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Impact of Price Transparency on Patient Relationships in an Outpatient Surgical Center

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Abstract

Background: Healthcare price transparency initiatives are becoming a larger force in healthcare reform. These initiatives promise to bring actionable pricing information to consumers/potential patients in a sector of the US economy that has historically struggled to be transparent. Physicians and some outpatient/ambulatory surgery centers are slowly adopting the idea of price transparency in various ways. Additionally, this movement has recently gained more traction after a recent Executive Order by President Trump [1]. The objective of this study is to examine the effects of price transparency on scheduling rates and procedure preferences in an outpatient surgical clinic.

Methods: BuildMyBod Health, a novel pricing and lead generation platform that allows consumers to check pricing after submitting their contact information, was incorporated into the website of an outpatient surgical practice. Using the BuildMyBod Health platform, prospective patients created personalized lists with procedures of interest. Patients received emails containing estimated cost breakdowns - including fees for the surgeon, operating room/anesthesia, implants, and other ancillary costs. Patients were then contacted to come in for consultations before scheduling procedures.

Results: From February to March 2019, 98 prospective patients created “wishlists” using the BuildMyBod Health Price Estimator with 46 (46.94%) indicating interest in multiple procedures. Within our prospective patient population, 45 (45.92%) indicated interest in one or more bariatric surgical procedures, 30 (30.61%) people indicated interest in one or more body-contouring procedures, 21 (21.43%) listed breast-related surgical procedures, 14 (14.29%) listed gynecologic surgical procedures, and 8 (8.16%) listed general surgery procedures. Afterwards, 21 (21.43%) patients came in for a consultation and booked procedures. Additionally, several patients wrote unsolicited 5-star reviews online which explicitly endorsed that they chose the physician due to the freely available pricing.

Conclusions: The interactive pricing application embedded within the physician’s webpage is a major customer service and marketing opportunity, facilitating clear, convenient patient access to expected procedure costs.

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Background

With the rise of the Internet and crowd-sourced review websites, price transparency has become increasingly prevalent in many consumer and business markets, giving consumers greater purchasing power with the ability to compare prices among competitors with ease. However, the healthcare industry remains one of the few markets with little price transparency. Simultaneously, patient cost burdens are continuing to increase with the rise of high-deductible healthcare plans. From 2013 to 2018 the fraction of insured consumers paying a deductible rose from 78% to 83% [2]. In the same period, the average deductible for consumers rose from \$1,135 to \$1,573. Due to cost increases, many patients have started to shop around to compare prices before making decisions [2]. In this business environment, healthcare providers have begun to examine price transparency as a possible competitive advantage. Additionally, many legislative and regulatory efforts, including the Affordable Care Act and a more recent Executive Order by the Trump Administration, are requiring hospitals to increase price transparency by publishing the standard charges for items and services [1,3].

Unfortunately, the pricing information made available to the public is more often than not accompanied by complex medical terminology indecipherable for the majority of patients [4]. Additionally, the prices listed by hospitals are based on “charge-master” rates – the rates hospitals charge insurance companies but are never the rates insurance companies actually pay. These are certainly not the rates patients would pay out of pocket. The prices are complicated by insurer-specific protocols and practices and are further segmented by differing hospital systems, creating an overwhelming amount of information for consumers [4]. While price transparency tools like the BuildMyBod Health platform attempt to compensate for insurer-specific protocols and clear up some of the confusion, studying price transparency’s impact on the general public remains difficult [4,5].

Physicians and facilities are particularly hesitant to disclose prices for multiple reasons. First, in the absence of equal transparency in quality metrics, many surgeons fear that patients may correlate higher prices with higher quality [4,6]. Second, price transparency could drive down bundled pricing or insurance reimbursements as competitors use this information to undercut the proffered price [5,6]. Finally, many procedures need to be individually customized, and it may be difficult to provide standard prices for all patients. Surgeons do not wish for patients to latch onto the estimated prices and misconstrue these estimates as guarantees [6].

While the overall patient population remains difficult to study, a smaller population of patients who specifically undergo “shoppable services” or elective procedures offers a unique glimpse into the psyche of the modern consumer. Since elective surgeries can be either medically necessary (hence covered by insurance) or cosmetic out-of-pocket procedures, this population allows us to understand the utility of price transparency in both settings. The consumer decision-making process for an elective

surgery involves a series of smaller decisions including the recognition of a need for surgery, finding a surgeon for consultation, and then collecting information on the required surgical procedures and associated prices. Generally, pricing information is either unavailable to potential patients until they consult a surgeon and ask for a price [6] or more commonly, not available until they have already received the service in question! In this retrospective data analysis, the authors aim to study if a price transparency tool can increase the demand for elective surgery by making price information more readily available to potential patients.

Methods

Starting in February 2019, the BuildMyBod Health Price Estimator, a novel pricing and lead generation platform that allows consumers to check pricing after submitting their contact info, was embedded in the website of an outpatient surgical center (www.georgiasurgicare.com). The service allowed patients to price both medically necessary surgeries, which were at least partially covered by insurance, as well as cosmetic procedures, which were not covered by insurance. The user interface was simple: patients visited the website, selected the procedures or services of interest, created accounts by entering their contact information, and submitted their “wishlist.” Patients then received an email with a detailed breakdown of costs including those for the surgeon, operating room, anesthesia, implants, and any applicable ancillary fees. Patients had the option to schedule an in-person consultation or create a new “wishlist.” A unique feature of the application was that the estimate included not only the surgeon’s fee, but also a breakdown of all other ancillary fees associated with their procedure. Concurrently, the practice also received the contact information of the prospective patients to reach out regarding follow up/consult scheduling.

The procedures considered by prospective patients using the BuildMyBod Price Estimator were recorded, along with the pricing estimate. Additionally, de-identified summary data that consisted of the number of patients who chose to price a given surgery and the number of patients who chose to schedule that surgery were also recorded. In total, data from 98 prospective patients with interest in 172 total procedures was collected from February 2019 to April 2019.

For multiple comparisons, one-way ANOVA tests were performed, followed by Tukey post hoc analysis. For linear regressions, a Least-Squares simple linear regression was conducted. All p -values < 0.05 were considered significant. All statistical analyses were performed using R version 3.6.1.

Results

Each patient in our study who created a “wishlist” with the Price Estimator received appropriate pricing information. Interested patients then progressed to a consultation and then to a procedure. A total of 98 patients priced and subsequently scheduled 178 procedures, resulting in a total revenue of roughly \$1,563,000. Example data is shown in [Table 1].

57.1% (56) of patients indicated interest in only one procedure. The remainder priced multiple procedures; 26.5% (26) priced two, 8.16% (8) priced three, 3.06% (3) priced four, 3.06% (3) priced five, 1.02% (1) priced six, and 1.02% (1) priced seven (Figure 1).

Prospective patients primarily priced services for elective procedures, both medically necessary and cosmetic, including bariatric, body contouring, and breast-related procedures. 43.8% of prospective patients priced bariatric procedures, 26.4% priced body contouring procedures, 12.4% of prospective patients priced breast-related procedures, 9.55% of prospective patients priced gynecological procedures, 5.62% of prospective patients priced general surgery procedures, and 2.25% priced facial procedures (Figure 2).

Of the 98 patients who utilized the tool, 21 patients (21.4%) came in for a consultation and 100% of those patients booked procedures. The average price of a priced procedure was \$8742.88, and the average price of a scheduled procedure was \$8783.34. A Welch unpaired two-tailed t-test was conducted between the prices of priced and scheduled procedures. This was done to examine whether patients were opting for less expensive procedures after learning the price of different procedures. The t test found no evidence of a statistically significant difference between these prices ($p > 0.90$), indicating patients were not opting for cheaper procedures after becoming price-aware.

The likelihood of a price-aware patient scheduling the procedure was then determined by dividing the number of patients who scheduled the procedure by the number of patients who priced the procedure. A one-way analysis of variance test was conducted to test whether the type of procedure impacted the likelihood of a patient coming in for the procedure. The one-way ANOVA failed to reject the null hypothesis, with a p value > 0.59 , indicating that the specific type of the procedure did not significantly affect the likelihood of a patient scheduling the procedure. This likely indicates that patients were not scared away by the price estimates provided, even as the price estimates increased.

Finally, a linear regression was conducted to determine if there was a significant correlation between the price of the procedure and the likelihood of the patient scheduling the procedure. Interestingly, a linear regression showed nearly no correlation (R^2 of 0.0019) between the price of the procedure and the likelihood of a patient coming in for the procedure (Figure 3). This indicates that patients are not shopping for “cheaper” procedures in isolation and that the different prices do not determine likelihood of the patient receiving their elective surgery.

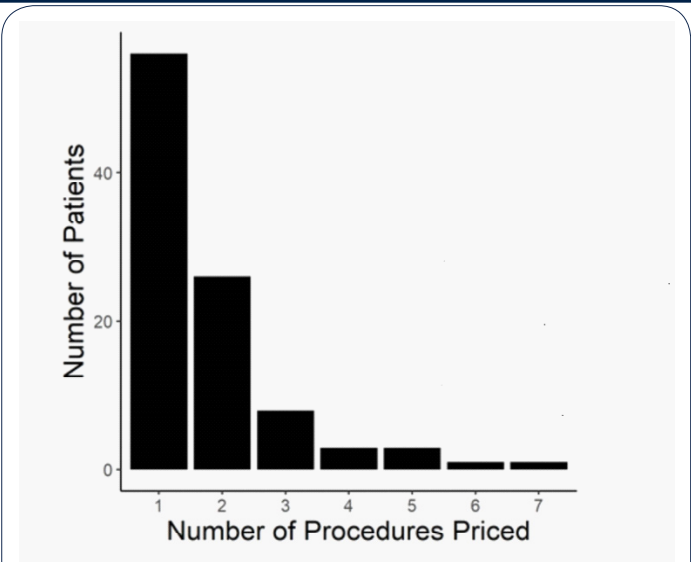


Figure 1: Frequency of number of procedures priced.

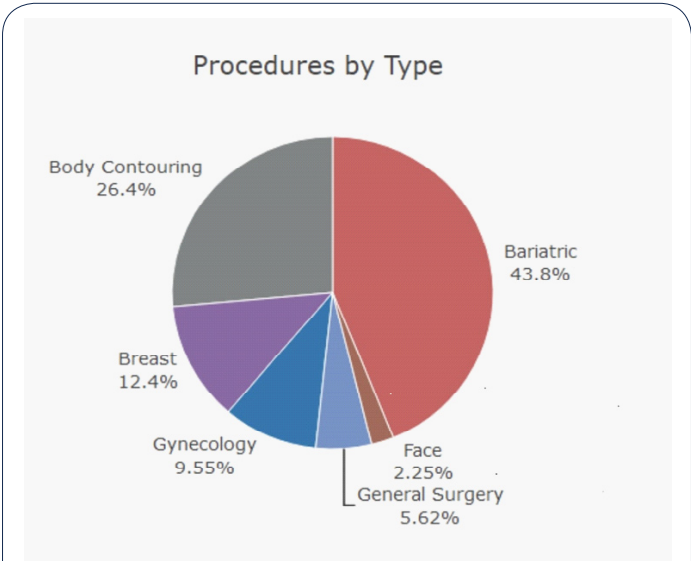


Figure 2: Distribution of type of procedures priced.

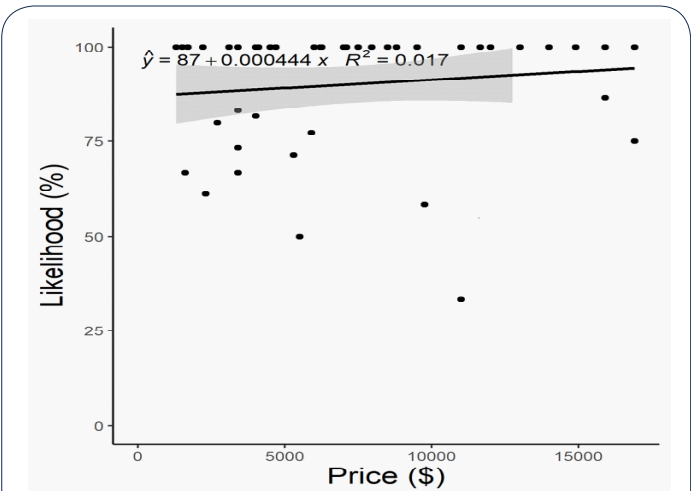


Figure 3: A linear regression showed nearly no correlation (R^2 of 0.0019) between the price of the procedure and the likelihood of a patient coming in for the procedure.

Table 1: Sample data

	Date	Procedure	Cost	Type	Surgeon
Patient A	04-01-2019	Endoscopic sleeve gastropasty (ESG - Endosleeve)	\$4000	Bariatric	Christopher Ibikunle
Patient B	04-01-2019	Breast Augmentation with Silicone Implants	\$2800	Breast	Christopher Ibikunle
Patient C	03-11-2019	Obalon Balloon	\$3000	Bariatric	Christopher Ibikunle
Patient D	04-01-2019	Open Tubal Reversal	\$1500	Gynecology	Christopher Ibikunle
Patient E	03-20-2019	Hernia - Groin (Laparoscopic)	\$1500	GeneralSurgery	Christopher Ibikunle
Patient F	03-14-2019	Varicose Veins Removal, endovenous with laser	\$1000	General Surgery	Christopher Ibikunle
Patient G	03-12-2019	Laparoscopic Gastric Sleeve Gastrectomy	\$4000	Bariatric	Christopher Ibikunle
Patient H	03-22-2019	Breast Lift without Implants	\$2000	Breast	Christopher Ibikunle

Discussion

Traditionally, physicians have hesitated to display pricing information for procedures online for a variety of reasons including fears that patients might delay or forego important beneficial elective procedures if they are deterred by the price in advance. Additionally, some physicians are concerned that competitors may use this information to their advantage. Price transparency in healthcare is slowly gaining acceptance due to recent legislation such as the Affordable Care Act and a recent Executive Order [3]. However, achieving price transparency with the public remains convoluted and segmented as hospital-specific chargemaster rates are published and complicated by insurer-specific protocols. These practices result in thousands of lists that are of questionable value to patients trying to understand and compare prices of operations between centers to make educated decisions [4].

An interactive tool that provides an accessible breakdown of pricing information on procedures consumers are interested in provides a new level of transparency. Furthermore, the price estimator utilized in this study is able to show bundled cash prices as well as the negotiated rates associated with medically necessary services specific to insurance plans. This provides patients with clear and concise information for both cosmetic and medically necessary procedures. Finally, this price transparency tool also provides healthcare providers with data on the existing market demand for these procedures by measuring the number of times patients price a given procedure compared to the number of times patients price a different procedure. This information could be used as a proxy for how interested patients are in a given procedure relative to their interest in other procedures. This information could then be leveraged for efficient marketing to target those specific market demands. An interactive price estimator provides a neat solution to the issues discussed above [6].

While tradition may encourage physicians to hide the prices of procedures, studies have indicated that price-aware patients are more likely to book procedures [6]. Our study concludes that price transparency in an outpatient surgical center can lead to numerous benefits and is not limited by purely price-shopping. We found no significant difference between the prices of priced and scheduled procedures, indicating patients were not opting for

less expensive procedures after becoming aware of the prices.

Figure 2 examines the usage of the price transparency tool across different fields of surgery including bariatric, body contouring, and breast-related procedures. It finds that usage of the tool was not limited to any one field, but rather encompassed every field of surgery offered at the surgical center. Figure 3 examines whether the likelihood of scheduling a procedure decreases if the price of the procedure was higher. The linear regression found almost no correlation between the price of the procedure and the likelihood of scheduling the procedure after using the tool.

Previous studies show that surgeons misconstrue the reality of price transparency - incorrectly assuming either that patients correlate higher prices with higher quality or that patients will selectively choose cheaper procedures if provided with full prices. Previous studies [5,6] have also found that being transparent with prices does not reduce the likelihood of patients opting for that procedure. However, those studies were generally limited in scope to a specific field or did not stratify by cost. Our data finds that the likelihood of booking a procedure does not depend on the field of surgery or the price of the surgery.

Finally, the patient satisfaction associated with transparent pricing practices cannot be overstated. In fact, several patients wrote unsolicited 5-star reviews online explicitly endorsing that they chose the physician, surgical center, and procedure as a result of the freely available online pricing. Using a novel tool to engage patients online can lead to greater understanding of the costs involved in a procedure, reduce sticker shock at the time of the consultation, and result in meaningful patient rapport.

Conclusion

Price transparency in healthcare promises to redefine many traditional healthcare practices and ingrained beliefs. Outpatient surgical centers providing “shoppable services” or elective procedures – both medically necessary and cosmetic – are in a unique position to take advantage of this ongoing shift in consumer behavior. By using interactive pricing tools, such as the price estimator described above, both patients and physicians will experience many advantages but probably none more important than improved patient satisfaction.

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