text for details on the construction of the monthly actuarial value of benefits. The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. The sample is the unbalanced panel of county-years with at least one MA plan over years 2000 to 2003. This sample includes 2,250 of 12,572 possible county-years and 62% of all Medicare beneficiaries. Year 2000, which is the year prior to BIPA implementation, is the omitted category. Controls are identical to those in Table 3. All monetary values are inflation adjusted to 2000 using the CPI-U. Robust standard errors clustered at the county level are reported in parentheses.

*Impact of $50 increase in columns 1 to 12. Impact of $1 increase in columns 13 and 14.

Table A3: Selection: Impact of $50 Increase in Monthly Payments, Alternative Specifications

	Dependent Variable:								
	MA Enrollment (%)			TM Costs ($)			MA Risk Adjustment ($)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Yearly BIPA Effect									
Δb X 2001	0.86	1.74	0.86	-3.05	1.57	-3.36	-1.36	-0.58	-1.50
	(0.60)	(1.07)	(0.61)	(1.67)	(2.00)	(1.73)	(0.48)	(0.67)	(0.51)
Δb X 2002	3.32	2.88	3.61	-0.88	3.79	-1.11	-2.42	-2.88	-2.53
	(0.83)	(1.27)	(0.84)	(3.41)	(3.95)	(3.52)	(0.59)	(0.93)	(0.61)
Δb X 2003	4.74	3.72	5.12	3.54	4.71	3.56	-3.43	-4.60	-3.58
	(0.90)	(1.41)	(0.91)	(3.73)	(3.46)	(3.85)	(0.81)	(1.33)	(0.84)
Panel B: Pooled Post-BIPA Effect									
Δb X Post-BIPA	3.29	3.47	3.48	-0.05	4.11	-0.14	-2.83	-2.87	-2.98
	(0.71)	(1.22)	(0.72)	(2.80)	(2.60)	(2.91)	(0.59)	(0.91)	(0.62)
Controls: All Panels									
Main Effects									
County FE	X	X	X	X	X	X	X	X	X
Year FE	X	X	X	X	X	X	X	X	X
Additional Controls									
Pre-BIPA Payment X Year FE		X			X			X	
Urban X Year FE			X			X			X
Pre-BIPA Mean of Dep. Var.	30.19	30.19	30.19	483.32	483.32	483.32	484.25	484.25	484.25

Note: Table shows coefficients on distance-to-floor × year interactions from difference-in-differences regressions. Although the estimation includes distance-to-floor interactions for all the years in our sample, we display coefficients for the post-reform years (2001-2003) above for brevity. The first-stage results displayed in Table 3 indicate that a $1 change in distance-to-floor translates into a dollar-for-dollar change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. Coefficients are scaled to reflect the impact of a $50 increase in monthly payments. The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. The sample is the unbalanced panel of county-years with at least one MA plan over years 1999 to 2003. This sample includes 2,892 of 15,715 possible county-years and 63% of all Medicare beneficiaries. Year 2000, which is the year prior to BIPA implementation, is the omitted category. Controls are identical to those in Table A13. All monetary values are inflation adjusted to 2000 using the CPI-U. Robust standard errors clustered at the county level are reported in parentheses.

Table A4: Selection: Impact of $50 Increase in Monthly Payments, by Pre-Reform Insurer Market Power

	MA Enrollment (%)	TM Costs ($)	MA Risk Adjustment ($)	Selection: Slope of AC Curve ($)	Selection: Slope of AC Curve Net of Risk Adjustment ($)
	(1)	(2)	(3)	(4)	(5)
Panel A: Baseline (Full Sample)					
Δb X 2003	4.74	3.54	-3.43	75	147
	(0.90)	(3.73)	(0.81)	(79.1)	(79.1)
Panel B: By HHI Tercile					
Highest Tercile (Most Concentrated)					
Δb X 2003	2.89	-7.42	-4.24	-257	-110
	(0.87)	(3.93)	(1.01)	(225.8)	(223.6)
Middle Tercile					
Δb X 2003	5.80	16.50	-4.41	284	361
	(1.40)	(10.15)	(1.42)	(192.9)	(190.3)
Lowest Tercile					
Δb X 2003	4.82	4.29	-1.94	89	129
	(1.68)	(5.13)	(1.31)	(169.0)	(173.7)
Panel C: By Number of Insurers					
One Insurer					
Δb X 2003	2.89	-7.42	-4.24	-257	-110
	(0.87)	(3.93)	(1.01)	(225.8)	(223.6)
Two Insurers					
Δb X 2003	3.54	12.13	-2.55	342	414
	(1.42)	(6.77)	(1.34)	(697.2)	(833.4)
Three or More Insurers					
Δb X 2003	7.20	0.90	-2.36	13	45
	(2.05)	(6.69)	(1.68)	(122.7)	(117.9)

Note: Columns 1 through 3 show coefficients on distance-to-floor × year interactions from difference-in-differences regressions, scaled to reflect the impact of a $50 increase in monthly payments. Although the estimation includes distance-to-floor interactions for all the years in our sample, we display coefficients for 2003 above for brevity. The first-stage results displayed in Table 3 indicate that a $1 change in distance-to-floor translates into a dollar-for-dollar change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. This sample includes 2,892 of 15,715 possible county-years and 63% of all Medicare beneficiaries. Year 2000, which is the year prior to BIPA implementation, is the omitted category. Controls are identical to those in Table A13. All monetary values are inflation adjusted to 2000 using the CPI-U. Robust standard errors clustered at the county level are reported in parentheses. Columns 4 reports the implied slope of the average cost curve before considering risk adjustment: $\frac{dAC/db}{dq/db}$. Column 5 reports the slope of the average cost curve incorporating risk adjustment: $\frac{dAC^{MA}}{dq} - b\,\frac{dAR^{MA}}{dq}$. Standard errors for the last 2 columns are calculated by the bootstrap method using 200 iterations.

Table A5: Pass-Through and Market Concentration, 2001 to 2003

	Dependent Variable: Mean Premium							
	Subsample, by 2000 HHI Tercile			Subsample, by 2000 Insurer Count			Full Sample	
	Q3	Q2	Q1	1	2	3 +		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Δb X 2001	-0.148	-0.341	-0.375	-0.148	-0.359	-0.424	-0.104	-0.103
	(0.100)	(0.111)	(0.081)	(0.100)	(0.087)	(0.103)	(0.142)	(0.144)
Δb X 2002	-0.152	-0.484	-0.723	-0.152	-0.513	-0.850	0.106	0.155
	(0.106)	(0.128)	(0.082)	(0.106)	(0.099)	(0.109)	(0.150)	(0.158)
Δb X 2003	-0.132	-0.400	-0.626	-0.132	-0.448	-0.735	0.120	0.113
	(0.138)	(0.141)	(0.101)	(0.138)	(0.122)	(0.128)	(0.191)	(0.201)
Δb X 2001 X HHI Tercile							-0.095	
							(0.062)	
Δb X 2002 X HHI Tercile							-0.281	
							(0.065)	
Δb X 2003 X HHI Tercile							-0.254	
							(0.082)	
Δb X 2001 X Contract Count								-0.110
								(0.069)
Δb X 2002 X Contract Count								-0.332
								(0.075)
Δb X 2003 X Contract Count								-0.280
								(0.093)
Main Effects								
County FE	X	X	X	X	X	X	X	X
Year FE	X	X	X	X	X	X	X	X
Pre-BIPA Mean of Dep. Var.	19.53	11.60	10.47	19.53	11.56	10.20	12.58	12.58
R-Squared	0.70	0.71	0.72	0.70	0.70	0.75	0.72	0.72

Note: Table shows coefficients on distance-to-floor × year interactions from difference-in-differences regressions. The dependent variable throughout the table is mean premiums. In columns 1 through 6, each column represents the main specification applied to a different subsample defined by pre-BIPA market concentration. In columns 7 and 8, the full sample is used and HHI terciles and contract counts are interacted with the distance-to-floor variables as continuous measures. Although the estimation includes distance-to-floor interactions for all the years in our sample, we display coefficients for the post-reform years (2001-2003) above for brevity. The first-stage results displayed in Table 3 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. While the analysis is conducted on segments of the data, the underlying sample is the unbalanced panel of county-years with at least one MA plan over years 1997 to 2003. This sample includes 4,262 of 22,001 possible county-years and 64% of all Medicare beneficiary-years. Year 2000, which is the year prior to BIPA implementation, is the omitted category. Controls are identical to those in Table A13. All monetary values are inflation adjusted to 2000 using the CPI-U. Robust standard errors clustered at the county level are reported in parentheses.

Table A6: Premium Pass-Through: Plan-Level Analysis of Impact of $1 Increase in Monthly Payments

	Dependent Variable: Monthly Premium ($)					
	Linear Regression			Tobit Regression		
	(1)	(2)	(3)	(4)	(5)	(6)
Δb X 2001	-0.296	-0.292	-0.307	-0.417	-0.373	-0.445
	(0.054)	(0.089)	(0.055)	(0.010)	(0.015)	(0.010)
Δb X 2002	-0.505	-0.538	-0.517	-0.644	-0.661	-0.664
	(0.059)	(0.105)	(0.059)	(0.008)	(0.011)	(0.008)
Δb X 2003	-0.446	-0.450	-0.449	-0.575	-0.480	-0.585
	(0.070)	(0.118)	(0.071)	(0.009)	(0.009)	(0.009)
Main Effects						
County FE	X	X	X	X	X	X
Year FE	X	X	X	X	X	X
Additional Controls						
Pre-BIPA Payment X Year FE		X			X	
Urban X Year FE			X			X
Pre-BIPA Mean of Dep. Var.	12.58	12.58	12.58	12.58	12.58	12.58
R-Squared	0.60	0.60	0.60	N/A	N/A	N/A

Note: Table shows coefficients on distance-to-floor × year interactions from difference-in-differences regressions. Although the estimation includes distance-to-floor interactions for all the years in our sample, we display coefficients for the post-reform years (2001-2003) above for brevity. The first-stage results displayed in Table 3 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. The unit of observation is the plan × year, and observations are weighted by the number of beneficiaries in the plan. The sample is the unbalanced panel of 7,386 MA plan-years over years 1997 to 2003. This sample includes 4,262 of 22,001 possible county-years and 64% of all Medicare beneficiary-years. The final three columns display results from a Tobit regression, which explicitly takes into account the fact that plans could not give rebates (charge negative premiums) during our sample period. Year 2000, which is the year prior to BIPA implementation, is the omitted category. Controls are identical to those in Table 3. All monetary values are inflation adjusted to 2000 using the CPI-U. Robust standard errors clustered at the county level are reported in parentheses.

Table A7: Mean Premiums by Size of Payment Increase and Year

	Mean Premium ($)		
Year	No Change in Payment	$1-$50 Payment Increase	$\geq$ $51 Payment Increase
1997	6.44	10.18	25.81
1998	8.91	10.84	29.96
1999	1.54	6.04	23.79
2000	10.82	23.34	40.12
2001	27.74	35.14	42.76
2002	39.79	36.57	45.82
2003	41.59	41.39	50.52

Note: Table shows mean premiums by year in three subsets of counties: counties with no BIPA-induced payment change, counties with a payment increase of $1-$50 , and counties with a payment increase of greater than or equal to $51. While the summary statistics is displayed by subsets of the data, the underlying sample is the unbalanced panel of 7,386 MA plan-years over years 1997 to 2003. This sample includes 4,262 of 22,001 possible county-years and 64% of all Medicare beneficiary-years.

Table A8: Premium Pass-Through: Impact of $1 Increase in Monthly Payments, Including FFS Costs Controls

	Dependent Variable: Mean Monthly Premium ($)					
	(1)	(2)	(3)	(4)	(5)	(6)
Δb X 2001	-0.305	-0.197	-0.316	-0.305	-0.196	-0.316
	(0.053)	(0.092)	(0.054)	(0.053)	(0.092)	(0.054)
Δb X 2002	-0.495	-0.371	-0.507	-0.495	-0.370	-0.506
	(0.058)	(0.119)	(0.058)	(0.058)	(0.119)	(0.058)
Δb X 2003	-0.436	-0.325	-0.438	-0.436	-0.325	-0.438
	(0.069)	(0.122)	(0.070)	(0.069)	(0.122)	(0.070)
Per capita FFS costs	-0.035	-0.043	-0.036			
	(0.037)	(0.036)	(0.037)			
Per capita FFS costs excluding IME and DSH				-0.031	-0.040	-0.032
				(0.038)	(0.038)	(0.038)
Main Effects						
County FE	X	X	X	X	X	X
Year FE	X	X	X	X	X	X
Additional Controls						
Pre-BIPA Payment X Year FE		X			X	
Urban X Year FE			X			X
Pre-BIPA Mean of Dep. Var.	12.58	12.58	12.58	12.58	12.58	12.58
R-Squared	0.73	0.73	0.73	0.73	0.73	0.73

Note: Table shows coefficients on distance-to-floor × year interactions from difference-in-differences regressions. Although the estimation includes distance-to-floor interactions for all the years in our sample, we display coefficients for the post-reform years (2001-2003) above for brevity. The first-stage results displayed in Table 3 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. The county-level measures are constructed using plan-level data weighted by plan enrollment. The sample is the unbalanced panel of county-years with at least one MA plan over years 1997 to 2003. This sample includes 4,262 of 22,001 possible county-years and 64% of all Medicare beneficiary-years. Year 2000, which is the year prior to BIPA implementation, is the omitted category. Controls are identical to those in Table 3, in addition to per capita FFS costs. All monetary values are inflation adjusted to 2000 using the CPI-U. Robust standard errors clustered at the county level are reported in parentheses.

Table A9: Within-Insurer Variation in Plan Characteristics in Year 2000

	AETNA	CIGNA	Kaiser	Pacificare	United
Premiums ($)					
Mean	36.33	17.74	20.54	23.30	5.07
SD	31.49	19.14	30.38	24.49	11.32
Physician Copay ($)					
Mean	10.00	9.84	8.93	7.18	10.24
SD	0.00	0.90	3.02	2.26	6.16
Specialist Copay ($)					
Mean	16.10	16.61	11.30	7.76	12.07
SD	2.08	5.06	5.43	4.10	6.44
Drug Coverage (%)					
Mean	1.00	1.00	0.96	0.79	0.65
SD	0.00	0.00	0.04	0.17	0.23
Dental Coverage (%)					
Mean	0.02	0.13	0.35	0.18	0.01
SD	0.02	0.11	0.23	0.15	0.01
Vision Coverage (%)					
Mean	1.00	0.10	0.96	0.88	0.41
SD	0.00	0.09	0.04	0.10	0.24
Hearing Aid Coverage (%)					
Mean	0.70	0.16	0.09	0.37	0.11
SD	0.21	0.14	0.08	0.23	0.10

Note: Table shows the within-insurer variation in premiums and benefits for the largest five insurers in the MA market in year 2000.

Table A10: Actuarial Value of Benefits: Impact of $1 Increase in Monthly Payments, by Quintile of Out-of-Pocket Spending

	Dependent Variable: Actuarial Value ($), by Total OOP Expenditure				
	Bottom Quintile	Second Quintile	Third Quintile	Fourth Quintile	Top Quintile
	(1)	(2)	(3)	(4)	(5)
Δb X 2001*	0.002	0.008	0.010	0.022	0.063
	(0.007)	(0.034)	(0.046)	(0.066)	(0.098)
Δb X 2002*	0.014	0.037	0.044	0.066	0.132
	(0.007)	(0.036)	(0.049)	(0.070)	(0.105)
Δb X 2003*	0.020	0.065	0.077	0.106	0.181
	(0.007)	(0.033)	(0.045)	(0.065)	(0.096)
Main Effects					
County FE	X	X	X	X	X
Year FE	X	X	X	X	X
R-Squared	0.80	0.82	0.82	0.82	0.81

Note: Table shows coefficients on distance-to-floor × year interactions from difference-in-differences regressions. Although the estimation includes distance-to-floor interactions for all the years in our sample, we display coefficients for the post-reform years (2001-2003) above for brevity. The first-stage results displayed in Table 3 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. The dependent variable is the actuarial value of benefits for a given quintile of out-of-pocket spending, which is constructed based on observed plan benefits in our main analysis dataset and utilization and cost data from the 2000 Medical Expenditure Panel Survey. The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. The sample is the unbalanced panel of county-years with at least one MA plan over years 2000 to 2003. This sample includes 2,250 of 12,572 possible county-years and 62% of all Medicare beneficiaries. Year 2000, which is the year prior to BIPA implementation, is the omitted category. Controls are identical to those in Table 3. All monetary values are inflation adjusted to 2000 using the CPI-U. Robust standard errors clustered at the county level are reported in parentheses.

Table A11: Re-weighted Actuarial Value of Benefits: Impact of $1 Increase in Monthly Payments

OOP Spending Quintile	Actuarial Value of Benefits Expansions	Mean OOP Spending	Relative MU of Consumption	Reweighted Actuarial Value
	(1)	(2)	(3)	(4)
Bottom	0.020	$48	0.891	
Second	0.065	$282	0.915	
Third	0.077	$579	0.947	
Fourth	0.106	$1,135	1.011	
Top	0.181	$3,176	1.300	
Average	0.090	$1,044	1.000	0.098

Note: Table shows how the actuarial value of benefits changes when reweighted based on the marginal utility of consumption. Rows correspond to quintiles of the OOP spending distribution among the elderly in the 2000 MEPS. Column 1 reproduces the estimates from Table A10 for the year 2003. Column 2 lists the mean OOP spending in each quintile. Column 3 lists the marginal utility for each quintile, relative to marginal utility at the mean of OOP spending, given the assumptions on risk aversion and consumption described in Section A.6. Column 4 re-weights the overall actuarial value by applying the marginal utilities in column 3 to the actuarial values in column 1. See Section A.6 for additional details.

Table A12: Plan Quality: Impact of $50 Increase in Monthly Payments

	Dependent Variable:											
	Percentage beneficiaries report overall quality of care is 10 out of 10			Percentage beneficiaries report doctors always communicate well			Mean mammography rate			Unreported quality composite		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Δb X 2001	0.053	1.272	0.023	-0.113	0.647	-0.133	0.033	0.004	-0.005	0.219	0.149	0.225
	(0.481)	(0.817)	(0.492)	(0.339)	(0.615)	(0.344)	(0.532)	(0.793)	(0.560)	(0.090)	(0.138)	(0.091)
Δb X 2002	0.752	1.209	0.745	0.470	1.306	0.447	-0.707	-0.009	-0.651	0.042	0.054	0.034
	(0.519)	(0.893)	(0.525)	(0.445)	(0.730)	(0.450)	(0.609)	(1.058)	(0.614)	(0.072)	(0.119)	(0.073)
Δb X 2003	0.887	1.365	0.879	0.482	1.316	0.461	0.148	0.813	0.245	0.083	0.169	0.073
	(0.506)	(0.886)	(0.512)	(0.448)	(0.757)	(0.453)	(0.618)	(1.136)	(0.628)	(0.071)	(0.125)	(0.071)
Main Effects												
County FE	X	X	X	X	X	X	X	X	X	X	X	X
Year FE	X	X	X	X	X	X	X	X	X	X	X	X
Additional Controls												
Pre-BIPA Payment X Year FE		X			X			X			X	
Urban X Year FE			X			X			X			X
Pre-BIPA Mean of Dep. Var.	50.25	50.25	50.25	69.20	69.20	69.20	72.90	72.90	72.90	-0.34	-0.34	-0.34
R-Squared	0.92	0.92	0.92	0.90	0.90	0.90	0.69	0.69	0.69	0.84	0.85	0.84

Note: Table shows scaled coefficients on distance-to-floor $\times$ year interactions from difference-in-differences regressions. Although the estimation includes distance-to-floor interactions for all the years in our sample, we display coefficients for the post-reform years (2001-2003) above for brevity. The first-stage results displayed in Table 3 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. Coefficients are scaled to reflect the impact of a $50 increase in monthly payments. In columns 1 to 12, the dependent variables are measures of mean plan quality, and the coefficient on distance-to-floor is scaled by $50. See text for details on the construction of the unreported quality composite. The unit of observation is the county $\times$ year, and observations are weighted by the number of beneficiaries in the county. In columns 1 to 6 and 10 to 12, the sample is the unbalanced panel of county-years with at least one MA plan over years 1999 to 2003. This sample includes 2,892 of 15,715 possible county-years and 63% of all Medicare beneficiaries. In columns 7 to 9, the sample is the unbalanced panel of county-years with at least one MA plan over years 1997 to 2003. This sample includes 4,262 of 22,001 possible county-years and 64% of all Medicare beneficiary-years. Year 2000, which is the year prior to BIPA implementation, is the omitted category. Controls are identical to those in Table 3. All monetary values are inflation adjusted to 2000 using the CPI-U. Robust standard errors clustered at the county level ($N = 662$) are reported in parentheses.

Table A13: Base Payments: Impact of $1 Increase in Distance-to-the-Floor, Balanced Sample of Counties

	Dependent Variable: Base Payment ($)		
	(1)	(2)	(3)
Δb X 2001	0.996	0.999	0.997
	(0.001)	(0.001)	(0.001)
Δb X 2002	0.995	1.000	0.992
	(0.003)	(0.003)	(0.003)
Δb X 2003	0.999	1.000	0.997
	(0.003)	(0.002)	(0.003)
Main Effects			
County FE	X	X	X
Year FE	X	X	X
Additional Controls			
Pre-BIPA Payment X Year FE		X	
Urban X Year FE			X
Pre-BIPA Mean of Dep. Var.	526.56	526.56	526.56
R-Squared	0.9999	0.9999	0.9999

Note: Table shows coefficients on distance-to-floor $\times$ year interactions from difference-in-differences regressions with the monthly base payments as the dependent variable. Although the estimation includes distance-to-floor interactions for all the years in our sample, we display coefficients for the post-reform years (2001-2003) above for brevity. The unit of observation is the county $\times$ year, and observations are weighted by the number of beneficiaries in the county. The sample is the balanced panel of county-years with at least one MA plan in each year between 1997 and 2003. This sample includes 2,548 out of 22,001 possible county-years and 54% of all Medicare beneficiaries. Year 2000, which is the year prior to BIPA implementation, is the omitted category. Year 2000, which is the year prior to BIPA implementation, is the omitted category. Additional controls in column 2 include quartiles of year 2000 county base payments interacted with year indicators and in column 3 include an indicator for urban status interacted with year indicators. Flexible controls for the 1998 payment floor introduction and 2000 blended payment increase are included in all specifications. These controls are identical to those in Table 3. All monetary values are inflation adjusted to 2000 using the CPI-U. Robust standard errors clustered at the county level ($N = 343$) are reported in parentheses.

Table A14: Premium Pass-Through: Impact of $1 Increase in Monthly Payments, Balanced Sample of Counties

	Dependent Variable:											
	Mean Monthly Premium ($)			Median Monthly Premium ($)			Minimum Monthly Premium ($)			Maximum Monthly Premium ($)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Δb X 2001	-0.392	-0.314	-0.412	-0.383	-0.256	-0.395	-0.332	-0.302	-0.342	-0.488	-0.374	-0.524
	(0.054)	(0.084)	(0.055)	(0.062)	(0.105)	(0.063)	(0.057)	(0.082)	(0.059)	(0.095)	(0.141)	(0.098)
Δb X 2002	-0.580	-0.402	-0.607	-0.647	-0.400	-0.672	-0.485	-0.353	-0.508	-0.523	-0.428	-0.550
	(0.066)	(0.109)	(0.066)	(0.087)	(0.126)	(0.089)	(0.076)	(0.119)	(0.077)	(0.081)	(0.138)	(0.082)
Δb X 2003	-0.485	-0.363	-0.497	-0.558	-0.333	-0.572	-0.418	-0.353	-0.428	-0.405	-0.405	-0.411
	(0.076)	(0.118)	(0.077)	(0.097)	(0.134)	(0.099)	(0.090)	(0.135)	(0.092)	(0.087)	(0.125)	(0.089)
Main Effects												
County FE	X	X	X	X	X	X	X	X	X	X	X	X
Year FE	X	X	X	X	X	X	X	X	X	X	X	X
Additional Controls												
Pre-BIPA Payment X Year FE		X			X			X			X	
Urban X Year FE			X			X			X			X
Pre-BIPA Mean of Dep. Var.	11.15	11.15	11.15	10.65	10.65	10.65	4.54	4.54	4.54	19.50	19.50	19.50
R-Squared	0.72	0.73	0.73	0.67	0.67	0.67	0.66	0.66	0.66	0.69	0.69	0.69

Note: Table shows coefficients on distance-to-floor × year interactions from difference-in-differences regressions. Although the estimation includes distance-to-floor interactions for all the years in our sample, we display coefficients for the post-reform years (2001-2003) above for brevity. The first-stage results displayed in Table A13 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. The sample is the balanced panel of county-years with at least one MA plan in each year between 1997 and 2003. This sample includes 2,548 out of 22,001 possible county-years and 54% of all Medicare beneficiaries. Year 2000, which is the year prior to BIPA implementation, is the omitted category. Controls are identical to those in Table A13. All monetary values are inflation adjusted to 2000 using the CPI-U. Robust standard errors clustered at the county level ($N = 343$) are reported in parentheses.

Table A15: Benefits Generosity: Impact of Increase in Monthly Payments, Balanced Sample of Counties

	Dependent Variable:						
	Physician Copay ($)	Specialist Copay ($)	Drug Coverage (%)	Dental Coverage (%)	Vision Coverage (%)	Hearing Aid Coverage (%)	Actuarial Value ($)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Δb X 2001*	-1.112	-0.318	5.382	5.471	-0.744	18.757	0.084
	(0.434)	(0.611)	(4.267)	(3.896)	(4.509)	(4.784)	(0.044)
Δb X 2002*	-2.764	-2.881	2.867	5.841	1.118	23.822	0.091
	(0.648)	(0.823)	(4.844)	(4.489)	(6.839)	(5.551)	(0.051)
Δb X 2003*	-3.552	-3.395	6.822	-0.081	-0.100	24.724	0.127
	(0.594)	(0.980)	(4.561)	(3.680)	(6.850)	(5.377)	(0.046)
Main Effects							
County FE	X	X	X	X	X	X	X
Year FE	X	X	X	X	X	X	X
Pre-BIPA Mean of Dep. Var.	7.15	10.98	74.71	27.58	77.81	46.65	n/a
R-Squared	0.69	0.71	0.82	0.66	0.74	0.83	0.81

Note: Table shows the scaled coefficients on distance-to-floor × year interactions from difference-in-differences regressions. Although the estimation includes distance-to-floor interactions for all the years in our sample, we display coefficients for the post-reform years (2001-2003) above for brevity. The first-stage results displayed in Table A13 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. In columns 1 to 6, the dependent variables are measures of benefit generosity, and the coefficient on distance-to-floor is scaled by $50. In column 7, the dependent variable is the monthly actuarial value of benefits, and the coefficient on distance-to-floor is not rescaled. See text for details on the construction of the monthly actuarial value of benefits. The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. The sample is the balanced sample of county-years with at least one MA plan in each year between 2000 and 2003. This sample includes 1,772 out of 12,572 possible county-years and 57% of all Medicare beneficiaries. Year 2000, which is the year prior to BIPA implementation, is the omitted category. Controls are identical to those in Table A13. All monetary values are inflation adjusted to 2000 using the CPI-U. Robust standard errors clustered at the county level ($N = 343$) are reported in parentheses.

*Impact of $50 increase in columns 1 to 6. Effect of $1 increase in column 7.

Table A16: Plan Availability: Impact of $50 Increase in Monthly Payments, Balanced Sample of Counties

	Dependent Variable:								
	At Least One Plan (%)			Number of Plans			HHI		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Δb X 2001	-2.044	-3.352	-2.325	0.019	-0.217	0.038	0.022	0.082	0.021
	(1.794)	(2.457)	(1.777)	(0.102)	(0.192)	(0.105)	(0.028)	(0.050)	(0.029)
Δb X 2002	-0.621	-6.569	-0.240	0.063	-0.186	0.078	-0.023	0.062	-0.029
	(2.022)	(3.130)	(2.041)	(0.135)	(0.199)	(0.140)	(0.034)	(0.049)	(0.035)
Δb X 2003	3.013	-2.601	3.388	0.122	-0.143	0.145	-0.053	0.031	-0.062
	(2.209)	(3.538)	(2.226)	(0.136)	(0.205)	(0.140)	(0.037)	(0.053)	(0.038)
Main Effects									
County FE	X	X	X	X	X	X	X	X	X
Year FE	X	X	X	X	X	X	X	X	X
Additional Controls									
Pre-BIPA Payment X Year FE		X			X			X	
Urban X Year FE			X			X			X
Pre-BIPA Mean of Dep. Var.	67.49	67.49	67.49	2.60	2.60	2.60	0.51	0.51	0.51
R-Squared	0.86	0.86	0.86	0.66	0.66	0.66	0.68	0.68	0.68

Note: Table shows scaled coefficients on distance-to-floor × year interactions from difference-in-differences regressions. Although the estimation includes distance-to-floor interactions for all the years in our sample, we display coefficients for the post-reform years (2001-2003) above for brevity. The first-stage results displayed in Table A13 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. Coefficients are scaled to reflect the impact of a $50 increase in monthly payments. The dependent variables are indicator for at least one plan (columns 1 to 3), number of plans conditional on at least one plan (columns 4 to 6), and Herfindahl-Hirschman Index (HHI) with a scale of 0 to 1 (columns 7 to 9). The sample in columns 1 to 3 is the balanced panel of county-years with non-missing information on base rates and Medicare beneficiaries during 1997 to 2003. This sample includes 21,504 of 22,001 counties and more than 99.9% of all Medicare beneficiaries. The sample in columns 4 to 9 is the balanced panel of county-years with at least one MA plan in each year between 1997 and 2003. This sample includes 2,548 out of 22,001 possible county-years and 54% of all Medicare beneficiaries. Year 2000, which is the year prior to BIPA implementation, is the omitted category. Controls are identical to those in Table A13. All monetary values are inflation adjusted to 2000 using the CPI-U. Robust standard errors clustered at the county level are reported in parentheses.

Table A17: Selection: Impact of $50 Increase in Monthly Payments, Balanced Sample of Counties

	Dependent Variable:				Implied Pass-Through with Selection (ρ)
	MA Enrollment (%)	TM Costs ($)	MA Risk Adjustment ($)	Mean Premiums* ($)	
	(1)	(2)	(3)	(4)	(5)
Panel A: Yearly BIPA Effect					
Δb X 2001	0.63	-4.02	-1.04	-0.38	1.13
	(0.69)	(1.84)	(0.46)	(0.05)	(0.17)
Δb X 2002	3.64	-0.45	-2.02	-0.52	0.90
	(0.92)	(3.73)	(0.62)	(0.06)	(0.14)
Δb X 2003	5.39	4.29	-3.57	-0.44	0.70
	(0.99)	(4.06)	(0.79)	(0.07)	(0.11)
Panel B: Pooled Post-BIPA Effect					
Δb X Post-BIPA	3.49	-0.20	-2.82	-0.48	0.86
	(0.78)	(3.08)	(0.57)	(0.06)	(0.11)
Controls: All Panels					
Main Effects					
County FE	X	X	X	X	
Year FE	X	X	X	X	
Pre-BIPA Mean of Dep. Var.	33.39	493.53	495.16	10.52	

Note: Columns 1 through 4 of this table show coefficients on distance-to-floor × year interactions from difference-in-differences regressions. Although the estimation includes distance-to-floor interactions for all the years in our sample, we display coefficients for the post-reform years (2001-2003) above for brevity. The first-stage results displayed in Table A13 indicate that a $1 change in distance-to-floor translates into a $1 change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. Coefficients are scaled to reflect the impact of a $50 increase in monthly payments. The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. The sample is the balanced panel of county-years with at least one MA plan in each year between 1999 and 2003. This sample includes 2,055 out of 15,715 possible county-years and 56% of all Medicare beneficiaries. Year 2000, which is the year prior to BIPA implementation, is the omitted category. Controls are identical to those in Table A13. All monetary values are inflation adjusted to 2000 using the CPI-U. Robust standard errors clustered at the county level are reported in parentheses. Column 5 reports the implied pass-through in a perfectly competitive market based on the estimates in the corresponding row (see Section V for more details). Standard errors for this implied pass-through estimate are calculated by the bootstrap method using 200 iterations.

*Impact of $1 increase in monthly payments shown in column 4.

Table A18: Utilization: Impact of $50 Increase in Monthly Payments

	Dependent Variable:								
	Part A Stays			Part A Days			Part B Line-Item Claims		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Δb X 2001	0.0002	0.0001	0.0002	0.001	-0.001	0.001	0.003	0.001	0.003
	(0.0001)	(0.0002)	(0.0001)	(0.001)	(0.002)	(0.001)	(0.006)	(0.007)	(0.007)
Δb X 2002	0.0005	0.0002	0.0005	0.002	0.0010	0.002	0.018	0.007	0.018
	(0.0002)	(0.0003)	(0.0002)	(0.002)	(0.002)	(0.002)	(0.012)	(0.012)	(0.013)
Δb X 2003	0.0006	0.0003	0.0006	0.003	0.002	0.003	0.022	0.011	0.022
	(0.0002)	(0.0003)	(0.0002)	(0.002)	(0.003)	(0.002)	(0.014)	(0.013)	(0.015)
Main Effects									
County FE	X	X	X	X	X	X	X	X	X
Year FE	X	X	X	X	X	X	X	X	X
Additional Controls									
Pre-BIPA Payment X Year FE		X			X			X	
Urban X Year FE			X			X			X
Pre-BIPA Mean of Dep. Var.	0.032	0.032	0.032	0.22	0.22	0.22	2.19	2.19	2.19
R-Squared	0.98	0.98	0.98	0.97	0.97	0.97	0.99	0.99	0.99

Note: Table shows coefficients on the coefficients on distance-to-floor × year interactions from difference-in-difference regressions. Although the estimation includes distance-to-floor interactions for all the years in our sample, we display coefficients for the post-reform years (2001-2003) above for brevity. The first-stage results displayed in Table 3 indicate that a $1 change in distance-to-floor translates into a dollar-for-dollar change in the monthly payments, so we can interpret the coefficients as the effect of an increase in monthly payments on a dollar-for-dollar basis. Coefficients are scaled to reflect the impact of a $50 increase in monthly payments. The unit of observation is the county × year, and observations are weighted by the number of beneficiaries in the county. The sample is the unbalanced panel of county-years with at least one MA plan over years 1999 to 2003. This sample includes 2,892 of 15,715 possible county-years and 63% of all Medicare beneficiaries. Year 2000, which is the year prior to BIPA implementation, is the omitted category. Controls are identical to those in Table A13. All monetary values are inflation adjusted to 2000 using the CPI-U. Robust standard errors clustered at the county level are reported in parentheses.