Original Article

A comparison of perspectives on costs in emergency care among emergency department patients and residents

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BACKGROUND: Costs of care are increasingly important in healthcare policy and, more recently, in clinical care in the emergency department (ED). We compare ED resident and patient perspectives surrounding costs in emergency care.

METHODS: We conducted a mixed methods study using surveys and qualitative interviews at a single, academic ED in the United States. The two study populations were a convenience sample of adult ED patients (>17 years of age) and ED residents training at the same institution. Participants answered open- and closed-ended questions on costs, medical decision making, cost-related compliance, and communication about costs. Closed-ended data were tabulated and described using standard statistics while open-ended responses were analyzed using grounded theory.

RESULTS: Thirty ED patients and 24 ED residents participated in the study. Both patients and residents generally did not have knowledge of medical costs. Patients were comfortable discussing costs while residents were less comfortable. Residents agreed that doctors should consider costs when making medical decisions whereas patients somewhat disagreed. Additionally, residents generally took costs into consideration during clinical decision-making, yet nearly all residents agreed that they had too little education on costs.

CONCLUSION: There were several notable differences in ED patient and resident perspectives on costs in this U.S. sample. While patients somewhat disagree that cost should factor into decision making, generally they are comfortable discussing costs yet report having insufficient knowledge of what care costs. Conversely, ED residents view costs as important and agree that cost should factor into decision making but lack education on what emergency care costs.

KEY WORDS: Emergency medicine; Clinical decision-making; Cost; Communication; Residency education

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INTRODUCTION

U.S. healthcare spending has been rising rapidly for the past several decades. The majority of insured Americans are covered by a private healthcare plan whereas approximately one-third are covered through the U.S. government through Medicaid, Medicare, or the Veterans Administration, and 10% have no health insurance.^[1] Recent U.S. legislation including The Affordable Care Act of 2010 and Medicare Access and

CHIP Reauthorization Act (MACRA) of 2015 promote cost-containment through new payment and quality measurement models. Emergency department (ED) episodes of care are estimated to account for 12% of healthcare costs: 8% related to ED admissions and 4% outpatient visits.^[2] Emergency departments are targets for cost reductions, with many programs using reduction in ED visits as program outcomes.^[3,4]

While movements such as "The Choosing Wisely

Campaign" aim to reduce low-value care, knowledge among physicians on what care costs is low.^[5] A survey of ED residents on the Choosing Wisely recommendations found the majority felt they should provide cost-conscious care; however, patient expectations were a key barrier.^[6] Another study found most emergency physicians felt they should consider costs but have limited knowledge of actual costs.^[7] By contrast, patients do not tend to rank cost to be of high importance when assessing value of care,^[8] however, this may change as cost-shifting to patients increases. Less clear is how ED residents and patients compare with respect to attitudes on costs and how cost should factor into an ED visit and physician-patient discussions. In this study, we explored resident and patient perceptions surrounding the costs of emergency care in a single academic ED.

METHOD

Study design and population

We conducted a mixed methods study using surveys and qualitative interviews in two populations. The first was a convenience sample of 30 adult ED patients (>17 years of age) recruited during December 2014. The second population was ED residents at an inner-city academic 4-year residency program in the United States with 75 000 yearly visits. Our surveys were adapted from a prior survey on a similar topic.^[9] We piloted the survey with individuals of varying education levels and with medical and non-medical backgrounds to assess flow and understandability and made changes based on feedback. The study received ethical approval by the institutional review board at George Washington University (IRB #061443), and there was no external funding source.

Survey administration and content

For the first population, a single author approached ED patients who were being discharged. Interviews were conducted by the study author, a senior ED resident, who was trained by the second author, an attending ED physician with expertise in narrative interviews. Given that ED patients have wide variability in health literacy and education level, consenting patients were verbally asked open and closed ended questions, and responses were recorded through note-taking by a single author. For the second population, a written survey was distributed to residents during a weekly educational conference where all present (24 residents) consented and completed the survey. The surveys contained questions on demographics, cost, compliance, and patient-provider

communication. The resident survey also included questions on education related to costs.

Data analysis

Closed-ended data were tabulated using statistical calculations including median and interquartile ranges using Microsoft Excel. Open-ended responses were analyzed using grounded theory where notes in the patient survey and written responses in the resident survey were coded based on repeated concepts and categorized into themes which were subsequently reviewed among authors to confirm agreement.

RESULTS

Thirty ED patients participated in the study. Twenty-four ED residents (33% PGY-1, 21% PGY-2, 25% PGY-3, and 21% PGY-4) out of 40 total residents were present at the weekly educational conference during survey administration, and 24/24 residents present (100%) participated.

Quantitative results

ED patients and residents felt neutral regarding the importance of cost discussions, and both generally disagreed that they had knowledge of medical costs. Patients were relatively comfortable discussing costs while residents were less comfortable. Patients were neutral or tended to disagree that doctors should consider costs when making medical decisions while residents agreed that cost should factor in clinical decision making.

A minority of patients had concerns about costs; however, none discussed this with their doctor. About a quarter of patients reported non-compliance due to cost, and, of those, more than half informed their doctor. Three in four residents knew of a patient who did not comply with medical care due to costs; of those residents, half obtained this knowledge during a return ED visit by the patient. Finally, nearly all residents felt they receive too little education on costs (Table 1).

Qualitative results

Themes emerged among ED patients pertaining to compliance and communication. Regarding non-compliance due to cost, reasons why patients informed their doctor included inquiry about more affordable alternatives (3 patients) and perceived importance of sharing this information (2 patients). With regard to patient-physician discussions, reasons why patients did not discuss cost concerns included limited duration of the patient-physician encounter (2 patients) and the perception

Table 1. Emergency department (ED) patient and resident perspectives on medical costs, *n* (%)

Variables	ED patients		ED residents	
Demographics				
Male gender (<i>n</i> =30; 24)	14 (47)		13 (54)	
Mean age in years (<i>n</i> =30)	42			
Black race (<i>n</i> =30)	24 (80)			
Privately insured (<i>n</i> =30)	17 (57)			
Medicaid/Medicare insured (<i>n</i> =30)	13 (43)			
I have discussed medical costs during an ED visit (<i>n</i> =30; 24)	11 (37)		16 (67)	
The patient (vs. provider) prompted the discussion on cost (<i>n</i> =11; 16)	9 (82)		13 (81)	
ED patient specific data				
I did not fill a prescription or attend follow-up care due to costs (<i>n</i> =30)	8 (27)			
I told my doctor my concerns regarding prescriptions/follow-up (<i>n</i> =8)	5 (63)			
Someone talked to me about the total costs of my ED visit today (<i>n</i> =30)	2 (7)			
Someone talked to me about my out-of-pocket costs today (<i>n</i> =30)	6 (20)			
I received tests or treatments during today's visit (<i>n</i> =30)	23 (77)			
I have concerns about the costs of the tests/treatment received (<i>n</i> =23)	4 (17)			
I told my doctor my cost concerns regarding tests/treatment (<i>n</i> =4)	0 (0)			
I received medication in the ED today or was given a prescription (<i>n</i> =30)	21 (70)			
I have concerns about the costs of the medication or prescription (<i>n</i> =21)	2 (9)			
I told my doctor about my cost concerns regarding medication (<i>n</i> =2)	0 (0)			
ED resident specific data				
I discuss costs with patients at least once per shift (<i>n</i> =24)			5 (21)	
I consider the costs of prescriptions at least once per shift (<i>n</i> =24)			8 (33)	
I know of a patient who was non-compliant due to costs (<i>n</i> =24)			18 (75)	
I found out a patient was non-compliance from a return ED visit (<i>n</i> =18)			9 (50)	
ED providers receive too little education on costs (<i>n</i> =23)			23 (91)	
General perceptions regarding costs				
	Median*	IQR*	Median	IQR
I am comfortable discussing costs during the ED visit (<i>n</i> =30; 24)	4	3–5	2	1–3
It is important for doctors to discuss the costs of tests/treatments (<i>n</i> =30; 24)	3	2–4	3	3–4
It is important for doctors to discuss the costs of prescriptions (<i>n</i> =30; 24)	3.5	2–4	4	3–4
I know the out-of-pocket costs of tests and treatments (<i>n</i> =30; 24)	2	2–2	2	1–2
Doctors know how much patients spend on out-of-pocket costs (<i>n</i> =30; 24)	2	1.25–3.75	1	1–2
Doctors should consider cost when making medical decisions (<i>n</i> =30; 24)	2.5	1.25–4	4	3–4
There are times when I wanted to discuss ED costs but didn't (<i>n</i> =30; 24)	2	2–3	4	2–4
Cost factored into my decision to come to the ED today (<i>n</i> =30)	1	1–3		
I feel burdened by my out-of-pocket costs (<i>n</i> =30)	2	2–4		

*: Median=values represent median value on a 5-point Likert scale (1=strongly disagree; 3=neutral; 5=strongly agree); †: IQR=Interquartile Range.

that physicians were not the appropriate party for this discussion as doctors do not determine prices (2 patients).

Several themes were also found among ED residents. Reasons why residents took cost into consideration included patient financial burden (9 residents) and feeling a personal responsibility for healthcare costs (5 residents). The most common reason why residents considered discharge prescription costs was because of patient compliance (15 residents). With regard to education, residents with prior cost knowledge cited the following methods: formal lectures (3 residents), clinical discussions with attending physicians (2 residents), and direct patient interactions (2 residents). Residents suggested access to price lists (9 residents) and formal presentations (8 residents) addressing topics including patient/family expectations and litigation risk as ways to improve education on cost.

DISCUSSION

We found that in general patients felt comfortable discussing costs; despite this, most had never done so. One explanation is that the majority of patients do not focus on costs during their ED visit and may be more

concerned about their acute health problem. Therefore, they may not feel the need to discuss costs with their doctor despite feeling comfortable doing so. Prior research has shown similar findings, specifically that cost is not identified as a major factor for patients in hospital admission decisions.^[10] Of the few patients with concerns, some felt that physicians do not control prices and therefore they did not think that the physician was the appropriate person to engage in cost discussions. Others felt that it was the physician's role to provide appropriate medical care regardless of costs. However, non-compliance with treatment recommendations was an important consequence of lack of patient-provider communication on costs. Ways to improve this communication could include incorporating education on costs into physician training programs and having expected costs of care directly available to physicians at the point of care to facilitate informed discussions.

Most ED residents in our sample took cost into consideration when making medical decisions. This was higher than expected given the reported overall knowledge gap on costs of care among providers, possibly reflecting a change in culture given the recent focus on healthcare

costs in the United States.^[11] Yet despite an expanding cost focus, residents still lacked knowledge and reported receiving too little education on the topic. This confirms prior research showing a general lack of awareness of medical costs among residents despite the consensus that costs should be considered in decision-making.^[7,9]

In the wake of increasing out-of-pocket costs for patients and payment model changes, incorporating educational tools such as formal presentations and access to prices and hospital charges could be beneficial.^[3,12] As U.S. healthcare transforms to become more cost-conscious, further research is needed to understand how ED providers should communicate with patients about costs of care and potential trade-offs.

Limitations

Limitations include a small study sample and restriction to a single academic site. In addition, data was collected by a single interviewer and direct transcription was not used. All patients surveyed had some degree of health insurance – there were no uninsured patients in this study. The study was also limited to discharged patients. Responses may have been different for patients being admitted to the hospital who are more severely ill and may have different expected out-of-pocket costs. Additionally, different methods of data collection were used for the two study populations which could have led to biases in survey responses, and audio recording was not employed during data collection which could have led to omitted content in recorded patient responses. Although all residents in attendance at the educational conference participated, the remaining residents not in attendance were not recruited to participate which could be a source of bias. Finally, a validated survey tool was not used which may have ensured that responses were more reliable, and we were unable to assess non-response bias.

CONCLUSIONS

In this U.S. sample, there were several notable differences in ED patient and resident perspectives on costs in emergency care. In general, patients do not see cost discussions in the ED as important and somewhat disagreed that cost should factor into decision making. Despite this, patients are comfortable discussing costs yet report having insufficient knowledge of what care costs. Conversely, ED residents view costs as important and agree that cost should factor into medical decision making; nevertheless, residents are less comfortable discussing costs with patients primarily because ED residents lack education on what emergency care costs.

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Conflicts of interest: The authors declare there is no competing interest related to the study, authors, other individuals or organizations.

Contributors: Gilbert SK proposed the study and wrote the first draft. All authors read and approved the final version of the paper.

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