

**Paying a Premium on your Premium?
Consolidation in the U.S. Health Insurance Industry**

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WEB APPENDIX

Online Appendix 1: The Large Employer Health Insurance Dataset (LEHID)

A. *Summary Statistics for LEHID*

Appendix Table A presents descriptive statistics for each year for the original unit of observation in LEHID, a healthplan-year. There are two notable trends in the data. First, there is a pronounced decline in the prevalence of fully-insured plans.¹ This trend is not unique to our data source: it has been corroborated in the Kaiser Family Foundation/Health Retirement Education Trust annual *Employer Health Benefits Survey* and the Medical Expenditure Panel Survey-Insurance Component (MEPS-IC), and appears to be especially pronounced among the very largest firms.² As Appendix Table A also reveals, the composition of plan types fluctuated during the study period, with PPOs making substantial gains in the latter half of the study period mainly at the expense of HMO and Indemnity Plans.

It is also worth noting that Blue Cross and Blue Shield (BC/BS) affiliates are all assigned the same carrier ID. Given we calculate concentration within each market, and there are only a handful of markets in which BC/BS affiliates complete, the uniform coding of these affiliates is unlikely to be consequential for our analysis.

¹ Large employers can spread risk across large pools of enrollees, and may choose to purchase stop-loss insurance to limit their remaining exposure. Per ERISA (the Employee Retirement Act of 1974), these plans are also exempt from state regulations (such as specific benefit mandates) and state insurance premium taxes.

² We are grateful to Kosali Simon for tabulating the MEPS-IC data to investigate this trend.

B. Representativeness of LEHID

As stated in the text, LEHID consists primarily of large, multisite employers.³ In order to examine the representativeness of this sample, we compared LEHID to the two leading alternative sources of insurance data: the Kaiser Family Foundation/Health Retirement Education Trust (KFF/HRET) annual *Employer Health Benefits Survey*, and the proprietary Interstudy database of insurer data. The KFF/HRET survey randomly samples public and private employers to obtain national statistics on employer-sponsored health insurance; approximately 2000 employers respond each year. The data are not publicly available, nor is the sample designed to provide estimates at the market level. However, the survey is designed to yield representative estimates of national trends.

As shown in Table 1 and Appendix Table A, PPO plans were by far the most common in 2006, the final year of our study period. The same is true in the KFF/HRET data. More specifically, 58 percent of LEHID enrollment in 2006 is in PPOs versus 62 percent in KFF/HRET for firms with 200 or more employees. The shares are also similar for HMOs (25 percent in LEHID versus 22 percent in KFF/HRET), POS plans (14 percent and 9 percent), and indemnity plans (3 percent in both data sets). Additionally, the average premium in the LEHID in 2006 of \$7,832 is almost exactly halfway between the average single and average family premiums of \$4,239 and \$11,575 for large firms in the same year in the KFF/HRET data.. Thus on these important dimensions, the LEHID appears very similar to other sources of insurance data that include information on typical large employer plans.

Appendix Figure A reports the annual growth rate in premiums for a family of four in an employer-sponsored plan. As in LEHID, both employer and employee premium contributions are combined, and both fully and self-insured plans are included. However, LEHID does not report premiums for a standard family size. Thus, to obtain a comparable measure from the LEHID sample, we divide the average annual premium in LEHID by the demographic factor. According to our source, this yields the premium per “person equivalent.” Annual growth rates

³ More than 96 percent of enrollees represented in LEHID are employed by firms that have more than 5000 employees. This compares to a national figure of 37 percent across all firms (KFF, 2010).

for this “individual” premium are reported in Appendix Figure A as well. The trends are quite similar throughout the period.

We also compare our measures of market concentration with measures constructed by other researchers using the proprietary InterStudy database. InterStudy reports enrollment and premium figures at the insurer and MSA level. We compare the HHI and number of carriers tabulated by Scanlon et al (2008) to the corresponding figures from the LEHID.⁴

Before describing the results, we note that the InterStudy data is not directly comparable to LEHID for several reasons. The InterStudy data includes only fully-insured HMO plans for the time period we consider, and the allocation of enrollment across geographic markets is fairly noisy. In addition to these issues, the LEHID geographic markets, which generally correspond to MSAs (but may include multiple MSAs), are often larger than the Interstudy markets.⁵

To compare measures of insurer market structure derived from the two sources, we begin by mapping MSAs to the corresponding LEHID markets.⁶ When multiple MSAs comprise one LEHID market, we weight the InterStudy MSA measures of market structure by the population of that MSA (obtained from the 2000 Census) to create measures of insurer market concentration (HHI, number of carriers) for each geographic market defined in the LEHID dataset.

When we use all plans in the LEHID dataset to construct HHI (as in our regression models), the correlation coefficient between the two measures is 0.18 over the entire sample period (1998-2006). This figure rises to 0.31 when we restrict attention to HMO plans only.⁷ As is apparent in **Appendix Figure B**, there are also some differences between the two estimates when we compare trends over time. The LEHID HHI exhibits fairly steady growth in the latter half of the study period while the Interstudy HHI peaks in 2003. Inconsistencies in market

⁴ Our sincere thanks to Mike Chernew, Dennis Scanlon and Woolton Lee for sharing their estimates of market structure. For details on the construction of the InterStudy HHIs, see Scanlon et al (2006).

⁵ For example, the entire state of Maine, is a single geographic market in the LEHID data.

⁶ We were able to find a match for 284 out of a total of 328 MSAs present in the Interstudy dataset.

⁷ Note that the InterStudy estimates include only fully-insured plans, while the LEHID estimates include both fully-insured and self-insured plans. If we construct LEHID HHIs using only fully-insured plans, the corresponding correlation coefficients are somewhat higher at .27 and .32, respectively.

shares across various sources of insurance data are very common, as documented in Dafny, Dranove, Limbrock and Scott Morton (2011).

We use the LEHID-based HHI estimates for theoretical and practical reasons. First, the set of carriers that serve large, multisite firms such as those included in LEHID may differ from the set of carriers at large. Thus, LEHID itself likely offers the best estimate of the relevant insurance market structure. Second, the InterStudy data does not consistently include PPO enrollment during our study period, and PPOs account for a large and increasing share of plan enrollment in our data. Third, as noted above, researchers have documented serious concerns about the way in which InterStudy allocates enrollment across MSAs. Finally, the InterStudy data is quite expensive to acquire.

One further concern with the LEHID is that the probability of being included in the sample may vary substantially across areas. However, Dafny (2010) reports that the ratio of sampled enrollees to total insured lives (available at the county-level from the US Census of 2000) varies little across geographic markets. This provides further evidence that the sample accurately captures the typical healthplans offered by large employers in the U.S.

References

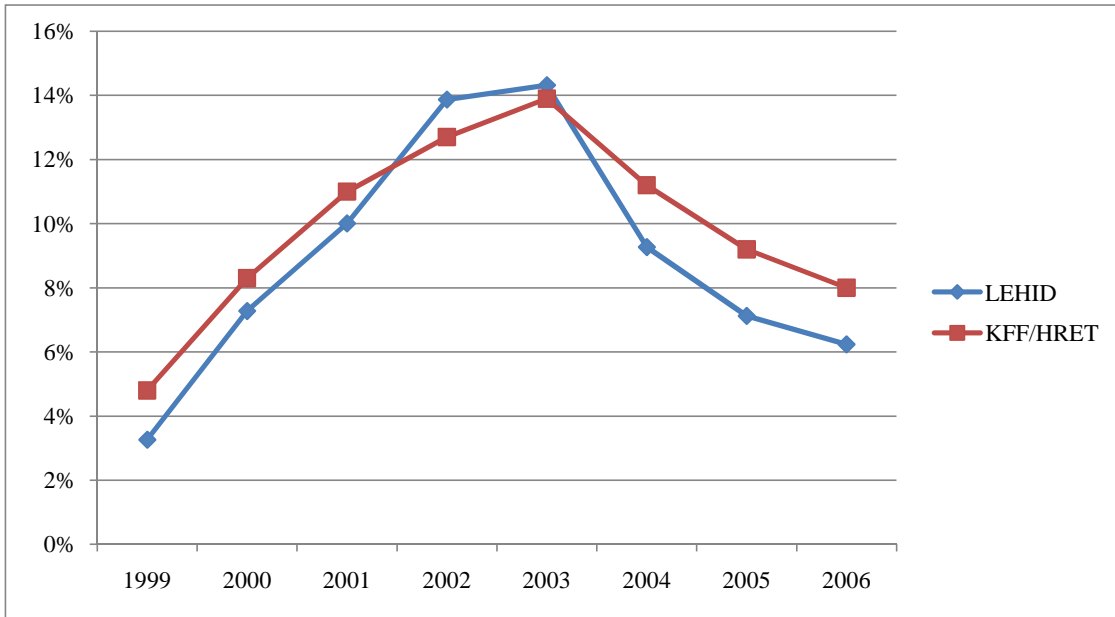
Dafny, L., Dranove, D. Limbrock, F. and Scott Morton, F. (2011), "Data Impediments to Empirical Work in Health Insurance Markets," *BE Press*, forthcoming

Appendix Table A. Descriptive Statistics

	1998	1999	2000	2001	2002	2003	2004	2005	2006
Premium (\$)	3995.50 <i>1118.70</i>	4125.50 <i>1161.40</i>	4426.32 <i>1222.23</i>	4868.92 <i>1292.52</i>	5545.23 <i>1425.18</i>	6338.24 <i>1565.92</i>	6925.26 <i>1734.47</i>	7400.19 <i>1860.18</i>	7835.63 <i>2014.87</i>
Number of Enrollees	181.70 <i>630.20</i>	165.40 <i>553.57</i>	156.30 <i>475.18</i>	173.03 <i>545.77</i>	174.42 <i>577.56</i>	178.65 <i>619.76</i>	171.32 <i>523.98</i>	196.42 <i>828.83</i>	190.16 <i>640.60</i>
Demographic Factor	2.34 <i>0.50</i>	2.26 <i>0.43</i>	2.24 <i>0.43</i>	2.25 <i>0.42</i>	2.29 <i>0.44</i>	2.29 <i>0.42</i>	2.33 <i>0.43</i>	2.32 <i>0.43</i>	1.84 <i>0.39</i>
Plan Design	1.06 <i>0.08</i>	1.06 <i>0.08</i>	1.04 <i>0.09</i>	1.06 <i>0.08</i>	1.06 <i>0.08</i>	1.04 <i>0.08</i>	1.03 <i>0.09</i>	0.99 <i>0.09</i>	0.99 <i>0.09</i>
Plan Type									
HMO	41.1%	43.0%	40.4%	39.9%	39.4%	36.6%	33.8%	33.5%	33.4%
Indemnity	20.4%	17.8%	13.6%	10.6%	9.9%	7.7%	6.4%	4.8%	4.8%
POS	22.8%	18.1%	20.1%	17.8%	14.9%	14.4%	14.8%	13.6%	13.5%
PPO	15.5%	21.1%	25.8%	31.6%	35.7%	41.2%	44.9%	48.0%	48.2%
% Fully Insured	44.7%	45.0%	39.0%	36.6%	32.4%	26.2%	23.9%	21.3%	19.8%
Market-Level Measures (counting each market once)									
Herfindahl Index	0.23 <i>0.09</i>	0.21 <i>0.08</i>	0.23 <i>0.08</i>	0.22 <i>0.07</i>	0.24 <i>0.08</i>	0.25 <i>0.08</i>	0.28 <i>0.09</i>	0.29 <i>0.10</i>	0.30 <i>0.11</i>
Four-firm Concentration	0.79 <i>0.09</i>	0.77 <i>0.10</i>	0.81 <i>0.10</i>	0.80 <i>0.09</i>	0.83 <i>0.08</i>	0.83 <i>0.08</i>	0.87 <i>0.08</i>	0.87 <i>0.07</i>	0.90 <i>0.07</i>
Number of Carriers	18.88 <i>6.38</i>	20.07 <i>6.17</i>	15.80 <i>5.38</i>	17.67 <i>5.42</i>	16.10 <i>4.64</i>	16.38 <i>4.60</i>	13.16 <i>3.87</i>	13.14 <i>3.39</i>	9.63 <i>2.82</i>
Lagged ln (Medicare costs)	8.54 <i>0.17</i>	8.48 <i>0.17</i>	8.48 <i>0.16</i>	8.54 <i>0.16</i>	8.62 <i>0.16</i>	8.69 <i>0.15</i>	8.75 <i>0.15</i>	8.82 <i>0.14</i>	8.88 <i>0.14</i>
Lagged unemp rate	4.89 <i>1.65</i>	4.51 <i>1.64</i>	4.24 <i>1.49</i>	3.99 <i>1.06</i>	4.66 <i>1.01</i>	5.55 <i>1.09</i>	5.78 <i>1.15</i>	5.40 <i>1.08</i>	5.09 <i>1.14</i>
Lagged Hospital HHI	0.12 <i>0.06</i>	0.20 <i>0.10</i>	0.13 <i>0.07</i>	0.13 <i>0.07</i>	0.13 <i>0.07</i>	0.13 <i>0.07</i>	0.14 <i>0.08</i>	0.13 <i>0.07</i>	0.14 <i>0.08</i>
Number of Employers	194	205	199	242	255	330	246	262	229
Number of Markets	139	139	139	139	139	139	139	139	139
Number of Observations	22074	25678	23661	29114	31539	33692	26575	26473	21854

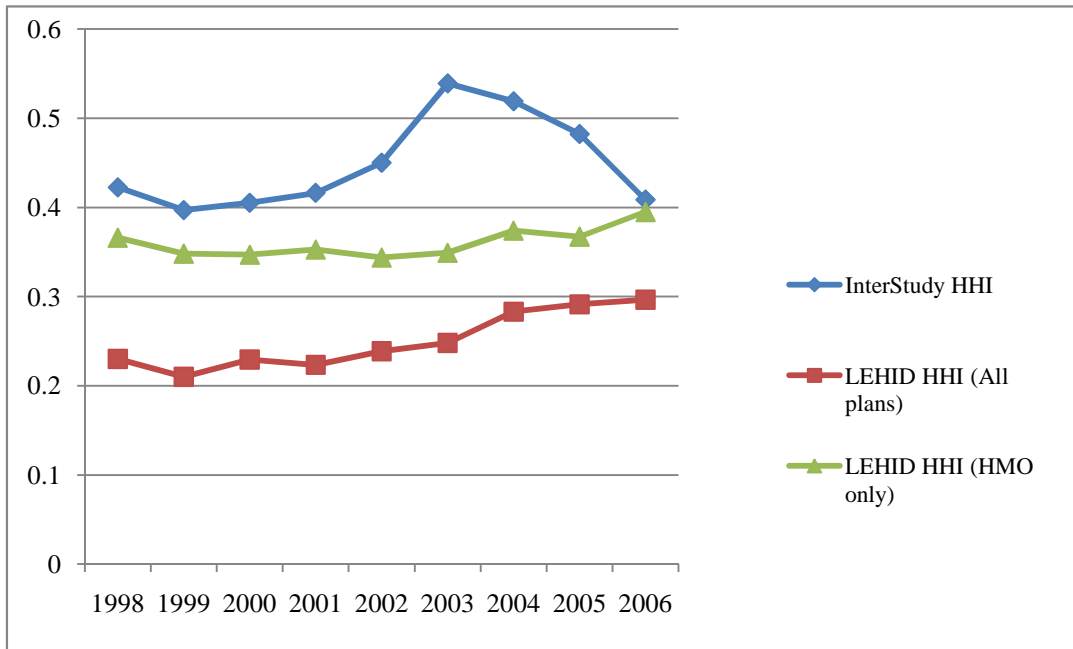
Notes: All statistics are unweighted. The unit of observation is an employer-carrier-market-plan-type-year combination, unless noted otherwise. Demographic factor reflects age, gender, and family size for enrollees. Plan design measures the generosity of benefits. Both are constructed by the data source and exact formulae are not available. Premiums are in nominal dollars.. Standard deviations are in italics.

Appendix Figure A: Annual Premium Growth, LEHID vs. KFF/HRET



Sources: LEHID sample (all plans), and 2007 Kaiser/HRET Annual Survey of Employer-Sponsored Health Benefits. Annual growth rates for the LEHID sample are calculated using employee-weighted average premiums for each year. Both sources combine fully-insured and self-insured plans.

Appendix Figure B. Comparison of Trends in LEHID vs. Interstudy HHI



Sources: LEHID sample (all plans), InterStudy database

Online Appendix 2: The Aetna-Prudential Merger of 1999

This appendix provides further background on the Aetna-Prudential merger that we focus on as part of our empirical approach. In December 1998 Aetna Inc. announced its intention to purchase Prudential Health Care (hereafter Prudential) for \$1 billion. Prudential had been publicly searching for an acquirer since at least October of the previous year; it was widely reported to be losing money and its parent firm, Prudential Insurance Company of America, had decided to exit the health insurance business. Importantly, Aetna was an unlikely suitor, as it had recently closed another \$1 billion acquisition (of NYLCare), and had publicly stated that future acquisitions would not occur “for at least a year.”¹ In announcing the deal, Aetna’s CEO claimed Prudential had ‘made an offer we can’t refuse.’² The deal closed in July 1999, after Aetna signed a consent decree to address concerns raised by the Department of Justice (DOJ).

According to industry analysts, Aetna’s acquisition of Prudential was part of a strategic bet on the long-term viability of managed care. Originally focused on providing fee-for-service plans to large, self-insured employers, Aetna gambled on the rising popularity of HMOs with the 1996 purchase of U.S. Healthcare, which offered fully-insured HMOs to small groups. The acquisitions of NYLCare (New York Life’s healthcare unit) and Prudential soon followed; managed plans were also the dominant segment for these units. At its peak after the Prudential acquisition in 1999, the firm covered 21 million lives. However, enrollment fell rapidly thereafter, declining to 13 million by 2002. A 2004 article in *Health Affairs* declared Aetna “the poster child for the aspirations and failures of managed care.”

This history provides some important insights for our analysis. First, the Aetna-Prudential merger does not appear to raise ex ante concerns about endogeneity. There is no anecdotal evidence indicating that the merger disproportionately affected markets that were experiencing low (or high) premium growth.³ Second, our estimates rely on a merger whose

¹ Freudenheim, Milt, “Aetna to Buy Prudential’s Health Care Business for \$1 Billion,” *The New York Times*, December 11, 1998, Section C, page 1.

² *Ibid*

³ This is corroborated by the empirical results we present in Section III of the paper.

effect on concentration was short-lived, and may therefore understate the effect of typical consolidations in the industry.⁴

⁴ To the extent that Aetna and Prudential offered different products prior to the merger, the premium effects would be smaller than we would expect from a merger between more similar firms. However, in our sample the proportion of managed care plans (HMOs and POS plans) is similar for Aetna and Prudential prior to the merger.

Online Appendix 3: Calculating Effect of Consolidation on Premiums

In this appendix, we describe how we use the coefficients from our IV specifications to arrive at the estimated effect of the growth in insurer concentration on premiums. If the average increase in HHI over the study period were uniformly distributed over time, there would be an annual increase of 87.25 points (698/8 years). Thus, consolidation between 1998 and 1999 would yield an increase in premium of $\exp(0.008725*0.39)$ or 0.34 percent by 2000 (recall that HHI in 1999 is assumed to affect premiums in 2000, and the IV estimate is 0.39). This initial increase in HHI would also have raised premium growth between 2000 and 2001, 2001 and 2002, etc, so that by 2007 premiums would be higher by $\exp(0.00875*0.39)^8-1$. However, we must also incorporate the effect of the 87.25 point increase in HHI between 2000 and 2001, this same increase between 2001 and 2002, etc. The resulting estimate of 13 percent can be calculated as

$$\left[\prod_{n=1}^8 \exp(n * 0.00875 * 0.39) \right] - 1 \approx 13 \text{ percent.}$$

As mentioned in the text, market concentration as measured by the HHI increased more during the latter part of the study period. Applying the above methodology to the *actual* average annual increases in HHI yields a somewhat smaller estimated cumulative increase in premiums of 7 percent. That is, the increase in premiums associated with the rise in insurer market concentration between 1998 and 2006 is approximately 7 percent.

Online Appendix 4: Impact of Consolidation on Non-Price Characteristics

In this appendix, we examine the impact of insurer consolidation on healthplan characteristics other than price, specifically the time-varying plan features that are included as controls in our main specifications (such as *plan design factor* and *% HMO*). For parsimony, all models are estimated on the sample including Texas (and the concomitant interaction term, *post*Texas*).¹ **Appendix Table B** presents results from these specifications. We begin with *plan design*, the measure of plan generosity that reflects the level of copayments (among other design choices). We find that employers reduce the generosity of plan design in the wake of the Aetna-Prudential merger, and that this effect is not present in Texas markets. Thus, increasing consolidation not only leads to higher prices, holding constant observable plan characteristics such as plan design (which was controlled for in the reduced-form specifications in Section III), but also to less generous insurance plans, as employers try to reduce the burden of higher insurance premiums. Note also the fact that *plan design* decreases post-merger is not consistent with the leading alternative explanation for post-merger price increases: quality improvements by Aetna and its competitors.

Columns 2 through 5 examine the impact of the merger on the share of employees enrolled in HMOs, POS plans, PPOs, and Indemnity plans, respectively.² We find employers in markets heavily impacted by the merger shifted away from managed care and toward PPOs and indemnity plans. Although we might have anticipated a shift toward *cheaper* plan types following a major consolidation, *ceteris paribus*, given the specifics of the merger in question these findings are unsurprising. Aetna was focused on its managed care products such as HMOs, so employers switching away from Aetna were likely to return to less-managed plans. This is also consistent with the post-merger increase in enrollment in self-insured plans (column 6), as HMOs are much more likely than other plan types to be fully-insured. It is also possible that post-merger increases in insurer market power result in especially steep premium increases for fully-insured products, thereby driving large employers further into self-insurance.

¹ Results change little when Texas is excluded or additional controls added.

² Employers could also respond by not offering health insurance coverage. However, our data does not allow us to distinguish attrition from the sample or firm exit (e.g. due to bankruptcy or a merger) from a situation where a firm no longer offers coverage. This is unlikely to be an important employer response given that approximately 99 percent of large firms offered coverage to their workers during this period (KFF, 2009).

Appendix Table B. The Impact of Consolidation on Plan Characteristics
Study Period: 1998-2002

Dependent Variable = Annual Change in

	<i>Plan Design</i>	<i>Fraction of HMO Enrollees</i>	<i>Fraction of POS Enrollees</i>	<i>Fraction of PPO Enrollees</i>	<i>Fraction of Indemnity Enrollees</i>	<i>Fraction of Self-Insured Enrollees</i>
Sim ΔHHI * post	-0.076*** (0.016)	-0.282*** (0.098)	-.137* (0.081)	0.180*** (0.066)	0.239*** (0.068)	0.326*** (0.146)
Sim ΔHHI * post * (Texas == 1)	0.091*** (0.024)	0.432*** (0.118)	-0.137 (0.106)	-0.091 (.086)	-0.204* (0.106)	-0.206 (0.190)
Texas Observations Included?	Yes	Yes	Yes	Yes	Yes	Yes
Number of Observations	30493	30493	30493	30493	30493	30493

Notes: The unit of observation is the employer-market-year. All specifications include lagged market covariates, change in demographic factor, fraction of self-insured patients, plan design, plantype shares and employer, market and year fixed effects. HHI is scaled from 0 to 1. Standard errors are clustered by market.

*** signifies $p < .01$, ** signifies $p < .05$, * signifies $p < .10$

Online Appendix 5: The Aetna-Prudential Merger: Assessing Competitors' Response

This appendix contains results from specifications estimated to assess the pricing response of Aetna's competitors in the wake of the merger. To the extent that Aetna was able to exercise market power post-merger and softened competition, we expect to see a corresponding (if weaker) price increase imposed by Aetna's rivals as well. As a test of this hypothesis, we restrict the sample to employer-markets that were served only by Aetna's competitors at the time of the merger and estimate specifications analogous to our reduced-form models. The results from these models are presented in **Appendix Table C** and are discussed in detail in the text in Part III, subsection D.

Appendix Table C. The Impact of the Aetna-Prudential Merger, By Initial Use of Aetna-Prudential

	Dependent Variable = Annual Change in ln(Premium); 1998-2002			
	<u>All Employer-Markets</u>	<u>All Employer-Markets in 1999</u>	<u>Employer Markets served by Aetna-Pru in 1999</u>	<u>Employer Markets not served by Aetna-Pru in 1999</u>
Sim ΔHHI * post	0.177*** (0.056)	0.222*** (0.053)	0.487*** (0.094)	0.206* (0.111)
Δ Demographic factor	0.304*** (0.006)	0.290*** (0.007)	0.331*** (0.010)	0.275*** (0.009)
Δ Fraction of Self Insured Employees	0.048*** (0.007)	0.050*** (0.007)	0.057*** (0.010)	0.047*** (0.009)
Δ Plan Type Shares	No	No	No	No
Δ Plan Design	No	No	No	No
Employer FE	No	No	No	No
Number of Observations	28645	22413	8634	13779

Notes: The unit of observation is the employer-market-year. All specifications include market-year controls and market and year fixed effects. Sample excludes observations from Texas. HHI is scaled from 0 to 1. Standard errors are clustered by market.

*** signifies $p < .01$, ** signifies $p < .05$, * signifies $p < .10$

Online Appendix 6: Details of the Occupational Employment Statistics (OES) Survey

The OES survey is conducted semi-annually and provides estimates of employment and wages in over 800 occupations representing all full-time and part-time wage and salary workers in nonfarm industries.¹ The survey description specifically notes that physicians are included in the survey, apart from the 15 percent who are self-employed. Approximately 200,000 establishments are surveyed every six months, and estimates are provided by geography (metropolitan statistical area or MSA) and by industry (using the North American Industry Classification System or NAICS). For the purposes of our study, we restrict attention to NAICS Sector 62 – Health Care and Social Assistance - and within this sector to occupations that are classified under the Standard Occupational Classification (SOC) system as “Healthcare Practitioner and Technical Occupations.”

Appendix Table D provides annual summary statistics for the entire sample between 1999 and 2002, and separately for “Physicians” and “Nurses,” as defined above. There is steady growth in average income over time for all occupation categories, with physicians experiencing a large jump between 2001 and 2002.² Nurses make up the largest employment category in the dataset by far, accounting for more than half of the estimated employment in healthcare-related occupations in all years. The “Nurses” category includes Registered Nurses (RNs) and Licensed Vocational Nurses (LVNs) with RNs making up over 75% of nursing employees in the data. RNs also earn higher wages than lower-skilled LVNs (mean wages of \$48,200 compared to \$32,300 in 2002).³

¹ The employment and wage estimates for all occupations do not include the self-employed. The OES survey data is available online at <<http://www.bls.gov/OES/>>

² This is partly due to changes in the OES survey methodology between 2001 and 2002. The OES survey collects hourly wage data in 12 intervals. For survey data collected before 2001, mean wages are calculated as a weighted average of the midpoints for each interval, except for the upper open-ended wage interval, for which the minimum is used. From 2002 onward, the wage for the upper open-ended interval is estimated using data collected from the National Compensation Survey.

³ In **Appendix Table E**, we estimate our earnings and employment regressions where we estimate separate effects for RNs and LVNs. Footnote 39 in the text contains our discussion of the results from this specification.

Appendix Table D. Descriptive Statistics (OES Survey Data)

	1999	2000	2001	2002
<i>All Occupation Categories</i>				
Average Earnings	42251 <i>21262</i>	43957 <i>21782</i>	45446 <i>22030</i>	49134 <i>29010</i>
No of Employees in Occupation-Market	1539 <i>5805</i>	1241 <i>4910</i>	1220 <i>4809</i>	1194 <i>4680</i>
<i>Physicians</i>				
Average Earnings	113494 <i>16655</i>	113301 <i>13630</i>	116318 <i>13257</i>	149584 <i>23923</i>
No of Employees in Occupation-Market	1154 <i>2057</i>	1432 <i>2205</i>	1414 <i>2254</i>	1413 <i>1949</i>
<i>Nurses</i>				
Average Earnings	39601 <i>5292</i>	41245 <i>5908</i>	42982 <i>5896</i>	44211 <i>6186</i>
No of Employees in Occupation-Market	16242 <i>18781</i>	16114 <i>17813</i>	16331 <i>17635</i>	16405 <i>17248</i>
<i>Totals</i>				
Number of Employees	3398560	3657910	3758310	3771600
Number of Physicians	106210	173260	173970	172370
Number of Nurses	2030230	2030330	2057690	2050660
Number of Occupation Categories	35	35	35	35
Number of Markets	126	126	126	126
Number of Observations	2209	2948	3081	3159

Notes: The unit of observation is an occupation-market combination. Sample does not include markets present in the state of Texas, where the DoJ imposed restrictions on the Aetna-Prudential merger. The OES survey collects hourly wage data in 12 intervals. The mean wage value for each interval is calculated as the midpoint of the interval, except for the upper open-ended wage interval where the mean is set at the lower end of the range. From 2002 onward, the BLS estimates the mean wage for the upper open-ended interval using data collected from the National Compensation Survey. Standard deviations are in italics.

**Appendix Table E. Effect of the Aetna-Prudential Merger on Healthcare Provider Earnings and Employment
(Nurse Categories Considered Separately)**

	<i>Dependent Variable = Δ Log (Average Income) from 99-02</i>			<i>Dependent Variable = Δ Log (Employment) from 99-02</i>		
Simulated Δ HHI	0.111 (0.181)	0.079 (0.217)	0.091 (0.205)	-2.372*** (0.809)	-2.721*** (0.948)	-2.435** (0.984)
Physician Indicator	0.193*** (0.034)	0.184*** (0.036)	N/A	0.523*** (0.170)	0.507*** (0.166)	N/A
Physician * Simulated Δ HHI	-2.007** (0.833)	-2.176*** (0.798)	-2.193*** (0.808)	-2.506 (7.937)	-2.632 (8.445)	-2.907 (8.438)
Registered Nurse Indicator (RN)	-0.015*** (0.006)	-0.017*** (0.006)	N/A	-0.148*** (0.026)	-0.154*** (0.028)	N/A
Licensed Vocational Nurse Indicator (LVN)	-0.012* (0.007)	-0.015** (0.008)	N/A	-0.165*** (0.034)	-0.172*** (0.036)	N/A
RN * Simulated Δ HHI	0.559** (0.264)	0.595** (0.293)	0.582** (0.293)	1.515 (0.916)	1.798 (1.126)	1.524 (1.067)
LVN * Simulated Δ HHI	0.073 (0.241)	0.107 (0.259)	0.094 (0.246)	2.300** (1.097)	2.543* (1.298)	2.272* (1.352)
Δ Hospital HHI, 1999-2002	0.020 (0.036)	0.019 (0.038)	0.021 (0.039)	-0.027 (0.256)	-0.032 (0.249)	-0.072 (0.237)
Trend in Dep Var, 1997-1998	No	Yes	Yes	No	Yes	Yes
Occupation Fixed Effects	No	No	Yes	No	No	Yes
# Observations	2228	1746	1746	2228	1746	1746

Notes: Unit of observation is the occupation-market-year. All physician occupations are lumped into one category. Specifications are restricted to occupation- markets present in both 1999 and 2002. Simulated HHI is scaled from 0 to 1. Sample does not include observations from Texas. All specifications are weighted by average estimated employment in each occupation-market. Standard errors are clustered by market.

*** signifies $p < .01$, ** signifies $p < .05$, * signifies $p < .10$