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The impact of a sliding schedule down payment policy on self-pay patients' access to elective surgery

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ABSTRACT

Purpose: Previous research investigating a 50% down payment policy for elective surgeries demonstrated that a substantial number of self pay patients failed to receive recommended surgery due to the down payment cost. The current study analyzes the effect of a new, more liberal sliding scale down payment policy implemented at this same public hospital and assesses the impact on health care access for self pay patients.

Methods: Data was collected from the admissions office and the pre-operative assessment office where elective surgery cancellation reasons were recorded. Chi-square tests were used to determine the statistical significance between data sets.

Results: 448 recorded cancellations were documented over an 8 month period. Of those records, 6.9% (n=31) were self pay patients and 93% (n=417) had insurance. Of the 31 self pay patients, 51.6% (n=16) had cancelled stating financial reasons, while 4.8% (n=20) of the insured canceled for financial reasons ($p < 0.0001$). In comparison to the previous study performed by Kaufman and Chavez, the results revealed a 50% decrease in the number of self pay patients failing to receive recommended surgery. Of those self pay patients who did not receive surgery, there was no significant difference in the rate of canceling for financial reasons ($p = 0.18$).

Conclusions: Despite gender or race, self-pay patients cancel elective surgeries at a rate significantly greater than insured patients. The more liberal sliding scale down payment policy appears effective in reducing the overall number of self pay patients who decline elective surgery for financial reasons. Self pay patients are still facing financial barriers to health care access despite the sliding scale payment policy.

INTRODUCTION

Historically, the mission of a public hospital has been to serve the healthcare needs of the community and to provide healthcare services that are not always accessible by the uninsured at private and non-profit institutions. For many of the uninsured, the only possibility of receiving elective surgery is to seek such care at a public hospital. Federal, state, and county money cover costs for those patients that are financially unable to pay at the point of service. However, as the number of uninsured rises, there are not enough resources at public hospitals to cover these costs. Public hospitals develop payment options that lower the level of the financial burden for the uninsured, and lowering out-of-pocket costs through programs and waivers helps to allow the patient to pay off the medical bill over weeks to years. However, public hospitals facing growing budgetary deficits are reluctant to permit patients to receive non-emergency services without paying a percentage of the cost.¹

The underinsured and the uninsured are a steadily growing population in the United States. The most recent statistics shows that 46.6 million non-elderly people are without health insurance, which includes 8.3 million uninsured children.² However, it has been estimated that approximately 80 percent of the uninsured are currently eligible for federally funded health insurance programs or live in families with an income below 300% of the federal poverty level; this includes 25 percent who are eligible for Medicaid or the State Children's Health Insurance Program(SCHIP).³ Despite this eligibility, as this number grows, the use of emergency rooms at public hospitals by the uninsured for non-emergency as well as emergency needs continue to grow. Compared to insured

individuals, the uninsured have difficulty obtaining recommended medical care and a poorer short-term outcomes in health status after experiencing an acute healthcare need.⁴ Research has shown that a third of the uninsured report needing care and not receiving it while nearly half report postponing care.⁵ The consequence is that uninsured patients tend to delay seeking care until they appear in the emergency department with far more serious illnesses and disabling diseases. Over two-thirds of hospitalizations of the uninsured are considered medical emergencies compared to half for insured patients.⁶

Hospital utilization patterns for patients can vary between institutions and can be based upon the social economic status of the patient. The public hospital in this study maintains records of patients and hospital utilization patterns of each patient that are documented regardless of form of payment. Additionally, in the previous study by Kaufman and Chavez on access to elective surgery by self-pay patients required to pay a 50% down payment, 55.6% (n=55) of those patients (n=99) cancelled their elective surgeries for financial reasons compared to 9.3% (n=53) of insured patients (n=568) canceling for financial reasons.⁷

After community pressure on this public hospital to make affordable to self-pay patients its upfront charges, the hospital instituted a much reduced co-payment requirement for health services.⁸ This current study investigates the impact on cancellation of elective surgery procedures after the implementation of this new payment policy at the hospital. Furthermore, the study considers if the implementation of a sliding scale payment policy lowers financial burden thereby increasing access to healthcare for self pay patients or if

there are other possible explanations for an increase in healthcare access for self pay patients.

METHODS

Data was collected for this project using elective surgery cancellation records from the admissions office. An elective surgery is defined as all non-emergent or medically necessary surgeries ranging from open reduction with internal fixation of fractured limbs to laparoscopic cholecystectomy to cosmetic trauma revision. Data was collected in the form of hard paper cancellation records. Also, in order to confirm consistent cancellation reasons, a recorded log obtained from the pre-operative assessment office was used to collect cancellation reasons. This helped to assure cancellation reasons were consistent on both admissions and pre-operative office records. The patient records spanned the dates of August 8, 2006 to March 9, 2007 and the data was collected from February 28, 2007 to March 12, 2007.

Information from these records was available as a hard copy paper stored in the admissions office with notes from the admissions department employees. Specific information from the patient records were entered into a Microsoft Access table using the following fields: medical record number, date of cancellation, financial code, employment status, race, age, diagnosis, procedure, down payment/co-pay, and reason for cancellation. The financial codes were based on codes developed by the admissions department to designate the patient's insurance status. The reasons for cancellation were divided into "financially related" and "not financially related" based on the pre-recorded

notes by the admissions office staff. A cancellation for financial reasons would be considered if the patient's insurance was denied, no authorization for the procedure was given, the patient had a pending financial application, or if the patient refused the procedure due to insignificant funds. The records without any notes recorded were categorized as "unknown."

Patient's records were kept confidential by storing the information on the UNM Health Sciences Center server under the secure H: drive. All records were marked with a unique ID number to allow for proper record and matching of data to patient information. Research methods and protocols were approved by the Human Research and Review Committee at the UNM Health Sciences Center before any data collection had begun.

The data collected in this study would then be compared with the results of a previous study in 2003 that analyzed the cancellation records of patients during the previously 50% upfront payment policy for self-pay patients. A chi-square test would be performed comparing both data sets. The analysis would be used to determine a difference in the rate of self-pay patients who cancelled elective surgeries for financial reasons.

After the data had been collected, a statistical analysis using the chi-square test was performed to determine any significance for cancellations among self-pay and insured patients. Calculations were performed using SAS version 9.1.

RESULTS

The study period was from August 1, 2006 to March 31, 2007. This included 448 recorded cancellations of elective surgeries by the university hospital admissions department. Of those records, 6.9% (n=31) were self pay patients and 93% (n=417) had some form of insurance, including financial assistance. Of the 31 self pay patients, 51.6% (n=16) had cancelled stating financial reasons, while 4.8% (n=20) of the insured canceled for financial reasons (Table 1). In comparison to the previous study, Kaufman and Chavez found during the 50% up front policy period there were 99 self pay cancellations with a 56% (n=55) cancellation rate for financial reasons over 10 months (Table 2). Overall, this comparison showed a significant decrease in the number of self pay patients not receiving elective surgery, but for those who still did not receive surgery, no significant difference from the previous study in the rate of canceling for financial reasons ($p=0.18$) (Table 2).

A large proportion of the cancellations were due to unknown reasons. In the insured group, 39.6% (n=165) cancelled for unknown reasons and the self pay group had 22.6% (n=7) of cancellation for unknown reasons. When assuming a worse case scenario that all unknown cancellation reasons were considered financial, an additional analysis was then performed in order to further verify the significance between the insured and self pay patients when comparing reasons for cancellation. This analysis combined the unknown and the financial cancellation reasons, which resulted in 74.2% (n=23) of self pay patients canceling for unknown or financial reasons and 44.4% (n=185) of insured patients canceling for unknown or financial reasons ($p=0.0013$) (Table 1).

A further comparison was performed analyzing the redistribution of the self pay patients into other financial programs including UNM Care Plan and Medicaid. This was done in order to investigate the possibility that other programs may have absorbed the 7.9% decrease in self pay patients from the 50% up front to the newer sliding scale policy. This resulted in an increase of 5.2% in the Medicaid financial classification and of 4.3 % in the insurance financial classification and a decrease of 1.6% was shown in the UNM Care Plan. The Financial Discount classification had a modest increase of 0.15% (Table 3).

Finally, upon further analysis of demographic features, no significant difference was found between male and female or between race when comparing insurance and self payment classification (Table 1). However, a multivariate analysis showed that regardless of race, self pay patients were 16.66 to 19.61 more times likely to cancel elective surgeries for financial reasons compared to insured non-Hispanic white ($p < 0.001$) (Table 4).

DISCUSSION

The results of our project suggest that since the new sliding scale payment policy has been implemented, the overall number of self pay patients canceling elective surgery has significantly decreased. However, of those self pay patients who still declined elective surgery, the proportion canceling due to financial reasons has not changed. Furthermore, the increase in number of cancellations from patients covered by Medicaid as well as

primary health insurance, which includes Medicare, imply that paradoxically the enrollment in government programs has increased due to increased eligibility for these programs. Some of the growth of patients covered by Medicaid may have occurred due to an over budgeting in the Medicaid funding, which allowed for expanded coverage of indigent patients in the 2006 calendar year. However, the decrease in uninsured patients canceling elective surgeries suggests that access to care has been improved for individuals who claim self pay status, and are able to qualify for the university hospital's sliding scale payment policy.

Until recently, the public hospital in this study, amongst others, had adhered to a high up-front payment policy before services were provided. However, in November 2005, a new Self Pay Down Payment hospital policy was implemented to provide payment options for self pay patients. Patients who are classified as "self pay" are those who are:

not eligible for Medicare, Medicaid, commercial insurance, CHAMPUS, Indian Health Service coverage or other third-party insurance, or the UNMHSC financial assistance programs for qualified medically indigent patients (the Bernalillo County Financial Assistance program, Out-of-County Indigent Fund or, for illegal aliens only, Limited Financial Assistance).⁹

Conversely, not all self pay patients meet the criteria for the payment plan. The qualifying criteria are as follows:

- 1) Income is below 350% of poverty.
- 2) Assets are below the amount allowed in the Bernalillo County Financial Assistance Policy. Assets do not include patient's home, retirement fund or cars.
- 3) Patient is a resident of Bernalillo County for more than 90 days or is a resident of New Mexico for more than 90 days and who need services that are not available in their home county.¹⁰

This payment policy is based on sliding fee schedules according to household income and members. Until November 2005, there was a self pay payment policy that required all patients to pay 50% of the cost as a down payment before services were performed. As previously noted, the study by Kaufman and Chavez et al documented how many self pay patients failed to secure recommended elective surgery because of this policy.

Even with hospital policy amendments, recent changes in the nation's financial budget and increased financial stress have created a difficult fiscal situation that would suggest an overall decrease in indigent care provisions in safety-net hospitals.¹¹ Research has shown that safety net hospitals reduce uncompensated care when there is a reduction in reimbursement from Medicaid or other government programs.¹² These same public hospitals that serve millions of indigent people provide nearly \$5.4 billion in uncompensated care, a sum that accounts for 21% of total costs compared to 5.4% of total costs for hospitals nationally.¹³ The safety-net created by public hospitals is only as durable as the intertwining cord of federal and state financial support that ensures services for underserved communities. Thus, the ideal goal of the implementation of any sliding scale payment policy would be to increase access to health care for self pay patients while maintaining fiscal responsibility.

The new sliding scale hospital policy clearly lowers the number of self-pay patients canceling elective surgeries, yet there still exists a financial barrier that prevents a minority of uninsured patients from ever receiving care. Clearly, the goal of improving health care access to self pay patients has been achieved but the results of this study show

that there is still room to improve accessibility to self pay patients. Improvements to the sliding scale policy might include making the financial assistance program more user friendly, assessing the reasons for self pay patients canceling at point of cancellation, or even offering more financial assistance to self pay patients.

Additionally, in order to ascertain the impact of the sliding scale policy on the patient population, further investigations should examine any subsequent ER or clinic visits by self pay patients who cancelled or who were eligible for elective surgery per the hospitals sliding scale policy. As the hospital system creates a unique medical record number for each patient without such prior identification, this would be a way to track those visits for subsequent healthcare. Furthermore, it would be beneficial to understand if patients are able to meet the required monthly payments set forth after the initial co-payment with the sliding scale payment policy. This would help to demonstrate if there are still other financial burdens after the point of service that may prevent future access to healthcare. Though this research project looks only at the increased health care access after the initial financial barrier has been overcome, self pay patients are still required to pay the full price whereas insured patients do not have this financial pressure.

There were several limitations to this study that merit being noted. First, in the previous paper and in this study there was no standard for the recording of cancellation reasons. The staff of the admissions office and the pre-op assessment office recorded cancelled elective surgeries, without obligation to consistently and accurately record each cancellation reason. Additionally, the staff members were under no obligation to record

cancellation reasons, which contributed to the large number of cancellations for unknown reasons. This being considered, the insured group had more unknown cancellations than the self pay group and when grouping the unknown with financial cancellation reasons, the results still showed significantly more cancellations for financial reasons of self pay patients (Table 1).

Limitations on the data collection arose after the initial estimates. A decrease in the period of records being saved caused a two month loss of recorded data. The previous study had 10 months of data collected to this project's 8 months. This did not alter the significance of the study, but a matching data set would have been preferred. Also, the time period of data collected was not identical, and only the months of September thru December were common in both data sets. However, there seemed to be no distinct pattern of difference between the two data sets in number of cancelled elective surgeries within this four month time period. Finally, the two authors contributed to another limitation in the method of deciding financial categories of each record. The data was collected with both authors present and a mutual judgment decision was made to designate the financial category for each cancellation reason.

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TABLES

Table 1. Reason for cancellation by payment category and demographic characteristics.

<i>Variable</i>	<i>N</i>	Reasons for Cancellation			Chi-square p-values	
		Non-Financial	Unknown	Financial	Three Categories	Two Categories ¹
Payment category						
Insured	417	232 (55.6%)	165 (39.6%)	20 (4.8%)	<0.0001	0.0013
Self-pay	31	8 (25.8%)	7 (22.6%)	16 (51.6%)		
Age						
<18	75	42 (56.0%)	28 (37.3%)	5 (6.7%)	0.022	0.011
18-39	98	39 (39.8%)	45 (45.9%)	14 (14.3%)		
40-64	205	114 (55.6%)	76 (37.1%)	15 (7.3%)		
>64	70	45 (64.3%)	23 (32.9%)	2 (2.9%)		
Gender						
Male	224	113 (50.4%)	89 (39.7%)	22 (9.8%)	0.25	0.18
Female	224	127 (56.7%)	83 (37.0%)	14 (6.2%)		
Race						
Other	313	168 (53.7%)	115 (36.7%)	30 (9.6%)	0.15	0.95
Non-Hispanic White	135	72 (53.3%)	57 (42.2%)	6 (4.4%)		

¹ Non-financial reason compared to the combination of unknown and financial reasons.

Table 2. Comparing self pay patients by cancellation reason

Payment Policy	<i>N</i>	Cancellation Reason			Chi-square p-values
		Non-financial	Unknown	Financial	
50% Up-front	99	34 (34.3%)	10 (10.1%)	55 (55.6%)	0.18
Sliding Scale	31	8 (25.8%)	7 (22.6%)	16 (51.6%)	

Table 3. Comparison of payment policies by financial classes

Payment Policy	N	Financial Class				
		Insurance	Self-pay	UNM Care	Medicaid	Financial Discount
50% Up-front	667	284 (42.6%)	99 (14.8%)	106 (15.9%)	149 (22.3%)	29 (4.4%)
Sliding Scale	448	210 (46.9%)	31 (6.9%)	64 (14.3%)	123 (27.5%)	20 (4.5%)

p < 0.001

Table 4. Multivariate risk ratios and 95% confidence limits for canceling for financial reasons

Variable	RR (95% CI)	p-value
Payment source and race		
Third party pay and Non-Hispanic white	1.00	
Third party pay and other	2.35 (0.71, 7.77)	0.16
Self pay and Non-Hispanic white	19.61 (5.74, 66.99)	<0.001
Self pay and other	16.66 (5.21, 53.26)	<0.001
Gender		
Male	1.00	
Female	1.11 (0.68, 1.82)	0.66