A CONSUMER IN HEALTHCARE = AN ALICE IN WONDERLAND

CAITLIN BASHWINER
SPRING 2015

A thesis
submitted in partial fulfillment
of the requirements
for a baccalaureate degree in Finance
with honors in Finance

Reviewed and approved* by the following:

Brian Davis
Clinical Associate Professor of Finance
Thesis Supervisor
Honors Adviser

James Miles
Professor of Finance
Faculty Reader

* Signatures are on file in the Schreyer Honors College.
ABSTRACT

If a hospital were to act like a true business, the organization would need to utilize a model while pricing procedures to ensure profitability and consistency. I set out on the journey to determine how hospitals do price procedures. This topic became more and more interesting along the way because all too often, hospitals do not disclose to the public how they price their procedures. While master charge lists for common procedures are accessible, these lists change rapidly and give no reference to where the numbers are actually coming from. I hoped to understand how hospitals track cash inflows and outflows and price accordingly. From there, I planned to gain an understanding of what the uncertainties and issues are with the models hospitals use to do so. Then, the goal was to hone in on one specific model and utilize quantitative analysis to find ways to make improvements. Going into this journey, I knew the result would be interesting, given all the recent reforms with the Affordable Care Act. I never knew, however, that what I would find was the answer to my question was actually a complete lack of an answer. This bolstered within me a belief that price transparency is not much more than an idea in the United States.
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ACKNOWLEDGEMENTS

Thank you to Brian Davis for serving as my advisor and supervisor, and thank you to James Miles for being my reader. I truly appreciate the time you took as I went along this journey. Also, thank you to my parents for giving me the opportunity to attend Schreyer and to undertake this academic endeavor.
Chapter 1
Introduction

When you go shopping at the supermarket, you pick the item you want and have the ability to choose between two similar items depending on price. You can easily use your own discretion while comparing quality and price, because the prices are easy to find. Additionally, among various supermarkets, especially those in similar areas, prices tend to remain consistent. This allows you to make informed decisions while buying your produce and products for the week. After picking your items, you pay for them in full prior to leaving the supermarket and prior to using the item. If you were to ask the supermarket why an item was priced in such a manner, they could easily provide you with the necessary information.

When you go to a hospital or similar facility for a procedure, the process is much different. It is not quite as easy to “shop” around as it is in any other circumstance. Partly because the situation could be life or death, eliminating the comfort of time, and partly because of the issue with price transparency. It is also extremely difficult to be an informed consumer because prices can vary from hospital to hospital, even within the same state. When you buy a product, in this case a procedure or medication, you usually do not know the price of the item before the purchase is made, and often, you do not understand where this price is even coming from. If you were to inquire about the price, the hospital would most likely struggle to give you clear direction as to where the price came from. Additionally, you may not be paying for the “item” in full because of insurance and a variety of other reasons, while at the same time you may not even understand what the price in full even really is.

This calls into question whether or not hospitals are even functioning as normal businesses, like your average supermarket. For obvious reasons a hospital may not be able to operate like a normal business. There are so many factors that come into play with healthcare that it is difficult for providers to act as true
businesses, but if they do not even know generally what to expect for revenues on a yearly basis, how do they even function correctly to be profitable? At the end of the day, some hospitals are for profit institutions and need to be profitable, not only to continue to operate, but to improve the quality of care for patients.

If a hospital were to act like a true business, the organization would need to utilize a model while pricing procedures to ensure profitability and consistency. I set out on the journey to determine how hospitals do price procedures. This topic became more and more interesting along the way because all too often, hospitals do not disclose to the public how they price their procedures. While master charge lists for common procedures are accessible, these lists change rapidly and give no reference to where the numbers are actually coming from. I hoped to understand how hospitals track cash inflows and outflows and price accordingly. From there, I planned to gain an understanding of what the uncertainties and issues are with the models hospitals use to do so. Then, the goal was to hone in on one specific model and utilize quantitative analysis to find ways to make improvements.

Going into this journey, I knew the result would be interesting, given all the recent reforms with the Affordable Care Act. I never knew, however, that what I would find was the answer to my question was actually a complete lack of an answer. This bolstered within me a belief that price transparency is not much more than an idea in the United States.
Chapter 2
Initial Findings

To begin delving into this topic, I began researching price transparency and procedure pricing from a more general viewpoint. What I found is that, while many believe we have a “market-driven” system in America, the prices actually paid for health care goods and services are extremely difficult to understand. In fact, many consumers are often entirely unaware of how procedure prices are determined. All too often, the price is not even known until the procedure has already been performed and needs to be paid for. Even if a consumer could figure out how a hospital priced out procedures, there would be no guarantee that this pricing could be applied from hospital to hospital, as there is major variation among hospitals.

Reinhardt’s article, “The Pricing of U.S. Hospital Services: Chaos Behind a Veil of Secrecy” gave me great insight as to how exactly procedures are priced and why there is such drastic variation. For instance, William McGowan, Chief Financial Officer of the University of California, Davis, Health System stated, “There is no method to this madness. As we went through the years, we had these cockamamie formulas. We multiplied our costs to set our charges” (1). Upon reading this quote, I immediately realized the idea of the model that I had set out to find might not even be existent; instead it seemed that prices were adjusted on a whim without clear direction. This article went on to discuss in depth a hospitals charge master, which is “a lengthy list of the hospital’s prices for every single procedure performed in the hospital and for every supply item used during those procedures” (1). It is these charge masters that provide the basis for the procedure pricing I was interested in. Unfortunately, such charge masters come with no common practice in when or how updates will occur. Some hospitals might update their charge masters annually, while some update them even more often. For instance, “some hospitals
might simply raise every price in the list by the same percentage once a year. Others might update prices for particular items or procedures separately, by different percentages, which make it difficult to know by what overall percentage a hospital has increased its prices” (1).

In general, the process and the idea of these charge masters seemed to re-emphasize McGowan’s statement of madness, not to mention that with the exception of California where this study was conducted, “hospitals are not required to post their charge masters for public view” (1). I continued, however, in search of a model used to price procedures, despite this discovery, in hopes of finding a method that could be streamlined across the board. Unfortunately, I continued to find no model, but instead many accounts of the drastic variation that does occur.

There is usually drastic variation of procedure costs from hospital to hospital, even within the same state. According to “Increased Price Transparency in Health Care — Challenges and Potential Effects, "the same MRI scan in Massachusetts ranged anywhere from $450 to $1,675 (2). A different article, “Washington Health Alliance Releases Publication on Variation in Billing Prices in Hospitals,” focuses on hospital price variation in Washington. The results found that “price variations anywhere from 200 percent to 400 percent for procedures are common” (3). Furthermore, the article, “Variation in Charges for 10 Common Blood Tests in California Hospitals: A Cross-sectional Analysis” showed that charges for 10 common blood tests in California hospitals varied drastically as well. For example, charges for a lipid panel ranged from “$10 to $10,169, a thousand-fold difference” (4). In this study specifically, few hospital characteristics and no market-level predictors significantly predicted charges for blood tests.

The combination of drastic variations, rapidly changing charge masters, and a lack of a clear model showcased to me an obvious issue. If I was attempting to act as a normal consumer
while conducting my research and if I truly was a patient seeking an understanding of the price of a procedure, it was near impossible to discover any information of value. Not to mention that the only thing I could get my hands on was charge masters, and it is obviously difficult for a consumer to even understand how these charge lists are applicable and where the numbers they contain even come from. Given the obvious arbitrary nature of the charge setting process, seen through the drastic variation among prices, it is then difficult for patients, even my hypothetical self, to act as true consumers.
Chapter 3  
University of Rochester Medical Center Interviews

Frustrated with the lack of information I was obtaining, I scheduled meetings with Michael Goonan, the Chief Financial Officer of University of Rochester’s Medical Center, as well as Ken Streb, Director of the Finance Department at the University of Rochester’s Medical Center (URMC). I walked away from these meetings with a better understanding of how a hospital prices procedures. Unfortunately, there is no true model that is used. William McGowan’s statement, “There is no method to this madness,” is actually close to the truth. According to Goonan and Streb, URMC utilizes information from Medicare to price procedures. Goonan explained that, “Medicare releases their own versions of charge masters, and URMC prices procedures based off of these lists.” The charges from Medicare are the minimum, and then URMC will charge above this to make a profit. There is no exact percentage of upcharge either. It all depends on the type of procedure and how much profit needs to be made. This list is changing constantly so prices of procedures are constantly changing as well. If a charge is not available from Medicare, the hospital will consider the costs of a procedure and markup the price from there. The costs of a procedure are a complicated thing, however, as many things are included from the time in the operating room, to the various drugs/ pieces of equipment needed, to the time owed to the doctor, etc.

The time I spent with these gentlemen made me realize that there reason that there is so much variation among hospital prices, even for the same procedure, is that each hospital is pricing the procedures in a different way without a standardized model. The amount that a hospital marks up its procedures will differ depending on the profit needed. For instance, URMC is an academic hospital, which means it may have more costs to cover than a typical community hospital. This may lead the prices of procedures to differ and truly matches my findings that consisted of drastic variations and no concrete model. Overall, this explained to me the drastic variations of the same procedure for a patient from hospital to hospital – each hospital is using a different basis and markup to create prices.
I then revisited what Mr. Goonan, Mr. Streb, and I had spent much time discussing: Medicare. While my hopes of tracking down a procedure pricing model and updating it seemed too farfetched, I decided to instead look into the basis of URMC’s pricing. Since Medicare information is being relied on to establish procedure pricing, re-focusing on the information that Medicare is making publicly available seemed to be a good direction to take.

Interestingly enough, in April of 2014, Medicare released data for the first time data that summarizes the utilization and payments for procedures and services provided to Medicare fee-for-service beneficiaries by specific inpatient and outpatient hospitals, physicians, and other suppliers. This information was released “…as part of the Obama administration’s goals to make our health care system more affordable and accountable through increased price transparency”(5). This information was also released in hopes that users could make comparisons between the amount charged by individual hospitals within local markets, and nationwide, for services that might be furnished in connection with a particular inpatient stay. Essentially, it is believed that increasing price transparency would lower the prices of procedures and services because “by being more transparent, hospitals would need to be able to explain how a procedure is priced and where the costs come from” (2).

After reviewing this data, I decided to analyze what was available and use it to answer a bigger question: How do hospitals monitor costs to ensure that they are still profitable with such an unpredictable stream of revenues? What costing models are typically utilized by hospitals? Revenue streams seemed to be unpredictable, made obvious by the unpredictable nature of procedure pricing, so I thought perhaps the best way hospitals could ensure profitability by focusing on costs.
Chapter 4
Medicare’s Public Information

The data provided by Medicare includes hospital-specific charges for the more than 3,000 U.S. hospitals that receive Medicare Inpatient Prospective Payment System payments for the top 100 most frequently billed discharges, paid under Medicare based on a rate per discharge using the Medicare Severity Diagnosis Related Group (MS-DRG) for fiscal year 2011 and 2012. These DRGs represent more than 7 million discharges or 60 percent of total Medicare IPPS discharges. The data is presented in two manners, averages by DRG or averages by state within DRG. (5)

Hospitals determine what they will charge for items and services provided to patients and these charges are the amount the hospital bills for an item or service. The Total Payment amount includes the MS-DRG amount, bill total per diem, beneficiary primary payer claim payment amount, beneficiary Part A coinsurance amount, beneficiary deductible amount, beneficiary blood deductible amount and DRG outlier amount. For these DRGs, average charges, average total payments, and average Medicare payments are calculated at the individual hospital level. Average charges are the average charge of all providers’ services covered by Medicare for discharges in the DRG. These will vary from hospital to hospital because of differences in hospital charge structures. (5)

Average total payments are the payments to all providers for the DRG including the MS-DRG amount, teaching, disproportionate share, capital, and outlier payments for all cases. Also included in average total payments are co-payment and deductible amounts that the patient is responsible for and any additional payments by third parties for coordination of benefits. Additionally, average Medicare payments are the average amount that Medicare pays to the provider for Medicare's share of the MS-DRG. Medicare payment amounts include the MS-DRG
amount, teaching, disproportionate share, capital, and outlier payments for all cases. Medicare payments do not include beneficiary co-payments and deductible amounts or any additional payments from third parties for coordination of benefits. (5)

Through my analysis of the available Medicare information, I found that the percentage of covered charges that were actually paid for was 50.09% in 2011 and 49.29% in 2012. Furthermore, the average Medicare payment was 23.04% in 2011 and 22.72% in 2012 for the top 100 most frequently billed discharges in more than 3,000 U.S. hospitals that receive Medicare Inpatient Prospective Payment System payments. This result is alarming simply because on average half or more of covered charges go unpaid for at hospitals and Medicare generally only pays for about 1/5 of covered charges. This also does not account for the charges are not “covered” and a hospital must find a way to address on their own.

I created tables showcasing this information for the 2012 and 2011 Fiscal Years top ten DRG groups. It is important to also note that the groups remained relatively similar from year to year, which shows that at least the DRGs, or in otherwise procedures, are remaining somewhat constant from year to year.

These results are also alarming because much of my research suggests that Medicare payments will continue to drop in the future, which means that since 2012 these percentages have probably further dropped and will continue to drop. This is only an assumption, however, because the only public information available on Medicare’s website is for 2011 and 2012, which does not lend to a current depiction of pricing and compensation. I also struggle to come to understand how this information increases price transparency to truly make a consumer well educated. Nonetheless, this impacts how hospitals will need to adjust how they manage costs drastically, especially with the implementation of the Affordable Care Act and the use of ACOs (affordable care organizations). For instance, an article from HFMA, “A Patient-Focused Model for Cost Reduction,” discussed that “…the pressure on insurance
companies to reduce premiums will drive lower payments to providers, and the budget issues at the federal and state levels will drive reductions in Medicare and Medicaid payment (6).

In the future, it is predicted, in fact, that the Medicare payment rate could become the standard. This would leave hospitals receiving low levels of compensation, forcing them to find new ways to be profitable. According to “Cost-Outcomes Focus Is Essential for ACO Success,” the best costing model to address the changing cost frontier is ABC Costing, “… a cost accounting methodology that provides the necessary detail by assigning costs to an organization’s activities (or cost drivers) related to its products and services in a way that reflects the extent to which the activities consume the organization’s resources” (7). Before setting out to understand how ABC Costing should be applied to address this issue with Medicare, I needed to completely understand how such a model works in traditionally.

<table>
<thead>
<tr>
<th>DRG Definition</th>
<th>Total Discharges</th>
<th>Average Covered Charges</th>
<th>Average Total Payments</th>
<th>Average Medicare Payments</th>
<th>Total Average Payments</th>
<th>% of Covered Charges Actually Paid</th>
<th>Average % of charges actually paid for</th>
<th>Medicare Payment %</th>
<th>Medicare Payment Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>251 - PERC CARDIOVASC PROC W/O CORONARY ARTERY STENT W/O MCC</td>
<td>31,947</td>
<td>$64,775.53</td>
<td>$13,751.67</td>
<td>$11,761.32</td>
<td>$25,512.98</td>
<td>39.76%</td>
<td>50.00%</td>
<td>18.30%</td>
<td>23.04%</td>
</tr>
<tr>
<td>249 - PERC CARDIOVASC PROC W/ NON-DRUG-ELUTING STENT W/O MCC</td>
<td>35,390</td>
<td>$64,900.95</td>
<td>$13,557.68</td>
<td>$10,711.53</td>
<td>$23,261.36</td>
<td>40.96%</td>
<td>50.00%</td>
<td>18.30%</td>
<td>23.04%</td>
</tr>
<tr>
<td>287 - CIRCULATORY DISORDER EXCEPT AMI, W CARD GATH W/O MCC</td>
<td>117,533</td>
<td>$23,971.19</td>
<td>$7,718.49</td>
<td>$6,303.38</td>
<td>$14,677.86</td>
<td>41.76%</td>
<td>50.00%</td>
<td>18.30%</td>
<td>23.04%</td>
</tr>
<tr>
<td>313 - CHEST PAIN</td>
<td>175,416</td>
<td>$16,815.25</td>
<td>$4,809.06</td>
<td>$2,970.38</td>
<td>$6,985.38</td>
<td>41.56%</td>
<td>50.00%</td>
<td>18.30%</td>
<td>23.04%</td>
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<td>619 - TRANSIENT ISCHEMIA</td>
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<td>$3,946.33</td>
<td>$9,838.05</td>
<td>42.08%</td>
<td>50.00%</td>
<td>18.30%</td>
<td>23.04%</td>
</tr>
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<td>247 - PERC CARDIOVASC PROC W DRUG-ELUTING STENT W/O MCC</td>
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<td>$14,308.15</td>
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<td>$26,124.11</td>
<td>42.12%</td>
<td>50.00%</td>
<td>18.30%</td>
<td>23.04%</td>
</tr>
<tr>
<td>431 - BACK &amp; NECK PROC EXC SPINAL FUSION W/O CC/MCC</td>
<td>38,691</td>
<td>$29,693.78</td>
<td>$7,116.63</td>
<td>$5,646.46</td>
<td>$12,762.45</td>
<td>42.32%</td>
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<td>18.30%</td>
<td>23.04%</td>
</tr>
<tr>
<td>839 - EXTRACRANIAL PROCEDURES W/O CC/MCC</td>
<td>37,880</td>
<td>$79,213.75</td>
<td>$15,692.38</td>
<td>$5,364.34</td>
<td>$13,416.82</td>
<td>42.48%</td>
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<tr>
<td>419 - LAPAROSCOPIC CHOLECYSTECTOMY W/O CELE, W/O CC/MCC</td>
<td>25,682</td>
<td>$18,193.73</td>
<td>$8,182.53</td>
<td>$6,532.91</td>
<td>$14,625.42</td>
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<td>149 - DYSPEPSIA</td>
<td>31,420</td>
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<td>$4,660.07</td>
<td>$3,452.50</td>
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<td>43.33%</td>
<td>50.00%</td>
<td>18.30%</td>
<td>23.04%</td>
</tr>
</tbody>
</table>

Figure 1. 2011 Medicare Information
<table>
<thead>
<tr>
<th>DRG Definition</th>
<th>Total Discharges</th>
<th>Total Covered Charges</th>
<th>Total Average Payments</th>
<th>Average Medicare Payments</th>
<th>Total Average Payments</th>
<th>% of Covered ChargesActually Paid (A)</th>
<th>Average % of Charges actually paid for</th>
<th>Medicare Payment %</th>
<th>Medicare Payment Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>333 - CHEST PAIN</td>
<td>187,224</td>
<td>$18,503.44</td>
<td>$4,033.39</td>
<td>$2,951.86</td>
<td>$6,954.45</td>
<td>32.58%</td>
<td>49.29%</td>
<td>15.95%</td>
<td>19.72%</td>
</tr>
<tr>
<td>251 - PERC CARDIOWAS PROC W/O CORONARY ARtery STENT W/O MCC</td>
<td>28,204</td>
<td>$69,918.78</td>
<td>$4,785.99</td>
<td>$3,231.70</td>
<td>$77,637.27</td>
<td>31.67%</td>
<td>10.64%</td>
<td>17.75%</td>
<td>17.75%</td>
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<tr>
<td>287 - CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH W/O MCC</td>
<td>188,574</td>
<td>$36,253.86</td>
<td>$7,767.16</td>
<td>$6,393.25</td>
<td>$44,059.51</td>
<td>31.00%</td>
<td>17.57%</td>
<td>17.57%</td>
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<tr>
<td>249 - PERC CARDIOWAS PROC W NON-DRUG-ELUTING STENT W/O MCC</td>
<td>29,344</td>
<td>$60,442.35</td>
<td>$12,876.57</td>
<td>$11,000.00</td>
<td>$73,876.37</td>
<td>39.50%</td>
<td>18.20%</td>
<td>18.20%</td>
<td>18.20%</td>
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<tr>
<td>491 - BACK &amp; NECK PROC EXC SPINAL FUSION W/O CC/MCC</td>
<td>31,968</td>
<td>$32,823.75</td>
<td>$7,545.32</td>
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<td>17.20%</td>
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<tr>
<td>267 - PERC CARDIOWAS PROC W DRUG-ELUTING STENT W/O MCC</td>
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<tr>
<td>409 - TRANSIENT ISCHEMIA</td>
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<td>17.86%</td>
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<td>829 - EXTRACRANIAL PROCEDURES W/O CC/MCC</td>
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<tr>
<td>383 - ATHEROSCLEROSIS W/O MCC</td>
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<td>$77,966.49</td>
<td>$4,136.87</td>
<td>$3,180.17</td>
<td>$77,966.49</td>
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<td>17.75%</td>
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<td>149 - DYSFUNCTION</td>
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<td>$4,621.63</td>
<td>$3,417.78</td>
<td>$19,635.00</td>
<td>41.05%</td>
<td>17.54%</td>
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</tr>
</tbody>
</table>

Figure 2. 2012 Medicare Information
Chapter 5  
Traditional Costing – A Summary of an ABC Costing Manual

I discovered an ABC Costing manual and decided to use this as a springboard. According to this manual, the traditional “… process of determining the costs of a hospital involves six steps:

1. Defining the major and relevant activity areas of the hospital.
2. Gathering information on the services provided or the output of the hospital.
3. Determining the labor and other recurrent costs.
4. Ascertaining the capital costs of the hospital.
5. Allocating indirect costs.
6. Reviewing and using the hospital cost summary” (8).

For step one, there are three factors to take into consideration, “the importance of an activity relative to the hospital’s total output or level of activity, the amount of detailed costing information available, and the amount of detail needed from the output of this exercise” (8). In step two, there should be a separation of inpatient and outpatient services. The focus of inpatient services should be total inpatient days and total admissions, and the focus of outpatient services should be total visits for a time period. In step three, the major cost components for the major activities will be identified, and in step four, capital costs include buildings, equipment, and vehicles. For step five, administrative costs must be allocated to the inpatient, outpatient, other ancillary services, and any other activities, using the direct costs as a basis for allocating the indirect costs. Additionally, in step six, the information is reviewed.
While the model of ABC Costing that this manual emphasizes is a good method for hospitals to use while costing, changes do need to be made to such a model to ease the transition into utilizing Affordable Care Organizations, and organizations “…should be prepared to challenge the status quo, which may involve abandoning long-held processes and financial models and transforming infrastructures to gain the visibility and insight required to achieve success as an ACO” (7).
Chapter 6
Changes to Traditional ABC Method and Other Changes

ABC costing relies on establishing the cost drivers based off specific activities and the resources required to perform those activities. In order to be successful, each cost driver must be established in a manner that ensures the charge items that do not use a specific resource are not allocated costs for such a resource. Service line costs must be accurate, but this is difficult as the term “service line” is less precise in healthcare as a human nature component does come into play. In general, “effective use of ABC in health care requires the identification of cost drivers according to specific service lines so that healthcare leaders can ascertain which service lines are profitable and drill into the detail to analyze the reasons why” (7).

One way to ensure success is to not define service lines by focusing on departments, as traditionally done and as seen in the previously mentioned manual, but to base service lines or activity areas as “patient encounter attributes” (7). This is more effective given that a patient usually interacts with more than one department in the hospital, this thus ensures that the hospital will be paid based on the entirety of the patient’s total stay. A data warehouse can be utilized to determine these attributes, and attributes can include inpatient, outpatient, and diagnosis code groupings. The difficulty that often rises here is in relation to nonbillable patient activity, such as transport and back-office administration. This does, however, need to be considered in order to recover the true cost of patient care delivery, and “costs should be attributed to all activities, whether chargeable or not, so that true variation in cost can be measured across individual patients” (7).

In addition to changes to ABC costing methods, hospitals can make bigger picture changes within the organization as well. While attempting to reduce costs, a hospital could utilize a patient-focused model, and this model “…should be aimed at improving the productivity of patient care by fully understanding the needs of the patient population and ensuring resources are best allocated to address
those needs” (6). This can be accomplished through the following four-step process: identify the problem, analyze the trends, collaborate on a solution, and implement the solution.

While identifying the problem, it is important to identify which patients are the biggest cost drivers because “approximately 20 percent of patients contribute to 80 percent of an organization's costs…” (6). Once these patients have been identified, analysts can identify the trends and characteristics that connect these patients as they require more productive care management, and “each target group will have a common demographic or clinical characteristic, such as zip code, address origin, common diagnosis-related group or longer-than-average length of stay” (6). From there, staff needs to brainstorm on the solutions that address the problem groups, and the dialogue between clinical and administrative teams needs to be opened. Once solutions are implemented, the progress of the patient population being addressed needs to be monitored and measured.

This process was carried out at Jane Phillips Medical Center in Bartlesville, Oklahoma for instance. The project aimed to address more than $34 million in write-offs from Medicare inpatients. It was discovered that “only 95 of the nearly 2,800 patients, or 3.4 percent, were responsible for $5 million, or almost 15 percent, of the total write-offs …” (6). Once identified as the problem, the project team then honed in on these 95 patients and looked at the demographics and clinical characteristics of this group. The analysis found many connections among these parents. For instance, 51.7% of adjustments greater than $40,000 came from patients in three zip codes, and six out of 22 physicians were responsible for 56% of adjustments (6). Solutions to lower these costs and write-offs included a community outreach program and a phone line for appointments and transportation. Such solutions created more than 1 million in cost reductions total, and costs were reduced by $231,000 in only the first six months (6).

In preparation for reform and the changes made by the Affordable Care Act, an organization can also take a variety of other steps as well. For instance, using an operational model over a strategic model for costing allows a hospital to re-compute “… the cost of services after each monthly general ledger close” (9). This changes the standard and makes costing more accurate because with strategic costing the
period is one full operating year and is used to make decisions for the following year. Another change hospitals should make is to “adopt job costing over standards costing whenever possible” (9). In this manner costs are actually measured as they are incurred versus being categorized according to activity level. Additionally, clear cost and cost bucketing definitions should be established to created continuity across an entire organization. Furthermore, a company should increase the use of micro costing, which “involves creating a detailed list … of every resource used in rendering a service, including the quantity used, frequency of use, part number or job class, and the unit cost. The sum of the costs of all the items on the list becomes the "standard cost" and should represent the actual or expected resource consumption to perform a service” (9).

Micro costing provides hospitals with a more precise measure of variable cost, as it does not mix the cost of waste and excess capacity while services are being rendered. Variable costs can also be a focus of an organization as “costs associated with running a physician organization have escalated 41 percent since 1991; meanwhile, Medicare payment rates over the same timeframe have trended, at best, to a minimal improvement, with recent rates trending flat” (10). Financial managers can rethink the relationship of cost to revenue by “increasing the proportion of variable to fixed costs” (10). This can be accomplished in high-cost categories, such as staffing, by moving the risk outside of the practice. For instance, billings/ collections can be moved to outside expertise, and costs can be tied to collections. Overall, organizations have multiple options for improving costing models to address falling compensation levels in the future.
Chapter 7
Conclusion

While I have found much information in regards to changing costing models for organizations, which has potential for a new study, my initial purpose of this journey was not fulfilled. Even though hospitals can better model costs, their revenue streams will still be highly unpredictable due to the nature of procedure pricing and the uncertainty surrounding this issue. There is no true model for procedure pricing which lends to drastic price variations. This is a problem for both organizations, who need to be profitable to better protect the health of Americans, and for consumers, who find it difficult to be educated while making decisions regarding their health. Although Obama has attempted to increase price transparency, there is still a lack of price transparency in the United States. To me, price transparency seems to still be nothing more than idea and not an actual reality. Price transparency needs to be improved upon so that organizations can be held more accountable to consumers, consumers can make more informed decisions, and organizations can become more profitable to ensure the well being of America.
BIBLIOGRAPHY


# ACADEMIC VITA

Caitlin Bashwiner  
47 Cobble Creek Road, Victor, NY 14564/ cob5195@gmail.com

## EDUCATION

<table>
<thead>
<tr>
<th>University</th>
<th>Location</th>
<th>Degree</th>
<th>Major</th>
<th>Graduation Year</th>
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<tr>
<td>Schreyer Honors College, The Pennsylvania State University</td>
<td>University Park, PA</td>
<td>Bachelor of Science, Finance</td>
<td>[Honors: Beta Gamma Sigma, Order of Omega, Dean’s List 7/7 Semesters]</td>
<td>Class of May 2015</td>
</tr>
</tbody>
</table>

## RELEVANT EXPERIENCE

<table>
<thead>
<tr>
<th>Company/Role</th>
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<th>Dates</th>
<th>Responsibilities</th>
</tr>
</thead>
</table>
| KPMG Healthcare Regulatory Compliance Intern      | New York, NY | June 2014 – August 2014 | ♦ Supported engagement team through various duties not limited to conducting research, analyzing data, attending client meetings, and sampling patient accounts  
♦ Developed a centralized prior authorization database tool to reduce claim denials at a client hospital |
| LionTutors Private Tutor                          | State College, PA | January 2013 – Present | ♦ Selected by tutoring center to aid students in Introduction to Financial and Managerial Accounting and Introduction to Business  
♦ Statistics through private reviews and group sessions of up to 200 students  
♦ Collaborated with the program director to develop a new tutoring course for Introduction to Business Statistics |
| Penn State Wall Street Boot Camp                  | University Park, PA | Spring 2013 | ♦ Chosen from 400 applicants to participate in a 40-student weekly training session  
♦ Developed a better understanding of career paths in the competitive field of financial services |

## LEADERSHIP EXPERIENCE

<table>
<thead>
<tr>
<th>Event/Role</th>
<th>Location</th>
<th>Dates</th>
<th>Responsibilities</th>
</tr>
</thead>
</table>
| Penn State Dance MarATHON Entertainment ENTRANCE Coordinator Captain | University Park, PA | September 2014 – March 2015 | ♦ Organize the logistics of the ENTRANCE where all performers and acts enter and leave the BJC throughout THON Weekend  
♦ Manage all ENT passes and arrange roundtable meetings that keep fellow volunteers informed about the pass system  
♦ Serve as a liaison between the Entertainment, Public Relations, and Rules & Regulations committees |
| Public Relations Event Management Captain         | University Park, PA | September 2013 – March 2014 | ♦ Collaborated with Special Events and Entertainment to plan and execute 100 Days ‘til THON  
♦ Secured all of Public Relation’s in-kind donations by serving as Public Relation’s Supply Liaison  
♦ Escorted press throughout THON Weekend to protect the wellbeing of dancers and families |
| Dance Relations Committee Member                  | University Park, PA | September 2012 – March 2013 | ♦ Provided physical and emotional support for dancers during the 46 hour event  
♦ Attended various pre-THON events throughout the year to motivate THON volunteers |
| Phi Sigma Rho Engineering Sorority Recruitment Chair | University Park, PA | October 2014 – February 2015 | ♦ Recruit potential new members for the Spring 2015 Associate Class and coordinate all recruitment events  
♦ Establish a recruitment committee and delegate tasks to the members to ensure successful events |
| Executive Board Member, Vice President of Event Management | University Park, PA | November 2012 – December 2013 | ♦ Organized and coordinated weekly events for 90 active members with over 20 other Greek Life organizations while upholding university standards and maintaining the positive reputation of the organization  
♦ Managed and allocated a $6,000 annual budget for sorority functions |
| Apparel Chair                                     | University Park, PA | January 2012 – December 2012 | ♦ Designed merchandise to promote awareness of the sorority on and off campus |
| Pledge Class Spirit Chair                         | University Park, PA | September 2011 – December 2011 | ♦ Organized events to encourage bonding among the new members and among the active members as well |
| Penn State Global Business Brigades               | University Park, PA | September 2012 – March 2013 | ♦ Empowered rural Panamanian communities to become economically stable via financial planning  
♦ Worked first-hand with community banks to provide financial literacy and credit savings education |
| Schreyer Honors College Orientation Mentor        | University Park, PA | January 2012 – August 2012 | ♦ Chosen to represent the Schreyer Honors College during the Schreyer orientation program  
♦ Developed relationships with incoming scholars to ease the college transition experience |

## WORK EXPERIENCE

<table>
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<th>Company/Role</th>
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<th>Dates</th>
<th>Responsibilities</th>
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<tr>
<td>Einstein Healthcare Network Orthopedic Bioengineering Laboratory Research Assistant</td>
<td>Philadelphia, PA</td>
<td>June 2012 – August 2012</td>
<td>♦ Assisted director of laboratory in multiple research projects that focused on artificial organs and medical devices</td>
</tr>
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</table>