

ORIGINAL STUDIES

Public unawareness of physician reimbursement

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Abstract**Objectives:** To assess subjects' perception of healthcare costs and physician reimbursement.**Background:** The lack of transparency in healthcare reimbursement leaves patients and physicians unaware of the distribution of health care dollars.**Methods:** Anonymous survey-based study by means of convenience sampling. Participants were asked to estimate the total hospital cost and physician fee for one of the six medical procedures ($n = 250$).**Results:** On the average for all 6 procedures, patients estimated the total cost was \$36,177, ~1,540% more than the actual Medicare rate of \$7,333. Similarly, patients estimated the physician fee was \$7,694, 1,474% more the actual Medicare rate of \$589.**Conclusion:** Patients' perception of the total cost and physician fee are significantly higher than Medicare rates for all 6 procedures. This lack of insight may have widespread negative implications on the patient-physician relationship, on political trends to reduce physician reimbursement, and on a physician's desire to continue practicing medicine.**KEYWORDS**

health care finance, hospital reimbursement, physician reimbursement

1 | INTRODUCTION

Health care spending is at an all-time high. It is forecasted to increase at an average rate of 6.2% from 2012 to 2022, which is 1.4% faster than the average annual growth in the GDP and leads to an exponentially expanding proportion of overall spending when compounded over decades [1]. This growth is unsustainable and by 2022 health care spending is expected to be 19.9% of the GDP, far higher than other industrialized nations [1]. While some patients may have insight into their insurance premiums and co-pay rates, the lack of transparency in the health care system leaves the patient completely detached from the reimbursement system thus unaware of the distribution of health care dollars. The purpose of this study is to measure the gap between what participants think physicians and hospitals are paid for selected procedures and what they are actually paid. This gap may have significant public policy implications and should raise awareness about the allocation of health care dollars.

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2 | METHODS

The survey was designed with guidance from experts at UC San Diego, and it was approved by the IRB at University of California San Diego Health System and Scripps Green Hospital. The survey was designed to gauge a respondent's initial perception of the costs of medical procedures and how much a physician is paid per procedure. For this reason, the four core questions of the survey were designed as fill in the blank questions as opposed to multiple choice.

Core survey questions:

1. Taking everything into account (medications, staffing, overhead, etc.), I think the total bill for this procedure is:
2. Of the total bill, I think the portion that went to the doctor is:
3. If it were up to me, I think the total bill should be:
4. If it were up to me, I think the portion that went to the doctor should be:

Surveys were administered by one individual between June 2015 and August 2015.

Physicians were identified through the San Diego County Medical Society and took the survey online; Approximately 100 physicians were invited to take the survey. Patients were randomly selected using convenience sampling. Approximately 400 patients were asked to participate in the survey. Patients were questioned verbally about their past medical history and were prohibited from evaluating a procedure if it was the cause of their current hospital stay.

If the participant had never heard of the procedure, they were assigned to evaluate, they were assigned a different procedure. If they had not heard of the second procedure, they were excluded. Statistical analyses were performed separating out patients who had a history of the procedure they evaluated and those who did not, to control for potential lack of knowledge regarding the complexity of the procedure.

Statistical analyses were performed using SPSS software with Kruskal–Wallis testing for nonparametric means. To account for variation between procedures, a percent difference was calculated for each procedure, reported in decimal format [%difference = (Medicare Rate – Subject Estimation)/Medicare Rate].

The reported costs are from 2015 Medicare rates for the Southern California region (carrier locality 0118299) [2]. Facility pricing was used for physician fees. The numbers used are as follows [Procedure Name (CPT Code): Total Cost/MD Payment]: New Pacemaker Implant (33207): \$9,985.97/\$507.56; Cardiac Ablation (93653): \$15,038.52/\$869.49; Laparoscopic Cholecystectomy (47562): \$4,468.21/\$677.68; Inguinal Hernia Repair (49550): \$3,281.54/\$593.97; Colonoscopy with Biopsy (45380): \$1,060.72/\$267.65; Single Stent Placement (92928): \$10,167.86/\$619.16 [2,3]. The total cost reported is inclusive of both the hospital component and the physician fee to match what subjects were asked on the survey.

3 | RESULTS

There were a total of 250 respondents of which 46 were physicians. Fifty-two percent of the sample was male with 11 participants not reporting sex. The total number of subjects who evaluated each procedure are as follows: New Pacemaker Implant 51, Cardiac Ablation 34, Laparoscopic Cholecystectomy 38, Inguinal Hernia Repair 39, Colonoscopy with Biopsy 47, and Single Stent Placement 41. Table 1 shows the demographic distribution of respondents broken down by patient and physician respondents.

Both patient and physician respondents estimated a higher total cost and physician reimbursement than actual. For patient respondents, the average percent difference for total cost for was –15.40, indicating that on average patients perceived the total cost was 1,540% more than Medicare rates. Similarly, the average percent difference for the physician reimbursement was –14.74 indicating that patients believed that physicians made 1,474% more than Medicare pays. Physician respondents were more accurate; they believed the total cost was 165% higher than Medicare, and physician fees were 129% higher than Medicare.

Additionally, Figure 1 illustrates respondents' quantitative estimation (perception) of the total hospital cost compared to what they thought the cost should be (value). On average for all 6 procedures, physicians overestimated the total cost of the procedure by almost \$10,000 (\$16,064.50 perceived versus \$7,333.80 Medicare) and felt the bill should have been less at \$10,971.50. Similarly, patients consistently overestimated the cost of the procedure by almost \$30,000 (\$36,177.17 perceived versus \$7,333.80 Medicare) and felt it should have been less at \$15,949.33. Taking pacemaker implant as an example, patients estimated the total cost to be \$36,642 but thought it should cost \$18,000, still double the Medicare rate (\$9,985).

Figure 2 summarizes the respondents' estimation (perception) of the physician fees compared to what they thought it should be (value). On average for all six procedures, physicians overestimated by about \$430 (\$1,019.00 perceived versus \$589.25 Medicare) and felt the fee should have been higher at \$1,547.80. Patients overestimated the physician fees by about \$7,000 (\$7,694.33 perceived versus \$589.25 Medicare) but felt the fees should be less at \$6,817.50. Again, using pacemaker implant as an example, patients believed that physicians were paid \$9,430 per implant, and should be paid less at \$6,691; still over 13 times higher than the Medicare rate of \$507.

Interestingly, for patients, there was no significant difference in their estimation if they had undergone the procedure that they evaluated or not (total bill perceived: $P = 0.555$, total physician fee perceived: $P = 0.483$).

4 | DISCUSSION AND CONCLUSIONS

This preliminary study confirms that patients often are not familiar with healthcare reimbursement for services or the distribution of healthcare dollars. Surprisingly, many physicians are unaware as well.

Both groups consistently overestimated how much hospitals and doctors are paid. Patients overestimated the total cost of the procedure in all categories, on average by almost \$30,000. Patients overestimated physician fees in all categories. Overall, the average perceived physician fee for all procedures was \$7,037.50, almost a 12-fold overestimation.

More interesting is what patients thought the costs should be. For 3 of the 6 procedures (pacemaker implant, colonoscopy, and stent placement), patients believed that physicians should be making less ("should be" value was less than perceived value). However, when subjects quantified what they believed the lower fee was for physicians should be, it was significantly higher than the Medicare rate. Interestingly, two similar studies published in 2013 reported that patients felt physicians should be making more than Medicare rates [4,5].

While physician estimations were not inflated to the same magnitude as patient estimations, they consistently overestimated both the total cost and physician reimbursement rates. For 5 of the 6 procedures, physician respondents felt that a fair reimbursement rate ("should be" value) was higher than actual Medicare rates. This suggests that physicians, and patients, feel that they should be reimbursed above what they believe Medicare is currently paying.

TABLE 1 Frequency analysis: patient and physician demographics

		Physicians	Patients
Age	18–24 years old	-	3.2% (8)
	25–44 years old	3.2% (8)	7.6% (19)
	45–64 years old	10.8% (27)	29.1% (73)
	65+ years old	1.2% (3)	36.3% (91)
	No response	3.2% (8)	5.2% (13)
	Total	18.3% (46)	81.3% (204)
Gender	Male	12.4% (31)	39.0% (98)
	Female	2.0% (5)	41.8% (105)
	No response	4% (10)	0.4% (1)
	Total	18.3% (46)	81.3% (204)
Ethnicity	Hispanic/Latino	2.8% (7)	12.0% (30)
	Not Hispanic/Latino	12.7% (32)	69.3% (174)
	No response	2.8% (7)	-
	Total	18.3% (46)	81.3% (204)
Race	African American	-	2.8% (7)
	Asian	1.6% (4)	4.0% (10)
	Native American/Alaskan	-	2.0% (5)
	Native Hawaiian/other Pacific Islander	0.4% (1)	0.4% (1)
	Caucasian/White	12.4% (31)	71.7% (180)
	Other	1.6% (4)	0.0% (0)
	No response	2.4% (6)	0.4% (1)
	Total	18.3% (46)	81.3% (204)
Highest level of education	High school diploma/GED	-	10.4% (26)
	Some college	-	16.7% (42)
	Associates degree	-	9.2% (23)
	Bachelor degree	-	22.7% (57)
	Postgraduate degree	15.5% (39)	17.5% (44)
	Other	-	0.4% (1)
	No response	2.8% (7)	-
	Total	18.3% (46)	81.3% (204)
Annual household income	<\$44,999	-	22.3% (56)
	\$45,000–\$49,000	-	3.2% (8)
	\$50,000–\$59,999	-	4.0% (10)
	\$60,000–\$100,000	0.8% (2)	21.5% (54)
	>\$100,000	14.3% (36)	25.1% (63)
	No response	3.2% (8)	5.2% (13)
	Total	18.3% (46)	81.3% (204)

Why such an awareness gap exists is rooted in many inter-related ways and may have negative implications the patient–physician relationship, physician reimbursement, and job satisfaction. Patient

unawareness is likely the result of a long history of complete lack of transparency in healthcare billing. Most patients' only knowledge of health care costs is the inflated charge master rates they receive after

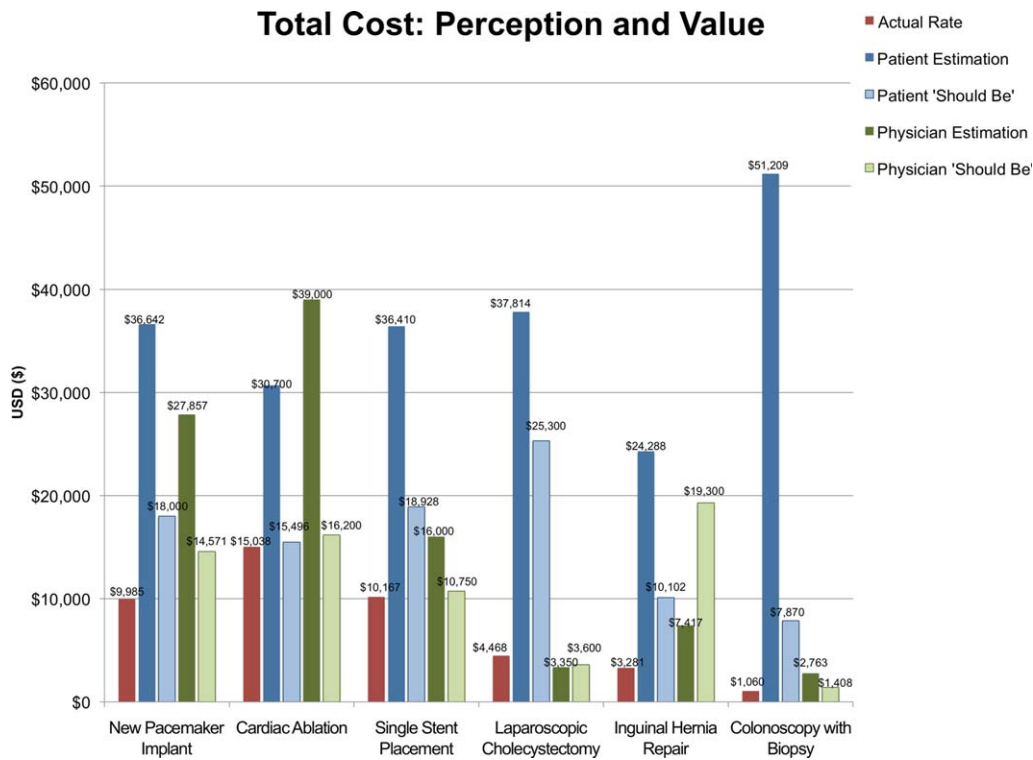


FIGURE 1 Total cost: perception and value. Graphic results for perception of the total bill and what respondents think it should be (mean), broken down by procedure type. The Medicare reimbursement for each procedure is listed, based off 2015 rates. The minimum and maximum values for each procedure are as follows: · New pacemaker implant (patients: \$500–\$200,000, physicians: \$10,000–\$50,000) · Cardiac ablation (patients: \$1,600–\$150,000, physicians: \$10,000–\$50,000) · Single stent placement (patients: \$2,500–\$157,000, physicians: \$5,000–\$35,000) · Laparoscopic cholecystectomy (patients: \$2,000–\$250,000, physicians: \$1,100–\$12,000) · Inguinal hernia repair (patients: \$240–\$180,000, physicians \$3,000–\$12,000) · Colonoscopy (patients \$500–\$1,000,000, physicians: \$800–\$8,800)

a hospital stay [6]. Increasingly short outpatient visits [7,8], combined with the patient perception that physicians are overpaid, and lack of financial transparency, sets the stage for an unsatisfied patient who can feel like “just a number” to their doctor. There are many implications of this; notably it has been shown that patients who are unsatisfied with their care are less likely to comply with their prescribed medical regime [9,10].

Cuts to provider fees typically gain public support, seen most recently when Highmark, a Blue Cross Blue Shield affiliate made a blanket 4.5% cut to provider fees to help cover recent losses as a result of the Affordable Care Act [11]. Historically, the public supports these cuts because the common assumption, as confirmed in this study, is that physicians are making more money than they actually are.

Patients are not the only ones who are unsatisfied with the current status of healthcare. In 2012, the Doctors Company published a survey that showed 9 out of 10 physicians would not recommend health care as a profession [12]. These low rates of satisfaction among physicians are multifactorial, but main contributors are thought to be the increasing burden of administrative tasks [8,12,13], less time allotted for actual patient contact [7,8], and decreasing reimbursement rates [8,14,15].

In conclusion, this study suggests that patients are grossly unaware of the cost of both health care delivery and physician reimbursement and need to be better educated. The lack of transparency leads to incorrect assumptions that can have detrimental effects on the

patient–physician relationship, on political trends to reduce physician reimbursement, and on a physician’s desire to continue practicing medicine. Future steps include investigation into possible confounding factors that may have influenced this outcome, sampling other subsets of the population such as hospital employed support staff and administrative personnel and expanding the geographical region for survey distribution.

5 | LIMITATIONS

We acknowledge that there is significant bias and error within this study. We elected not to randomize subjects to different procedure types because the investigators discovered that many subjects were not equally familiar with all the procedures. We also ignored private reimbursement of physicians and hospitals, and Medicare reimbursement in other geographic areas, which may in some cases differ from the selected Southern California Medicare rates. The goal of this study was to provide the reader with preliminary descriptive data, and therefore does not provide precision or the probability of type 1 statistical errors.

Additionally, the response rate was not accurately tracked during this study, which limits the authors’ ability to accurately calculate confidence intervals, as such this was omitted. Standard deviations were not included in the graphic results due to nonparametric data.

Physician Fee: Perception and Value

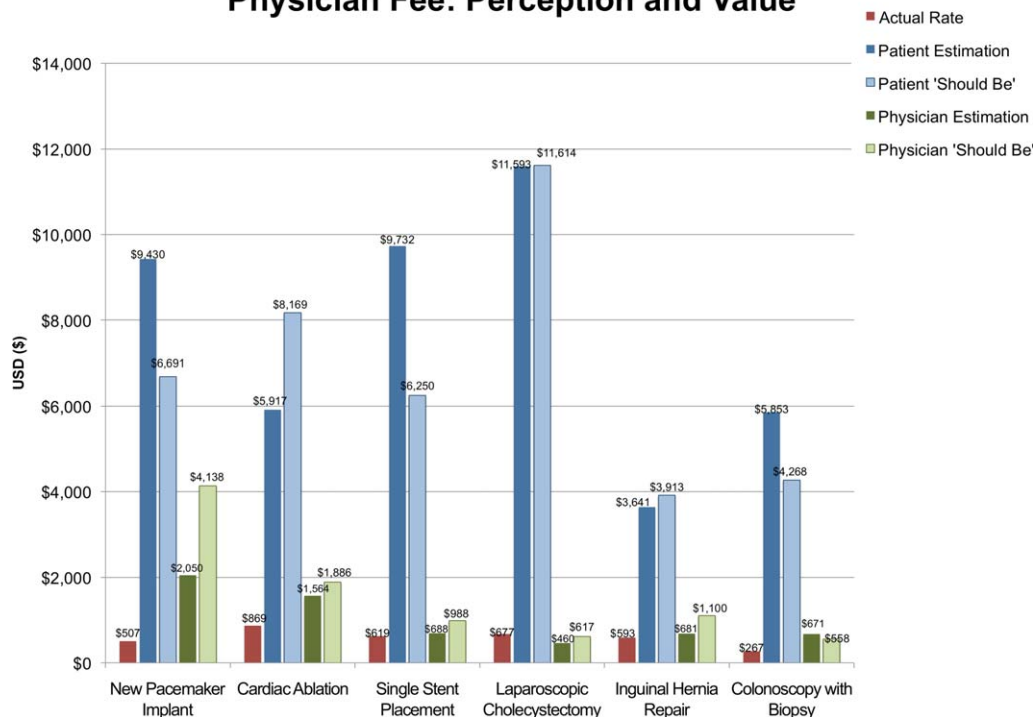


FIGURE 2 Physician fee: perception and value. Graphic results for perception of the physician fee and what respondents think it should be (mean), broken down by procedure type. The Medicare reimbursement for each procedure is listed, based off 2015 rates. The minimum and maximum values for each procedure are as follows: · New pacemaker implant (patients: \$300–\$50,000, physicians: \$200–\$7,000) · Cardiac ablation (patients: \$300–\$35,000, physicians: \$450–\$2,500) · Single stent placement (patients: \$800–\$40,000, physicians: \$300–\$2,000) · Laparoscopic cholecystectomy (patients: \$150–\$80,000, physicians: \$200–\$780) · Inguinal hernia repair (patients: \$120–\$20,000, physicians: \$300–\$2,400) · Colonoscopy (patients: \$250–\$100,000, physicians: \$200–\$2,500)

ACKNOWLEDGMENTS

Nicole Herrick had full access to all the data in the study and takes full responsibility for the integrity of the data and the accuracy of the data analysis. Nicole Herrick and Toni Rush completed all data analysis. This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors. The authors declare that there is no conflict of interest.

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How to cite this article: Herrick NL, Fontanesi J, Rush T, Schatz RA. Public unawareness of physician reimbursement. *Catheter Cardiovasc Interv*. 2018;91:1062-1067. <https://doi.org/10.1002/ccd.27363>