

## **Profitability and Cherry Picking of California Physician-Owned Hospitals**

Jim Pinder

La Sierra University, Riverside, California, USA

[jim.e.pinder@gmail.com](mailto:jim.e.pinder@gmail.com)

Minh Pham

Prologis, Inc., USA

[minh.pham@cgu.edu](mailto:minh.pham@cgu.edu)

Elizabeth Dameff

Kaiser Permanente in Fontana, California, USA

S. Eric Anderson

La Sierra University, Riverside, California, USA

### **Abstract**

Scrutiny of physician-owned hospitals (POHs) in the United States intensified in 1989 and continued until passage of the Patient Protection and Affordable Care Act of 2010 (ACA). Government studies attempted to better understand the allegations that POHs were exploiting the whole hospital exception in the Stark laws by primarily accepting the healthiest patients with the best insurance (cream skimming or cherry picking) while avoiding sicker, less well insured patients. The ACA prevented new POHs from opening and existing ones from expanding. What has happened to POHs in California since passage of the ACA? How do POHs compare to other hospitals in California? In this study, POHs were compared to two other groups of hospitals: investor-owned, and non-profit, using the metrics of net income margin percentage and low-reimbursing insurance payor mix, for the time period 2009-2015. The results indicate there are

no statistically significant differences between POHs and other hospitals ownership types when considering net income margin percentage. There are statistically significant results between POHs and other hospital ownership groups in low-reimbursing insurance payor mix. The data analysis shows that POHs cherry picked their patients (intentionally or unintentionally) from 2009-2015 but did not benefit financially from the advantageous payor mix.

*Keywords:* hospital, physician owned, specialty, health services, affordable care act.

## **Introduction**

Prior to passage of the Patient Protection and Affordable Care Act of 2010 (ACA), it was alleged that physician-owned hospitals (POHs) were operating in ways that were unfair to other hospitals. Opponents claimed they cream skimmed patients (only accepting the ones with the best insurance, or ones that were the healthiest). Physician self-referral occurs when a physician refers their own patient for additional care or services to a business entity in which they have financial ownership or interest. The logic was that if physicians were self-referring, they would only accept the most lucrative patients and avoid the ones with lower reimbursing or no insurance. They might also prefer to choose the patients that were relatively healthy and avoid the sicker ones. It was alleged that physicians who self-refer would benefit unfairly from this practice. It was also alleged that physicians would order unnecessary tests to build up the reimbursement in a fee-for-service payment model. As physician owners, greater reimbursement from insurance means increased profits for the hospital and their owners. The studies by the government and others look carefully at these allegations.

One small provision of the ACA was designed to halt the opening of new physician-owned hospitals (POHs) or expansion of existing POHs. The logic was that POHs were harmful and unfair to other hospitals and the healthcare system and this harm needed to be mitigated. Since 2010, when the ACA was passed, no known new POHs have been opened in compliance with the ACA. The purpose of this study is to empirically assess the patient payor mix, and to analyze the profit margin of POHs compared to other hospitals in California for the period of 2009-2015. It is logical to assume that POHs (a subset of investor-owned hospitals) would have owner return-on-investment as their number one priority. On the other hand, nonprofit hospitals do not have this motivation. Therefore, POHs would be expected to have a higher net income margin and a smaller low-reimbursing payor mix compared to nonprofit hospitals.

The Stark Laws (1989, 1990, 1993) and their associated regulations restricted physician self-referral<sup>1</sup>. An exception to these restrictions is allowing physicians to have an ownership in the entire hospital, as opposed to ownership of a subdivision of the hospital (such as the clinical lab). This is known as the whole hospital exception. The assumption was that ownership in the entire facility (such as owning shares of an investor-owned hospital) would be diluted enough that self-referral would not be a significant conflict of interest or financial drain on the system. Even if a physician referred their patient to a hospital in which the physician owned shares, it would not significantly benefit the physician financially. This makes sense if one is considering a large comprehensive hospital that offers many levels of service. The outcome can change when one considers a physician referring a patient to a small specialty hospital in which the physician has an ownership stake.

When Donald Trump became President, he began an effort to repeal and replace the ACA. Progress came with passage of the Tax Cuts and Jobs Act of 2017.<sup>2</sup> One provision of this

new law reduced the penalty of the individual mandate to \$0. This law set in motion the judicial proceedings that threatened to undo the ACA in its entirety as the courts must determine if the individual mandate is severable from the rest of the ACA. This latest case was called *California v. Texas* and oral arguments were heard in November 2020. A decision was reached, and the ACA continues to stand in its entirety.

Government studies have attempted to better understand the implications of POHs on the healthcare system and the communities in which they reside.<sup>3, 4, 5</sup> Other research has also investigated the claims against POHs at both the national and state levels.<sup>6, 7, 8</sup> None of the studies analyze both patient payor mix and net income margin while comparing POHs to both investor-owned and nonprofit hospitals.

## **Methods**

The aim of this study is to investigate California Physician-Owned Hospitals profitability and insurance mix compared to other hospitals and to evaluate how these variables have changed over time. The specific objectives of the study are:

1. Empirically assess the profitability of physician-owned hospitals compared to other hospitals in California for each year and over time.
2. Evaluate the payor mix of physician-owned hospitals compared to other hospitals in California for each year and over time.

Data was downloaded from the Office of Statewide Health Planning and Development website for the years 2009-2015. This data categorized hospitals as non-profit, investor-owned, or government. The umbrella term investor-owned contains both POHs and other for-profit hospitals. The number of POHs in California compared to all other hospitals in California is not

a published list or statistic. By analyzing and researching all investor-owned hospitals, it is estimated a high proportion of POHs have been identified. These hospitals were identified by searching investor-owned hospital websites and news stories to determine if they had direct physician ownership. It is possible some POHs remain unidentified and would thus remain in the pool of investor-owned hospitals. From 2009 to 2015, there were approximately 530 hospitals in California. There were between eight and 11 POHs, 154-154 investor-owned hospitals, 276-277 non-profit hospitals, and 89-92 government hospitals. It is possible some hospitals did not submit data to OSHPD. If this is true, these hospitals will not be included in the study. In the statistical analysis for this study, government hospitals are combined with non-profit hospitals because their corporate motivations are similar (community benefit). The number of hospitals reporting data varies. More hospitals report data relating to payor mix than do their characteristics or financial data.

The dependent variables that were analyzed are as follows:

1. Net income margin percentage
2. Low-reimbursing payor mix percentage

The measure for analyzing profit margin will be net income margin percentage. It is a more comprehensive variable compared to the other profit margin data points (total margin, operating margin) because it accounts for taxes and interest and describes a more complete picture of the hospital's financial situation. The formula for net income margin is revenue, minus the cost of goods, minus operating and other expenses, and minus interest and taxes, divided by revenue. <sup>8</sup>

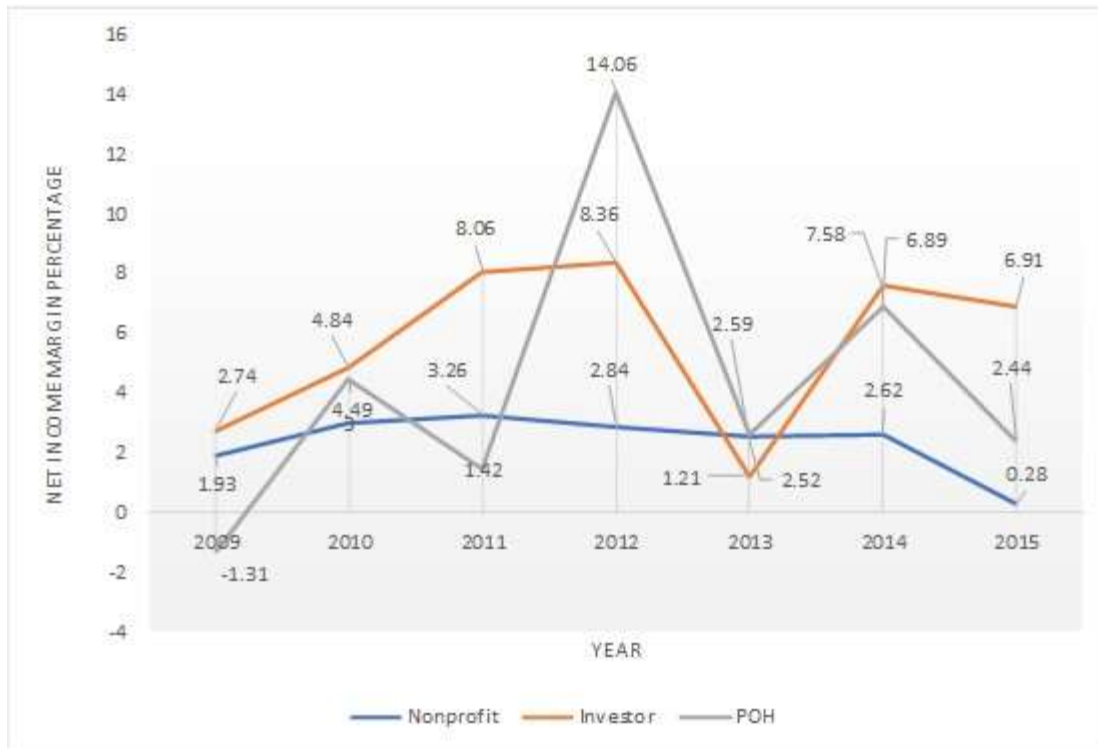
The measure for analyzing payor mix is percentage of payors from all possible options. In the OSHPD data set are nine insurance types: Medicare, Medi-Cal, private coverage, workers' compensation, county indigent programs, other government, other indigent, self-pay, and other payor. The insurance types will be grouped as follows: low reimbursing: Medi-Cal, county indigent, other government, other indigent, self-pay, and other payor; high reimbursing: Medicare and private coverage. Workers' compensation was excluded. This grouping was determined by considering which insurance types are considered higher reimbursing (private and Medicare), and combining all the others into the low-reimbursing category.

## **Results**

Results for each research objective and their associated statistical analysis follow. Means for net income margin percentage and low-reimbursing payor mix percentage for all hospitals, shown graphically, give a snap-shot of the results (figure 1).

## **FIGURE 1**

Figure 1: Net Income Margin Percentage Means For All Hospitals, 2009-2015



Low-Reimbursing Insurance Payor Mix Percentage Means for All Hospitals, 2009-2015



**Research objective #1.** Empirically assess the profitability of physician-owned hospitals compared to other hospitals in California for each year and over time. The first statistical analysis conducted to answer this research objective was a one-way between groups ANOVA. Comparing the three hospital ownership groups to each other resulted in statistically significant results in 2011, 2012, and 2014. Table 1 lists the p-values. Tukey and Scheffe post-hoc analyses confirm the results are significant in these years between investor-owned and non-profit hospitals. There is no statistically significant between POHs and other hospital ownership types.

**TABLE 1**

*One-Way Between Groups ANOVA Net Income Margin*

Year	POH N	Inv N	NP N	Total	POH Mean(SD)	Inv Mean (SD)	NP Mean (SD)	F-value	P-Value	Multiple Comparison	Tukey P-Value	Scheffé P-Value
2009	5	110	260	375	-1.31 (25.1)	2.74 (13.4)	1.93 (17.3)	.20	.82			
2010	7	107	258	372	6.63 (7.0)	5.12 (19.8)	3.00 (15.5)	.72	.49			
2011	8	106	256	370	1.42 (19.3)	8.06 (13.4)	3.26 (16.5)	3.64	.03*	Inv, NP	.02*	.03*
2012	8	106	259	373	14.06 (22.82)	8.36 (13.0)	2.84 (14.6)	7.32	.001**	Inv, NP	.003**	.004**
2013	7	109	254	370	2.59 (10.8)	1.21 (40.6)	2.52 (14.76)	.10	.90			
2014	7	104	258	369	6.89 (7.2)	7.58 (11.6)	2.62 (13.0)	5.98	.003**	Inv, NP	.002**	.003**
2015	7	106	256	369	2.45 (8.9)	6.91 (19.7)	0.28 (46.7)	1.01	.36			

Inv = investor, NP = non-profit

\* p < .05, \*\* p < .01

From the correlation analysis, the statistically significant variables relating to the dependent variable net income margin percentage were included as covariates in the random effects regression model. The Hausman test indicates that random effects are preferred over fixed effects. The variables that were included in the model from the correlation analyses are: teaching status ( $r = .13$ ), licensed beds ( $r = .11$ ), licensed bed occupancy rate ( $r = .22$ ), average length of stay ( $r = -.11$ ), and charity percentage of operating expenses ( $r = -.14$ ).

The random effects linear regression model, reported in Table 2 indicates that several independent variables are statistically significant and can predict the dependent variable net



income margin: investor-owned hospitals ( $b = .35$ ,  $p < .001$ ), licensed beds occupancy rate ( $b = .46$ ,  $p < .001$ ), and average length of stay ( $b = -.20$ ,  $p < .001$ ). The dependent variable, licensed beds occupancy rate, and average length of stay are standardized in natural log forms. The variable of most interest, POH, is not associated with predicting the dependent variable. The results indicate that compared to non-profit hospitals (reference variable), investor-owned hospitals are associated with an increase in net income margin percentage by 35%. An increase in licensed beds occupancy rate by 1% increases net income margin percentage by 0.46%. Increasing the average length of stay by 1% decreases the dependent variable by 0.20%. The two mentioned coefficients are significant at the 1% level. The model was checked for multicollinearity with a VIF of 1.60.

**TABLE 2**

*Random Effects Linear Regression Net Income Margin Percentage*

<b>Parameter</b>	<b>Standardized Coefficient</b>	<b>Standard Error</b>	<b>z</b>	<b>p-value</b>
<b>Constant</b>	-2.29	0.11	-20.65	< .001***
<b>POH</b>	0.11	0.08	0.44	.66
<b>Investor-owned Hospitals</b>	0.35	0.08	4.26	< .001***
<b>Teaching Status</b>	0.17	0.15	1.18	.24
<b>Licensed Beds Occupancy Rate</b>	0.46	0.08	5.81	< .001***
<b>Average Length of Stay</b>	-0.20	0.04	-4.92	< .001***

Dependent variable: net income margin percentage

Observations = 1,872, groups = 448, statistically significant (prob > chi2 = 0.00)

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Research objective #2.** Evaluate the payor mix of physician-owned hospitals compared to other hospitals in California for each year and over time. The first statistical analysis conducted to answer this research objective is a one-way between groups ANOVA. The results indicate there is statistically significant differences in low-reimbursing payor mix between POH

and investor-owned hospitals ( $p < .05$ ), and POH and non-profit hospitals in 2010, 2011, and 2012 ( $p < .05$ ). This indicates that there are statistical differences between POHs and the other hospitals groups in three years of the sample data. The p-values are listed below in Table 3, and statistically significant results are noted.

**TABLE 3**

*One-way Between Groups ANOVA Low-Reimbursing Insurance Payor Mix*

Year	POH N	Inv N	NP N	Total	POH Mean(SD)	Inv Mean (SD)	NP Mean (SD)	F-value	P-Value	Multiple Comparison	Tukey P-Value	Scheffe P-Value
2009	8	154	368	530	11.75 (24.5)	28.89 (29.3)	29.61 (26.0)	1.72	.18			
2010	11	153	367	531	7.39 (9.4)	29.46 (29.0)	30.49 (26.3)	3.96	.02*	POH, Inv; POH, NP	.02*, .01*	.03*, .02*
2011	11	153	367	531	7.43 (10.1)	28.72 (29.9)	29.86 (27.1)	3.73	.03*	POH, Inv; POH, NP	.03*, .02*	.04*, .03*
2012	11	153	367	531	7.94 (8.9)	31.10 (29.8)	30.67 (27.2)	3.87	.02*	POH, Inv; POH, NP	.02*, .02*	.02*, .02*
2013	10	154	366	530	20.05 (18.0)	29.13 (27.6)	31.22 (26.6)	1.09	.34			
2014	10	154	367	531	21.20 (17.8)	30.97 (29.3)	31.65 (27.0)	0.74	.48			
2015	10	154	367	531	21.37 (17.3)	32.19 (29.6)	33.33 (26.4)	0.99	.37			

Inv = investor, NP = non-profit

\*  $p < .05$

From the correlation analyses, the statistically significant variables relating to the dependent variable low-reimbursing payor mix were included as covariates in the random effects regression model. The Hausman test indicates that random effects are preferred over fixed effects. The variables that were included in the model from the correlation matrixes are: teaching status ( $r = .125$ ), licensed beds ( $r = .137$ ), average length of stay ( $r = .140$ ), and charity percentage of operating expenses ( $r = .138$ ).

The random effects linear regression model indicates that several independent variables are associated with a lower reimbursement payor mix (Table 4). The variable of most interest, POH ownership, is statistically significant meaning that it does predict low reimbursing payor mix. The statistically significant variables are POH ( $b = -0.13$ ,  $p = .02$ ), and teaching status ( $b = .14$ ,  $p < .001$ ). The coefficients show that compared to non-profit hospitals, if a hospital is

categorized as a POH, low-reimbursing payor mix would go down by 13%, which is significant at the 5% level. Compared to non-teaching status, teaching status increases low-reimbursing payor mix by 14%, which is significant at the 1% level. Average length of stay is the only standardized variable in natural log form and it is not statistically significant. The model was checked for multicollinearity with a VIF of 1.28.

**TABLE 4**

*Random Effects Linear Regression Low-Reimbursing Payor Mix Percentage*

<b>Parameter</b>	<b>Standardized Coefficient</b>	<b>Standard Error</b>	<b>z</b>	<b>p-value</b>
<b>Constant</b>	0.36	.01	24.68	< .001***
<b>POH</b>	-0.13	0.05	-2.44	0.02*
<b>Investor-owned Hospitals</b>	-0.03	0.02	-1.58	.11
<b>Teaching Status</b>	0.14	0.04	3.85	.001**
<b>Average Length of Stay</b>	0.00	0.01	-0.45	.65

Dependent variable: low-reimbursing payor mix percentage

Observations = 2,591, groups = 467, statistically significant (prob > chi2 = 0.00)

\* p < .05, \*\* p < .01, \*\*\* p < .001

## **Conclusion**

The primary allegation against POHs that this study investigated was whether POHs in California have cherry-picked or cream-skimmed patients (intentionally or unintentionally), resulting in an advantageous payor mix (second objective). Furthermore, this study considered if the profitability of POHs was different than other hospitals (first objective). The data shows that POHs in California from 2009-2015 have an advantageous payor mix that is statistically significant in several years (2010-2012). The analysis is clear that POHs have a payor mix that is favorable because they have fewer low-reimbursing insurance patients, as a percentage of their total payor mix. This study did not attempt to determine if the patients were healthier, only the type of insurance they carried. This conclusion validates the allegation that POHs cherry-pick or

cream-skim patients (intentionally or unintentionally). This study did not attempt to determine if this advantageous payor mix was obtained by POHs intentionally. It simply exists in the time period 2009-2015.

Logically, an advantageous payor mix could result in higher profit margins (first objective). The results show that POHs do not have a statistically higher net income margin compared to other hospitals. Having an advantageous payor mix would help achieve higher profit margins. POHs may have disadvantages compared to other hospitals that prevent them from achieving higher profit margins (location, size, services offered).

In conclusion, it is apparent that POHs occupy a very small portion of the hospital market in California. Their payor mix is desirable, but they do not seem to benefit financially from this advantageous payor mix.

### **Policy Implications**

From the Conclusion section of this chapter, it is known that physician hospital ownership (POHs) is associated with a statistically significant more advantageous payor mix. POHs have a lower fraction of their payor mix from poorly paying sources. But this advantageous payor mix does not benefit them consistently. Their net income margin is not statistically different than other hospital ownership groups. If POHs did not exist in California, their advantageous patient payor mix would be transferred to other hospitals. The number of POHs is so small, the other hospitals would not see any measurable improvements in their net income margins.

POHs as a business model exist because of a loophole in the Stark law (the whole hospital exception). The ability of physician hospital owners to take advantage of this opening in California has not been successful during 2009-2015. One of the strengths POHs enjoy because

of their relatively small size is maneuverability in the marketplace. They can transition from performing cardiac procedures to orthopaedic procedures quickly. But with ACA limitations, they cannot expand. Thus POHs in California are benign under the current conditions.

The coefficients from the random effects regression model for net income margin percentage indicate that compared to non-profit hospitals, investor-owned hospitals are financially stronger. They further indicate that as the amount of charity care increases, the profit margin decreases. The ACA's requirement that non-profit hospitals provide community benefit (or charity care) should be re-examined. It is incongruent that non-profit hospitals must provide charity care while investor-owned hospitals do not, considering how much it impacts net income margin percentage.

The coefficients from the random effects regression model for low reimbursing payor mix indicate that as the percentage of charity care increases, so does the low reimbursing payor mix. The result is similar to the previous paragraph where non-profit hospitals are disadvantaged by having to provide charity care. As they continue to provide additional charity care (as required by the ACA), their payor mix continues to deteriorate. Policymakers should consider requiring all hospitals to provide a community benefit or charity care, and the amount should be specific. As the ACA is written, the value or level of community benefit is not specified. To level the playing field, all hospitals should be treated equally in this regard.

### **Limitations**

A study is always limited by the data it uses for the analysis. Data from OSHPD is not without fault. While hospitals are required to submit their data each year, not every hospital complies to the same degree. For instance, Kaiser hospitals provided insurance payor mix data, but not the financial variables data. These gaps in the data could have affected the results

because non-profit hospitals were underrepresented in this area. Depending on how well Kaiser hospitals performed financially, the mean net income margin for non-profit hospitals could have gone up or down, affecting how POHs compared to them.

It is possible some POHs were missed when creating the groups to be studied. With the number of POHs being relatively low, missing one or two hospitals could have impacted the results.

Because POHs tend to be specialty hospitals that focus on a limited number of disease states or procedures, it might have been beneficial to control for the severity of patient diagnosis or case mix. This would help account for the differences in insurance payor mix or net profit margin percentage between a comprehensive acute care hospital and a small specialty hospital that only focuses on cardiac or orthopedic procedures. Unfortunately this data was not a part of the data set downloaded from OSHPD.

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