

Standardized and Competent Cost-Conscious Practice of Medical Students during Clinical Clerkship

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ABSTRACT

Objective: To assess the perception of medical students regarding cost-conscious practices in healthcare.

Study Design: A Retrospective qualitative study

Place and Duration of Study: This study was conducted at the Al-Tibri Medical College and Hospital, between the duration from September 2021 to October 2021 for a period of 03 months.

Materials and Methods: An electronic survey was prepared and sent to total 460 participants out of which 145 were practicing physician and 315 were medical students of 4th and 5th year. This survey included 39 close- and open ended questions that was prepared after extensive literature review. Questions were asked in which respondents were requested to agree, disagree, or don't know. Student's responses were compared to practicing physician using Chi square test.

Results: We observed from our data that practicing physician were comparably well aware about cost-effective procedures than medical students. In our context the expert physicians were more likely to be aware about cost reduction expenditure and electronic health records that can be an effective way to reduce the cost on the other hand medical students were less aware about this strategy.

Conclusion: The provision of resources that can be easily adopted by various institutions can help to speed the widespread adoption of HVC curriculum in medical schools. Moreover, there is a need to emphasize the curriculum to advance their knowledge against cost-conscious care. Even with minimal clinical experience, medical students were able to identify instances of lack of attention to cost-conscious care as well as potential solutions.

Key Words: Cost-Conscious Care, Healthcare, Medical Students, Physician, Clerkship

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INTRODUCTION

High Value Care (HVC) or Cost Conscious Care is a notion that refers to healthcare that gives the most benefit in relation to cost and damage. Despite the fact that affecting an HVC cultural shift has become a key objective in medical education, it is still unknown to what degree HVC has infiltrated in the curriculum and clinical experiences of medical students^[1]. All healthcare facilities are directed by physicians, numerous studies have suggested that their lack of knowledge deliberately caused cost of medical care.

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Moreover, traditional training program for medical students did not provide instructions on cost-effective awareness. It is obvious that learners will definitely adopt the wrong practice without proper education regarding cost-conscious care^[2]. The students will follow the same practice whatever followed by their supervising physician. Usually, most of the physicians follow a same approach which is "more is better", which is then automatically adopted by their students in clerkship^[3].

Control the cost of healthcare system has become a challenge for many countries. Research has suggested that education regarding cost-conscious care has a positive impact on residents that will motivate them to continue their work in a cost-conscious manner after completing their clerkship^[1,4]. The emphasis on the next generation of physicians is also based on the idea that motivated learners may effect change by rethinking the medical system and addressing local system concerns by implementing creative initiatives to enhance healthcare practices, thereby serving as change agents^[5,6].

Residency training is viewed as critical in teaching a new generation of doctors to offer high-value care while keeping costs down^[7].

Although the role of education in addressing these issues is becoming more widely acknowledged, there remains a lag in implementation. According to empirical research, medical residents cite time constraints, medical uncertainty, fear of missing something, and concern of malpractice responsibility as impediments to resource stewardship [8,9].

Furthermore, due to a hierarchy in teams, a dearth of clinical role models, and teachers who penalize "sins of omission" excessively, the existing teaching environment may offer challenges to enhancing high-value treatment [10, 11].

By conducting a system analysis that considers the environment in which High value cost conscious care (HVCCC) must work, the goal of this study was to determine the standardize cost conscious practice among the residence and physicians at Al-Tibri Medical College and Hospital ATMC&H.

MATERIALS AND METHODS

Ethical Approval: This web-based survey study was conducted after ethical approval from concerned authority of Al-Tibri Medical College and Hospital, Isra University Karachi.

Study Design: This survey was carried out over a period of 03 months September 2021 to October 2021. It was conducted at Al-Tibri Medical College and Hospital, Isra University Karachi (ATMC&H). This survey comprised of 39 questions that was proposed to

take about 5-7 minutes to fulfil the survey. Students of MBBS and residence Doctors were asked about their experience to indulgent towards High Cost Care. Questions were asked in which respondents were requested to agree, disagree, or don't know.

We assessed trainees for their exposure to high value care and barriers during their clerkship. We also surveyed the level to which the residents and MBBS student want to include high value care training courses in their educational curriculum. The demographic data was also asked including gender, profession and ethnic group.

This survey was filled by 460 participants. The mean age of the participants was 31.16 ± 5.68 years.

Data Analysis: Our data were analyzed by using statistical software SPSS version 22.00. The relationship between groups were analyzed by using chi-square and One Way ANOVA. The $p \leq 0.05$ was considered as statistically significant.

RESULTS

A total of 460 participants were enrolled in our survey, out of which 145 were practicing physician and 315 were medical students of 3rd and 4th year. The demographic data was also recorded include age, gender, ethnicity, and nationality. As our study is independent of sex and gender so we didn't discuss their frequency here.

Table No.1: Attitudes of Practicing Physicians and Medical Students toward Cost-Conscious Care

Questionnaire	Responses	Practicing physicians (n=145) %	Medical Student (n=315) %	p-value
Do you think high quality healthcare minimizes the overall cost burden of the caretakers?	Agree	84.44	34.23	< 0.005
	Disagree	12.8	51.54	
	Don't Know	2.8	15.23	
Do you think effective patient care may contribute to the cost-conscious strategy?	Agree	89.7	56.30	< 0.005
	Disagree	8.97	20.55	
	Don't Know	1.33	23.15	
Do you believe that cutting down the expenditures without sacrificing patient care, can help in cost-reduction?	Agree	95.23	88.50	< 0.871
	Disagree	1.50	9.00	
	Don't Know	4.27	2.5	
Do you think generating electronic health records (EHRs) of patients can be a step towards cost-conscious care?	Agree	84.61	67.50	0.067
	Disagree	15.39	25.20	
	Don't Know	0	7.30	
Do you think pre-planning and strategic budgeting can contribute to an effective cost-conscious care?	Agree	94.92	78.56	0.850
	Disagree	5.08	15.90	
	Don't Know	0	5.54	
Do you think reducing medical waste can help in	Agree	77.66	56.66	< 0.005
	Disagree	16.23	28.20	

overall cost-reduction?	Don't Know	6.11	15.14	
Do you believe that conscious cost care requires extra efforts?	Agree	84.56	89.90	0.985
	Disagree	10.22	8.44	
	Don't Know	5.22	1.66	
Do you believe adequate staff schedules can help in cost-conscious care?	Agree	92.33	45.67	< 0.005
	Disagree	7.67	34.56	
	Don't Know	0	19.77	
Do you believe that healthcare products and services must be transparent in price for cost-effectiveness?	Agree	84.66	72.56	0.075
	Disagree	12.33	23.55	
	Don't Know	3.01	3.94	
Do you think innovative thinking and dedication to researching new trends or best practices can help in overall cost-conscious care?	Agree	78.45	84.56	0.891
	Disagree	21.55	15.44	
	Don't Know	0	0	
Do you think providing proactive and coordinated services timely to severely ill patients (for e.g., ER beds) can help in cost-reduction?	Agree	82.56	75.23	0.715
	Disagree	15.67	19.2	
	Don't Know	1.77	5.57	
Do you think that overall cost-conscious care fosters patient trust and satisfaction	Agree	87.45	86.75	0.905
	Disagree	12.55	12.00	
	Don't Know	0	1.25	

At the time of the survey, 33% (48/145) of physician respondents were between the ages of 30 and 40, 67% (97/145) were between the ages of 41 and 50, whereas 94 %t (296/315) of medical student respondents was between the ages of 21 and 26.

The questionnaire was designed to get maximum answer regarding their knowledge of high value cost conscious care as shown in Table 1.

While it was observed from our data that practicing physician were comparably well aware about cost effective procedures than medical students. For the first two question, when participants were asked that they could play an important role in minimizing the caretaker's total financial burden with high-quality healthcare. More than 84% physicians and 34% medical students were agreed with statically significant difference ($P < 0.005$). In our context the expert physicians were more likely to aware about cost reduction expenditure and electronic health records that can be effective way to reduce the cost on the other hand medical students were less aware about this strategy. Use of pre-planning strategic budget can also help out in cost reduction, which is supported by our 94% physician and 78% students with no significant difference (i.e. $P > 0.005$). In response to our question no. 7 regarding cost conscious care require extra effort, most of doctors were agreed to this statement and they think that it is an additional work more or less students had also the same response.

Similarly, most of the physician (92%) believed that there is a need to appropriately schedule the staff so that it can aid in cost effective measurements. In contrast, medical students were not well aware. Moreover, according to our practicing physician and medical students it is essential to make innovative thinking and dedication towards the new trends and best practices in coordinating with ill patient which ultimately reduce the cost of caretakers also help in treating seriously ill patients timely by arranging emergency bed for them. Our both group were agreed (86%) that cost conscious care also care fosters patient trust and satisfaction.

DISCUSSION

To our knowledge this is the first ever survey taken place in ATMC&H Karachi. The result of our qualitative analysis towards medical students' attitudes of cost-conscious care during their clerkship is presented in our study. We have studied numerous articles to find out the data regarding cost conscious care standardization Pakistan, but unfortunately we couldn't find out the data.

Many respondents said that cost education was critical for increasing physicians' cost awareness and encouraging more judicious resource utilization. Moreover it was observed from our study that learners are not properly guided by expert physicians regarding cost effective treatment which is reflecting from their responses.

A few studies have been undertaken at specific residency programs to address the inadequacy of HVC instruction in the curriculum, despite the necessity for it. Traditionally, HVC education has not been addressed at the undergraduate medical college level, however it has been included in the curriculum of few institute in United States^[12, 13].

The establishment of an online module to teach trainee doctors about the financial structure of the healthcare system was one of the initiatives to educate trainee doctors about healthcare expenditures^[14].

A major contributor to healthcare waste is the over and misuse of laboratory testing and treatment with expensive medicines. This cost can be reduced when students were trained to be HVC officers during their clerkship^[15].

This study, on the other hand, gives insight into the perspectives of early clinical learners on the importance of cost effective healthcare. Though some of Medical students instinctively identified reasons of low-value treatment as well as potential remedies even with limited clinical experience, however, the other needs the guidance from their instructor.

We believe that a reflective assignment that encourages medical students to think of ways they may be more cost-conscious would create a consciousness of healthcare value because medical students do not commonly make orders^[16, 17].

CONCLUSION

The challenge is to provide high-quality, ethical, useful, and cost-effective way of treating patient. We must be aware of the financial implications of each clinical choice, and we must encourage this culture by providing proper advice to our trainees in the use of healthcare resources. As research improves and new issues relevant to health care emerge, medical colleges are always pushed to balance curricular time and resources. The provision of resources that can be easily adopted by various institutions can help to speed the widespread adoption of HVC curriculum in medical schools.

Author's Contribution:

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