

The Effects of Physician-Owned Hospitals on Medical Care Quality and Expenditures: A Review and Update

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ABSTRACT

Background: The purpose of this paper is to provide a summary and update of the evidence on the effect of physician-owned hospitals (POHs) on medical care quality and expenditures, focusing on two questions: (1) is the quality of care delivered in POH settings different from the quality of care delivered in non-POH (NPOH) settings?; and (2) is the level of medical expenditures in POHs higher than their NPOH counterparts?

Methods: For each of the two outcomes of interest—POH quality and expenditures—we conducted a two-part analysis consisting of a review of the literature and an analysis of available public data supporting direct comparisons of POHs and NPOHs for each measure.

Results: The literature shows that POHs provide a level of care equal to or greater than their NPOH counterparts. The performance of POH hospitals in the U.S. Medicare value-based purchasing program is consistent with the literature. POHs appear to achieve these quality rankings at a lower cost to the U.S. Medicare program, primarily because POHs are not paid the same subsidies as NPOHs.

Conclusions:

Much of the policy concerns over physician ownership, particularly those arguing that the “demand inducement” aspects of physician ownership drive up costs, are likely overstated. Conversely, taking the quality and expenditure savings estimates together, POHs would generate about \$10 billion in savings over a 10-year period.

Keywords: physician ownership; physician owned hospitals; quality; outcomes; expenditures; costs; hospital value based purchasing; Medicare

Implications for Policy Makers

Physician-owned hospitals, or POHs, have been the subject of controversy globally. The main argument against POHs is “supplier-induced demand,” a notion that physician ownership implies high incentives for overuse of services. While at first glance this seems like a reasonable hypothesis, this line of thinking ignores the fact that all hospitals (especially those in the U.S.) are to some extent interested in increasing revenue. Thus, we have argued that the right question is, generally, how POHs differ, if at all, from their non-POH (or NPOH) hospital counterparts. Our research has been focused on that topic. The main implications to policy makers are that concerns over POHs are largely overstated. We find, through a combination of literature review and straightforward analysis of U.S. public data sources, that POHs have above-average quality and provide the same services for less reimbursement.

Implications for Public

One of the main tenets of “value-based purchasing,” from the perspective of the public, is enabling health care consumers to determine what they are getting for their (or their employer’s or insurer’s) money. In some cases, consumers may be willing to pay more for services if they determine the quality to be better. In other cases, consumers may be interested in how much less they can pay without jeopardizing quality. In this case, we show that, in the U.S. and perhaps beyond, physician ownership results in better outcomes and, other things equal, lower overall expenditures.

1. Introduction

The debate over physician ownership of acute care hospitals has been active for the past decade. Most of the arguments distill down to a relatively simple debate. Critics argue that physician-owned hospitals (POHs) “over-utilize” medical care services because, they contend, physicians are more likely to utilize services in which they share an ownership interest.[1, 2] Defenders of POHs argue that the hospitals deliver a high quality of care, evident in their above-average performance in the Centers for Medicare and Medicaid Services’ (CMS) new Hospital Value Based Purchasing Program (HVBP), and that the incentives to under-utilize or over-utilize medical care services are persistent issues throughout the health care system—just as evident in non-POHs (NPOHs), community hospitals, and doctors’ offices as anywhere else.[3-7]

The purpose of this paper is to provide a summary and update of the evidence on the effect of POHs on medical care quality and expenditures, and to supplement the review with some recently published U.S. health system data. The objective is to address two relatively straightforward questions. First, is the quality of care delivered in POH settings different from the quality of care delivered in NPOH settings? Second, is the level of medical expenditures in POHs higher than their NPOH counterparts? In assessing the economic value of medical care interventions, we are generally interested in whether an intervention is more costly or less costly than the status quo. If an intervention is more costly, payers will generally look for evidence that the additional expenditures are resulting in better quality. The most desirable medical interventions, at least from a payer perspective, are those that generate better outcomes but do not cost more than the status quo; even better are interventions that result in better outcomes and cost less. In this paper we show that POHs have better outcomes and, overall, cost less per stay than their NPOH counterparts.

In this paper we employ two methods to address these questions. First, we review the literature pertaining to POH quality and expenditures. Rather than include this review as background, we present the review for each outcome as part of the results section. Second, we pair each review with an analysis of data from public U.S. sources. For quality, we present data from the HVBP program, comparing POHs and NPOHs. For expenditures, we conduct a simple analysis that calculates total 2013 Medicare outlays under two assumptions: status quo versus moving all current POH patients into NPOH settings. We then calculate the net difference between the two amounts.

2. Methods

For each of the two outcomes of interest—POH quality and expenditures—we conducted a two-part analysis consisting of a review of the literature and an analysis of available public data supporting direct comparisons of POHs and NPOHs for each measure. The literature reviews were conducted in PubMed, using combinations of the following key words paired with “physician ownership” or “physician owned hospital(s)”: quality; outcomes; expenditures; costs; hospital value based purchasing; Medicare charges; and Medicare reimbursement. The objective of the review was to retrieve only empirical research on each topic; thus, articles focused on commentary and narrative analyses were not considered. In addition, our review was not

intended to be systematic; a systematic review on POHs was recently published,[8] and this helped guide our review.

To supplement the literature on POH quality, we conducted a comparison of POHs and NPOHs using public data from the CMS HVBP program. The HVBP program “attaches value-based purchasing to the payment system that accounts for the largest share of Medicare spending, affecting payment for inpatient stays in over 3,500 hospitals across the country.”¹ Participating hospitals receive additional inpatient acute care service payments from CMS based on an overall quality score, the basis of which is the average of 14 scores across a variety of measures focused on process of care, mainly adherence to practice guidelines and best-practices.[9, 10]

To supplement the literature on POH expenditures, we conducted a comparison of average U.S. Medicare expenditures for the same outpatient and inpatient services across the two settings. Another important factor driving POH expenditures is that, due to the structure of the Medicare payment system, POHs generally receive less payment per hospitalization than an NPOH providing the same service. Total POH expenditures can be expressed as a simple identity: $TE_{POH} = Q_{POH} \cdot P_{POH}$, where TE_{POH} represents total medical care expenditures in POHs, Q_{POH} is the quantity of services provided in POHs, and P_{POH} is the average price per service provided in POHs. In the inpatient setting, P_{POH} is analogous to a Medicare Severity Diagnosis Related Group (MS-) payment in CMS’s Medicare Inpatient Prospective Payment System (IPPS); in the outpatient setting, P_{POH} is analogous to CMS’s Ambulatory Payment Classification (APC) groups paid under the Medicare Outpatient Prospective Payment System (OPPS).

Assuming the *quantity* of services provided in POHs (Q_{POH}) is essentially no different than the quantity of services provided in NPOHs (we address this in the expenditure literature review), all other things equal, in order for POHs to have higher *total expenditures* (as POH critics argue) it must be the case that $P_{POH} > P_{NPOH}$, where P_{NPOH} is the average price per service in NPOHs. To further explore this, we analyzed recently released Medicare Provider Charge Data (Inpatient & Outpatient) from CMS [11] to assess differences in Medicare payments to hospitals according to POH versus NPOH status. The basic hypothesis was that actual Medicare payment rates vary substantially by hospital, and that net payments per services in POHs is less than the same services provided in NPOHs; that is, $P_{POH} < P_{NPOH}$ for a given set of DRGs or APCs. We based this hypothesis on the fact that NPOHs are more likely to receive outlier payments, disproportionate share payments, indirect medical education, graduate medical education, capital expenses, and other pass-through expenses.[12]

The CMS inpatient data include hospital-specific charges for the more than 3,000 U.S. hospitals that receive Medicare IPPS payments for the top 100 most frequently billed discharges, paid under Medicare based on a rate per discharge using the MS-DRG for Fiscal Year (FY) 2013. These DRGs represent almost 7 million discharges or 60% of total Medicare IPPS discharges. For these DRGs, average charges and average Medicare payments are calculated at the individual hospital level. The CMS outpatient data include estimated hospital-specific charges for 30 APC groups paid under the OPPS for Calendar Year (CY) 2013. The 30 APCs

¹ See generally <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/hospital-value-based-purchasing/index.html?redirect=/hospital-value-based-purchasing/>

represent approximately 75% of all Medicare outpatient expenditures (based on communication with CMS). For these APCs, the estimated average charges and the average Medicare payments are provided at the individual hospital level.²

We compiled these downloaded CMS data using Stata® software to create inpatient and outpatient analytic databases. To each database we merged a crosswalk linking hospital provider identifiers with POH status ($n = 209$). We then calculated the average payment rate differentials (POH vs. NPOH) for the 100 DRGs and the 30 APCs. The last step was to extrapolate these findings to the national population, taking into account the fact that the DRG data represent about 60% of inpatient expenditures and the APC data represent about 75% of all outpatient expenditures. The goal was to calculate the added expense that would be incurred by government payers if all POH patients were no longer allowed to visit POHs (e.g., as a result of legislative restrictions). In this hypothetical construct, the associated calculation is to take the POH caseload and apply the NPOH average paid amounts.

3. Results and Discussion

3.1. Literature on Quality

The literature on POH quality began growing considerably in the mid-2000s. A study commissioned by the Centers for Medicare and Medicaid Services (CMS) observed cardiac and orthopedic surgical hospitals consistently performed better than expected given the mix of patients treated.[13] Moreover, the CMS study found that specialty cardiac hospitals performed better than their general hospital competitors on three of the four cardiac inpatient quality indicators based on ratios of observed versus expected rates. The three measures (“Patient Safety Indicators,” or PSIs) were “selected infections due to medical care” (PSI = 7), “post-op pulmonary embolism or deep vein thrombosis” (DVT) (PSI = 12), and “post-op sepsis” (PSI = 13). For each of these measures, the “expected” rate of occurrence was significantly higher than the observed rate in the specialty hospital group, whereas in all but one measure general hospital competitors (NPOHs) had higher than expected rates.

Barro et al. (2006) analyzed Medicare claims data at the hospital referral region (HRR) level and found that specialty hospital entry leads to both a reduction in expenditures and a decrease in mortality.[14] A consistent theme in these and other studies is that specialty hospitals have higher procedural volumes on average, and are therefore well-positioned to exploit the positive outcome effects associated with higher volume. Like Barro et al., Cram et al. (2005) found no significant differences in mortality for cardiac patients treated at specialty hospitals and general hospitals after adjusting for lower severity and higher procedure volume at specialty hospitals.[15] Similar results were found by Nallamotheu et al. (2006), who also studied cardiac specialized hospitals but used different methods.[16] Using a rich dataset from the National Registry of Myocardial Infarction, the authors found that greater hospital specialization in

² See CMS-1589-FC-Claims Accounting narrative available at www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Downloads/CMS-1589-FC-Claims-Accounting-narrative.pdf

percutaneous coronary intervention (“PCI”) was associated with lower risk of in-hospital mortality.

In addition to the learning effects of higher procedural volumes, another explanation for the better outcomes at specialized cardiac hospitals is better adherence to clinical practice guidelines and protocols. Popescu et al. (2008) used CMS data to compare the quality of care of specialty cardiac hospitals and competing general hospitals, and found that specialty hospital compliance with heart attack and heart failure guidelines was similar to that of competing general hospitals.[17]

In sum, the peer-reviewed literature on quality of care provided in POHs is remarkably consistent, finding that specialty hospitals and POHs provide at least the same quality of care as NPOHs, and according to most studies the levels of quality observed in POHs exceeds that of NPOHs. These findings are consistent with a recent review paper on POH “effectiveness,” particularly among the more rigorous study designs.[8] Moreover, the published evidence on POH quality clearly supports the conceptual framework of the quality-related benefits of specialization, procedural volume, and learning-by-doing, which we have described previously.[7]

3.2. *Value-Based Purchasing*

POHs have performed exceptionally well in the HVBP program. In 2013 the largest reward went to a POH, and some of the biggest cuts went to NPOHs. Higher quality can result in cost savings in a number of different ways, but the most likely types of savings occur in the reduction of “excess” charges associated with (1) patient safety and preventable medical errors, and (2) avoidable deviations from established clinical practice guidelines (CPGs) and protocols. Prior to the HVBP, we would expect POHs to perform well in these dimensions. The CMS report found that POHs had substantially lower preventable medical errors, and the Popescu article (discussed above) found that POHs are better at following CPGs.

Whereas the 2006 CMS study focused on patient safety indicators,[13] the HVBP program focuses on related process of care measures.[10] Comparative data from the HVBP program for NPOHs versus POHs is shown in **Table 1**. POHs outperform NPOHs by a sizable margin in both of the HVBP composite measures. Consistent with the published studies to date, the HVBP process quality composite score is nearly 15.7% higher on average for POHs. The difference in patient-experience measures is substantially greater, where the POH score is nearly twice the NPOH score. Combined, the composite score for POHs is about 30% higher than the NPOH composite score.

Table 1. POH Performance in the Hospital Value-Based Performance Program, 2013 (a)				
Measure (b)	NPOH Mean (c)	POH Mean (d)	Diff. in Score	% Diff. in Score
HVBP Process Score	42.16	48.76	6.60	+15.7%
HVBP Patient Score	12.45	21.59	9.14	+73.4%
HVBP Total Score	54.61	70.35	15.74	+28.8%
<i>Sources & Notes:</i> (a) Based on data from CMS Hospital Compare and a list of current physician owned hospitals provided by Physician Hospitals of America; higher scores imply better performance; (b) HVBP = CMS Hospital Value-Based Payment program; (c) NPOH = non physician-owned hospital; (d) POH = physician-owned hospital				

Higher HVBP process scores suggest better adherence to CPGs on the part of POHs, which is consistent with some of the literature on POHs.[17] Moreover, this differential is associated with a cost. One way to estimate the cost differential is to estimate the probability and costs associated with the medical problems most likely avoided due to improved CPG adherence. The 12 HVBP measures are generally designed to minimize the occurrence of certain avoidable adverse events, complications, and readmissions associated with common inpatient admissions, including acute myocardial infarction, heart failure, pneumonia, and a wide range of surgical procedures.

For the conditions associated with all 12 measures, rates of adverse events and complications average about 9%, taking into account differences in rates for the types of adverse events and complications associated with each measure.[18-22] For these events, the average added cost is about \$15,000 in current dollars.[18, 23]. The mean expected added cost of adverse events and complications is the product of the two, or about \$1,343 per admission. In addition, about 15% of the discharges associated with these admissions will result in re-admissions.[24, 25] Assuming an average cost per re-admission of \$13,924 [24], the mean added expected costs for re-admissions is \$2,064. Added to the adverse event and complication added cost, the total mean expected added cost per case associated with the 12 HVBP process measures is about \$3,407. This can be viewed as an average for NPOHs, given that the vast majority of the cited data used in the calculations is based on acute care community hospitals. Given that POHs score 16% better in the HVBP process measures, we can assume that the average added cost for POHs would be 16% less, or \$2,862.

If we assume that the 238 POHs generate approximately 4,500 discharges per year on average, totaling 1,071,000 admissions per year, then the total added costs of complications, adverse events and readmissions in POHs is about \$3.07 billion per year. If we were to move all of those patients into NPOHs, where the average added cost is 16% higher, the total added costs of complications, adverse events and readmissions of the “re-assigned” POH patient grows to about \$3.65 billion per year, for a total annual difference of \$584 million. Assuming these

differentials persist, over a 10-year period with an annual average inflation rate of 3.5% the “quality savings” associated with POHs would generate \$6.8 billion in savings.

3.3. *Literature on Expenditures and Utilization*

The majority of peer-reviewed published studies show that POHs are *not* associated with higher utilization. The studies commissioned by Congress were the first comprehensive studies of POHs. The first of these studies was conducted by Centers for Medicare and Medicaid Services (CMS) and Research Triangle International (RTI).[13, 26] The CMS study is especially noteworthy because they were able to measure actual physician ownership shares through site visits to 13 specialty hospitals, and link those ownership shares to Medicare claims data through the Medicare provider identifier; no other study has done this. The CMS study found that the incentive for physicians to refer to hospitals in which they have an ownership stake depended more on the size of the ownership stake rather than the fact that they were owners. Given that ownership shares on average were very low, the CMS study found that referral patterns were not significantly affected by the entry of specialty POHs into the market. The most important limitation of the CMS study is that it did not take into account endogenous POH entry and did not examine the role of baseline trends in utilization.

Using a different methodology, the CMS study essentially reached the same conclusions as a parallel study conducted by the Medicare Payment Advisory Commission (MedPAC) [27-31]—MedPAC’s first of two reports. The MedPAC study used a “differences in differences” model to examine the effect of cardiac POHs on changes in Medicare cardiac treatment costs from 1996 to 2002. The study found no statistically significant findings in utilization rates between hospital referral regions (HRRs) with and without cardiac specialty hospitals. The main limitations of the MedPAC study are that it only focused on cardiac POHs and that the study did not take into account the likelihood that POHs are more likely to enter areas with higher than average pre-entry levels of utilization, thereby creating a potentially serious endogeneity problem. MedPAC later repeated their analyses using a larger sample of cardiac POHs and a more recent time period—1996 to 2004.[29] In the revised study, they found that cardiac surgeries per capita were 6% higher in markets with cardiac POHs. Again, the main limitations of the revised MedPAC study are that it only focused on cardiac POHs and that the study did not take into account endogeneity of POH market entry.

Nallamothe et al. (2007) focused exclusively on the effects cardiac POHs.[32] Using Medicare claims data from 1995 to 2003, they found that rates of change for total revascularization were higher in HRRs after cardiac POHs opened when compared with HRRs where new cardiac programs opened at NPOHs and HRRs with no new programs. Four years after their opening, the relative increase in adjusted rates was more than two-fold higher in HRRs where cardiac POHs opened when compared with HRRs where new cardiac programs opened at NPOHs and HRRs with no new programs. The relative increase in adjusted rates of coronary revascularization was 19.2% for HRRs with new cardiac POHs, compared to 6.5% for HRRs with new cardiac programs at NPOHs and 7.4% for HRRs with no new programs. Similar to the MedPAC studies, the main limitations of this study are that it only focused on cardiac POHs and it did not adequately take into account endogeneity of POH market entry. An additional

limitation of the study is that it is not clear how much variation in HRR utilization rates is explained by the models, and how well the models deal with unobservable time-variant HRR characteristics.

Two studies to date have examined the effect of POHs on Medicare expenditures, rather than focusing separately on the volume and price components of expenditures. The first of these studies-- Barro, Huckman, and Kessler (2006)-- analyzed Medicare claims data from 1993, 1996, and 1999, using a matched case control panel design with fixed HRR effects.[14] Their main findings were that hospital expenditures for patients treated in HRRs with cardiac specialty hospital entry ("entry HRRs") experienced roughly 3% slower growth in cardiac care expenditures compared to patients treated in HRRs without cardiac specialty hospitals ("control HRRs"). Under the reasonable assumption that HRRs with POH entry would have retained their 1993-1996 trend in expenditures and outcomes in the absence of POH entry, they found that specialty hospital entry leads to both a *reduction* in expenditures of at least 7% and a *reduction* in mortality of at least a 4%. The results were robust to several different specification tests. The main limitations of the Barro et al. study are the limited time frame (only three time points, with 1999 as the most recent year) and inadequate consideration of endogenous market entry.

Schneider et al. (2010) examined the effect of POHs on Medicare per-enrollee expenditures at the metropolitan area (MSA) level nationwide, spanning the 8-year time period from 1998 to 2005.[33] The study was the first POH study to use fixed effects panel data estimation with instrumental variables to account for the bias introduced by endogenous POH market entry (i.e., POHs may be more likely to open in high-growth/high-demand markets with high levels of Medicare per enrollee expenditures). After controlling for other variables that are likely to affect expenditures (especially the age and sex distribution of the MSA), Schneider et al. found no association between POH presence and Medicare expenditures per enrollee at the MSA level. The results were robust to changes in model specification, estimation technique, and definition of geographic market, leading the authors to conclude that "the 'demand inducement' aspects of physician ownership of acute care hospitals (if any) have no meaningful impact on market-level Medicare expenditures per enrollee." The results of Schneider et al. were somewhat similar to the results of two recent studies by Lu et al., both of which employed a sound methodological approach and found no POH effects on utilization.[34, 35]

Finally, two studies by Mitchell reach conclusions somewhat similar to those of Nallamotheu et al. (2007), although the methods differ substantially. Mitchell (2005) used state-level data from Arizona, although the study is severely hampered by its assumption that physician owners can be identified simply as physicians with relatively high-volume admissions to POHs.[36] In addition, the study is largely descriptive, lacking necessary statistical controls for case mix differences, baseline trends, and the likely possibility that POH entry is endogenous (i.e., POHs will enter markets with high demand).

The other Mitchell study (2008) analyzed workers compensation claims in Oklahoma, finding that the entry of orthopedic specialty hospitals was followed by increases in market area utilization for complex fusion surgery.[37] The main problems with the Mitchell studies are the inability to determine whether utilization differences reflect appropriate or inappropriate care and the lack of a theoretical framework that specifies why financial incentives apply uniquely to

physician ownership and no other forms of organization—a finding that is contrary to the literature on the economics of organization.[38, 39]

In sum, based on these studies, the effect of POH on expenditures appears to be ambiguous. The studies with the most methodological rigor tend to reach the conclusion of “no effect,” and one of those studies with particularly good methods finds that POHs *decrease* utilization and expenditures. There is clearly no trend toward showing that POHs lead to higher utilization, no study to date has been able to show whether any observed utilization differences represent appropriate or inappropriate medical care services. It is important to note that the CMS report on POHs found that physician owners do not change their referral patterns after taking an ownership interest in a hospital, [13] and that could explain why studies of POH utilization effects have failed to consistently find an effect.

3.4. Medicare Payment Differentials

Based on the preceding discussion of POH utilization and referring back to the discussion of our methodological approach, the *quantity* of services provided in POHs (Q_{POH}) is essentially no different than the quantity of services provided in NPOHs, all other things equal. Thus, in order for POHs to have higher *total expenditures* it must be the case that $P_{\text{POH}} > P_{\text{NPOH}}$, where P_{NPOH} is the average price per service in NPOHs. However, for all DRGs and APCs, we found that POHs had lower net payment rates than NPOHs. This differential was observed at the national level and within states.

Table 2 summarizes the results of this analysis. If all POH patients were re-assigned to NPOHs in 2013, an additional \$267,568,504 in expenditures would be incurred by the Medicare program. Over a 10-year period, assuming a 3.5% annual inflation rate, the additional total expenditures incurred would be about \$3.1 billion. Put differently, POHs result in \$3.1 billion in savings attributable to lower reimbursement rates for the same procedures relative to their NPOH counterparts.

Table 2 Summary of Savings from POH-NPOH Payment Differentials, 2011-2013, and 10-Year Projected Savings					
	2011	2012	2013	Percent Change (2011-2013)	10-Year Projected (c) (based on 2013)
Inpatient (a)	\$228,876,105	\$241,600,378	\$255,959,743	10.6%	\$2,559,597,430
Outpatient (b)	\$8,392,096	\$10,583,490	\$11,608,761	27.7%	\$116,087,610
TOTAL	\$237,268,201	\$252,183,868	\$267,568,504	11.3%	\$2,675,685,040
TOTAL (d)					\$3,138,951,319
<i>Notes & Sources:</i> See text. (a) Savings based on 100 DRGs is adjusted to reflect all DRGs; (b) Savings based on 30 APCs is adjusted to reflect all APCs; (c) 10-year projected savings is equal to the 2013 amount multiplied by 10; (d) assumes 3.5% annual inflation during the 10-year projection period					

4. Conclusions

In this paper we have reviewed the evidence on POH quality, utilization, and expenditures and reported the results of some straightforward additional analyses to supplement the published literature. The literature on quality unequivocally supports the hypothesis that POHs-- through a combination of specialization, higher procedural volume, and learning-by-doing—are able to consistently deliver quality as good and in most cases better than their NPOH counterparts. Our analysis of the HVBP data adds further support to this general finding. If all POH patients were re-assigned to NPOHs, an additional \$6.8 billion in medical care costs associated with adverse events, complications, and readmissions would be incurred due to the HVBP process score differential, where POHs have consistently outperformed their NPOH counterparts.

The literature on POH expenditures and utilization fails to support the conjecture that POHs achieve their quality results at higher costs, either by increasing the intensity of services or “inducing” demand for unnecessary services. This is in part because there is no a priori reason why we would expect differences by ownership; both POHs and NPOHs face similar regulations, payment systems, and financial incentives. Thus, while we can to argue that demand inducement is a relevant issue in the U.S. health care system, it is not a factor that clearly differs by organizational model; we have evidence of many cases in which demand inducement is present in NPOH settings as well.

In addition to the absence of consistent findings on utilization, overall expenditures on POHs are significantly lower than expenditures on the same services in NPOH settings. The supplemental analysis reported in this paper shows that in 2013, if all of the care provided by

POHs were to migrate to NPOHs, the Medicare program would have to pay an additional \$267 million, or \$3.1 billion over a 10-year period.

Taking the quality and expenditure savings estimates together, POHs have the potential to generate \$10 billion in savings over a 10-year period. In addition, the aforementioned CMS study of POHs found that POHs spend a substantially larger proportion of their revenue on community benefit in the form of charity care, federal and state income tax, sales tax, and real estate and property tax. The CMS report found that POHs spend between 4% and 7% of revenue on community benefit, compared to less than 1% for NPOHs. In sum, contrary to much of the popular press on POHs, these hospitals have largely figured out what all hospitals have been trying to do for some time: deliver a high-quality service at a reasonable cost. The evidence on quality, expenditures, and community benefit tell a story markedly different from the popular media, and show, to the contrary, that the innovative aspects of POHs have resulted in these hospitals rising through the ranks of CMS rankings while providing the same services for less money than their NPOH counterparts.

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