



Are Hospital Prices Reasonable?



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Within the last two years there has been increased scrutiny of hospital prices in the United States by the media, governmental payers, and the general public. In all of this discussion the hospital industry has literally taken it on the chin, but has not really landed a blow on its opponents. Much of the discussion has focused around hospital bills for the medically uninsured. It seems that most reporters assume that these patients pay close to 100% of the itemized charges on their bill, and either forget or don't know that most hospitals collect virtually nothing on most bills for the medically uninsured. The vast majority of these claims are either written off as charity care, or eventually turn into bad debt expense. The Medicare outlier issue was also widely publicized as another example of greed crazed hospitals trying to milk the system out of hard earned taxpayer dollars. The reality is, of course, that only a limited number of hospitals were involved, and the vast majority of US hospitals are, in fact, providing services to Medicare patients for reimbursement that is less than cost.

With increased focus on hospital prices, the public appears to be demanding that hospital prices be reasonable. While the principle of reasonableness is one that would be acceptable to all parties, it is the actual assessment of reasonableness that causes the most problems.

Assessment of Reasonable Prices

In our experience, there are two generic ways that reasonableness of prices may be assessed:

1. Comparison with other hospitals. Oftentimes both payers and hospitals will assess the reasonableness of their prices based upon comparisons with similar or local hospitals. A number of states and local communities have reporting mechanisms for hospitals to report charges for either specific procedures or some aggregate measure of facility output such as discharges. Most recently, some states including California have made portions of hospital Charge Description Masters publicly available. One of the difficulties with comparing hospital charges is that they may vary significantly across hospitals, not necessarily because of operating cost differences but because of payer differences. Hospitals with heavy percentages of Medicare, Medicaid, and indigent patients will have higher prices in order to realize minimal levels of profitability.

I know of only one state, Maryland that mandates uniform discounts from billed charges. In Maryland, Medicare and Medicaid pay 92% of charges, and all other payers pay 96% of charges. Under this type of regulatory control, hospital markups (the relationship of charges to cost) is much lower than it is in other states in the US, and there is much less variation of price across hospitals in Maryland (Figure 1). Because all other states do not require uniform discounts, prices vary significantly among hospitals as a result of payer differences.

	1999	2000	2001	2002
US Acute Care	1.70	1.76	1.85	1.95
Maryland Acute Care	1.17	1.15	1.16	1.17

2. Return on investment adequacy. Most public utility-type regulatory models permit the earning of a reasonable rate of return on investment to ensure that capital can be replaced. Without adequate rates of return, capital will not be available to replace and renovate plant and equipment. Hospitals have heavy investment in plant and equipment and must keep replacing that plant and equipment to keep pace with medical technology advances.

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In addition, hospitals also have sizable working capital needs that are not recognized as expenses but require cash outlays. For example, most hospitals pay employees on a bi-weekly basis but collect patient receivables on a 60-plus-day basis. Hospitals must set prices to generate a reasonable level of profit that will permit them to replace their capital asset bases in a timely manner and to provide for working capital needs.

Comparing Prices Across Hospitals

Comparing prices at hospitals is a tricky business for a variety of reasons, but one of the first issues to address is the unit of service question. Are we comparing prices for individual procedure prices (e.g. CDM level prices), or is the basis of comparison an encounter (e.g. an admission or outpatient visit). The level of variation is great at both the CDM level and the admission or visit level, but the comparison of units should be more comparable at the CDM level. For example, a chest x-ray 2 view should be more comparable across hospitals than a DRG 127 (Heart failure and shock).

Comparing CDM prices is the level most often referenced in articles on hospital pricing. Most everyone has read or heard of the infamous \$58 Tylenol and reacted with disgust at the unfair pricing policies of hospitals. Products or services like Tylenol that are well understood by the general populace are the easiest to reference because almost everyone knows what the retail price of Tylenol is and has most likely purchased some in the recent past. Buried in this price comparison, however, is the significant labor cost involved in packaging, distributing, and recording the usage. This is not to affirm a \$58 Tylenol, rather it suggests that hospitals incur significant expenses in the delivery of care that may or may not be reflected in a particular facility's price for various items.

Comparing the cost of procedures such as a CT scan or a chest x-ray two view is not quite as easily accomplished because awareness of the service is not in the general knowledge bank of most consumers. Most people know very little about the cost of equipment or labor requirements for the production of chest x-ray. Figure 2 shows the 2002 distribution of prices for a two-view chest x-ray (CPT code #71020) compared to prices for DRG#127 (Heart failure and shock). As expected there is more variation at the encounter (DRG) level than the procedure level.

Figure 2 - 2002 Median Charge					
Percentile	Chest Xray (Two View) #71020	% above 10th Percentile	DRG #127 (Heart failure and shock)	% above 10th Percentile	
10	91.73	0%	5,231	0%	
25	114.00	24%	7,020	34%	
50	145.11	58%	9,768	87%	
75	190.16	107%	14,401	175%	
90	254.33	177%	21,167	305%	

Variation in pricing at the encounter level is shown in Figure 3. To develop the figure, four quartiles were created based on the 2002 Medicare Charge per Discharge (Case mix and wage index adjusted). The table shows the variation between the lowest charge quartile and the other three quartiles. For instance, the highest charge quartile had a median charge per discharge of \$18,198, which was approximately 165% above that of the lowest charge quartile. While significant variation exists in median charges among the four quartile groups, higher costs do not appear to be the primary driving factor for higher charges. In that regard, Medicare Cost per Discharge for the highest charge quartile at \$6,082, is only 35% above the lowest charge quartile group. Clearly, there is some relationship with higher cost to higher charge; however, the variation is more impacted by payer mix variables. Perhaps,

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more important to note is the variation among the Deduction Ratio values. The lowest charge quartile had a deduction ratio of 34% compared to the highest charge quartile value of 65%, which is approximately 90% higher. While the high charge group may have significantly higher charges, they are clearly writing off a much larger percentage of their gross charges as compared to the lowest charge quartile. Finally, the EBIDA to assets variance shows that the highest charge quartile group is not using higher charges to realize more significant levels of profit – as very little difference is seen between the values.

Figure 3 - 2002 Pricing Variation								
	Charge/ Discharge (CMI/WI Adj)	% above Q1	Cost/ Discharge (CMI/WI Adj)	% above Q1	Deduction Ratio	% above Q1	EBIDA to Assets	% above Q1
Lowest Charge Quartile (Q1)	\$6,860	0%	\$4,509	0%	34.3	0%	8.9	0%
Low Charge Quartile (Q2)	\$9,609	40%	\$5,351	19%	44.0	28%	8.8	-1%
High Charge Quartile (Q3)	\$12,391	81%	\$5,761	28%	53.0	54%	9.1	2%
Highest Charge Quartile (Q4)	\$18,198	165%	\$6,082	35%	65.1	90%	10.4	17%

Adequacy of ROI

Many people outside the hospital industry conclude that significant variation in hospital prices goes directly to the bottom line. They believe that hospitals with high prices make more money and have unreasonable levels of profit. The first question to answer is do hospitals have high levels of ROI compared to other industry sectors. The data in Figure 4 seem to show that this is not true. Hospitals do not and have not realized levels of return that would be construed as excessive by any reasonable person. If high prices have not produced high returns, then perhaps hospital costs are unreasonable and the public is paying for hospital inefficiency? Figure 5 shows that hospital costs have not increased dramatically when adjusted for case mix complexity over the last 4 years. In fact, the percentages shown here are more than likely overstated because of improvements in both the quality and nature of services provided. In this regard, the relationship would demonstrate that hospitals have kept their costs under control during a period of dramatically rising wages for critical professional staff and increasing costs for drugs and new medical technology.

Figure 4 - Industry Profitability			
Industry	ROA (5 yr avg)	ROE (5 yr avg)	
US Acute Care Hospitals	2.5	5.9	
Pharmaceutical	15.6	35.1	
Insurance (Accident & Health)	3.8	13.1	
S&P 500	7.1	19.8	

Figure 5 - Medicare Cost per Discharge (CMI & WI)				
	1999	2000	2001	2002
US Acute Care Median	4,881	4,927	5,160	5,382
% Change	-	0.9%	4.7%	4.3%

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Well, if profits are not high and costs are not out of control then perhaps the hospital industry has too much investment? Figure 6 shows that the relationship of service provided as measured by revenue to investment in plant property and equipment is actually improving. This implies that hospitals are becoming increasingly efficient with respect to the utilization of fixed assets. We believe this should cause reasonable policy analysts to conclude that hospital prices are not unreasonable because hospitals are not making excessive profits, their costs are under control, and they are not investing in excessive technology. The major cause for price variation is clearly related to payer mix and payer contractual terms.

Figure 6 - Revenue to Fixed Assets				
	1999	2000	2001	2002
US Acute Care Median	2.23	2.26	2.31	2.36

Summary

Our primary conclusion from this brief review is four fold. First, we do not believe that hospital pricing should be a major public concern at the present time. For the most part, hospital prices are not unreasonable and are a direct result of the hospital's payer mix and payer contractual terms. Second, while prices for services to the medically uninsured are significantly higher than average payment received from most third party payers, very few medically uninsured patients actually pay at a level approaching average payment levels of most third party payers because the vast majority of the bill is written off either as charity care or bad debt expense. Third, any policy change that either restricted hospital pricing or limited charges to medically uninsured patients would have an adverse impact on already thin hospital profits. Forcing hospitals to limit pricing in anyway, would require comparable increases in payments from other third party payers such as Medicare, Medicaid, and other commercial carriers. Given the current economic environment, this does not appear to be a likely outcome. Fourth, hospitals that fail to set prices to recover their true financial requirements including a profit factor to permit replacement of capital assets and to finance working capital, will erode their financial position and shift the financial burden to the next generation of patients. This strategy does not appear to be economically sound or equitable.