

# **Impact of Student Presence on Patient Satisfaction in a Family Medicine Outpatient Setting**

## **Title page**

Wessam Labib, MD, MPH  
Director-Medical Student Education  
Loma Linda University-School of Medicine  
Department of Family Medicine  
25455 Barton Rd, Loma Linda, CA 92336  
(909) 558 6600 Ex 66508  
[wlabib@llu.edu](mailto:wlabib@llu.edu)

Rasha Abdrabou, DrPH, MPH  
Assistant Professor  
Loma Linda University-School of Medicine  
Department of Family Medicine  
25455 Barton Rd, Loma Linda, CA 92336  
(909) 558 6600 Ex 66508  
[Rabdrabou@llu.edu](mailto:Rabdrabou@llu.edu)

## **Presentation:**

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**Abstract:** *Purpose:* Assess impact of student presence on patient satisfaction in an outpatient setting. *Hypothesis:* Patient satisfaction with medical care will not change when students are present during examination. *Design:* Anonymous cross sectional survey with two groups. *Methods:* Family medicine faculty office patients were recruited for the study. Participation was voluntary. All patients who were seen by a participating provider were eligible to complete a survey after the office visit. Surveys and consent forms were distributed to participating physician offices, and completed and uncompleted forms were dropped in a sealed box by the patient. *Patients:* 75 patients seen on teaching days (22 patients were seen by a medical student and preceptor and 43 were seen by preceptor alone (medical student not offered), 7 refused student presence and were seen by preceptor alone). *Measurement:* Ten closed-ended questions assessing patient satisfaction with specific dimensions of care. Demographic information was also collected through the survey. Questionnaire form utilized was the Consultation and Relational Empathy (CARE) measure. *Results:* Data was analyzed using SPSS. Patients were not statistically significantly different from each other in age, gender, ethnicity or health status regardless if a student was present during the examination or not. Patients also did not statistically significantly differ from each other by reason of visit, if they were seen by their regular physician or if they were previously seen in the presence of a medical student. If a medical student was not present during examination, it was more likely due to not having been offered a student than refusing to be seen in the presence of one. Also, patient satisfaction with care did not differ statistically whether a student was present or absent.

### **Introduction/background:**

In a family medicine clerkship, students are required to work with family medicine physicians in their clinic to get some hands on experience and develop appropriate clinical skills. This part of the student's education is vital but has faced multiple challenges including reluctance on the part of the preceptors of having a student accompany them in their own clinic as the impact on the patient may not be clear. For the most part, current data is not decisively conclusive on patient satisfaction with medical student presence in the examination room, especially in a family medicine outpatient setting. The benefits of student patient interactions could be summarized by Bell's (2009) (1) student comments: patient interactions made "information easier to learn" and "helped solidify and consolidate knowledge by creating a framework to organize medical knowledge that must be mastered quickly". This framework also allowed the student to prioritize information and materials in a way that is more congruent with reality as they observe what aspects of treatment emerge as relevant in each case. Much evidence supports the importance of early patient interaction for medical student education. As such, many programs have modified their curriculum to include earlier exposure to patients or have direct patient care at the center of their educational model (2,3,4). This study's objective is to clearly identify patients' perception of student involvement in their care. This knowledge would then aid in family medicine preceptor recruitment and overall of student education. The outcomes of the this study would also provide a solid basis for enhancing medical student education by ensuring the advocacy of their presence by the patients themselves. Results from this study regarding patient comfort and satisfaction would provide a foundation for more patient centered curricula that takes into account the impact of type of visit and patient assessment of their health status on patient's perception of medical student involvement.

Patient centered care by medical students has been shown to improve outcomes because students address patients' emotions and concerns (5). This may result in increased patient confidence, trust, and overall compliance. Thus, our working hypothesis stated that satisfaction with medical care would not be negatively affected by the presence of the student during the exam. Several studies have examined the impact of student presence on patient's satisfaction. Benson et al (2005) (6) surveyed 649 patients who were seen in five general practices in England involved in medical student teaching. During the study, ten patient focus groups were formed representative of practice age and gender. Patients reported being generally amenable to participating in student education conditional on having a sense of control over the student's presence. This sense of control included having information on the student's characteristics such as gender, competence and level of training, and also knowing the level of involvement the student would have in his/her care beforehand. Also, patients wanted to be able to decide well in advance whether or not they would want to have a student present. An additional finding was that patients perceived that the involvement of students in hospital care did not follow the same standards as clinics where patients felt the relationship with the practitioner was more intimate and established; giving the patients more control over the situation.

In 2000, a study was conducted in eight internal medicine departments of HMOs affiliated with Harvard University exploring the impact of student presence in the managed care setting (7). Third year medical students were assigned to preceptors who,

after obtaining patient consent, allowed students to evaluate patients alone and then discuss the results with the physician, generally outside the exam room. The physician would then enter to see the patient with the student and complete the visit. In addition, two other groups of patients were also assessed: those seen on teaching vs. non-teaching days but who saw no student. There was no significant difference in the three groups of patients as to their reports of the quality of their care. One of the weaknesses of the study was that the preceptors were the ones in charge of deciding, based on his/her relationship to the patient, which patient would be seen with a student and which would be seen alone, which may have led to selection bias.

### **Methods**

Patients from the family medical faculty offices were recruited for the study. Participation was voluntary. Inclusion criteria were any adult, English speaking patient (> 18 years of age) seen by a family medicine physician who routinely has medical students rotating in the clinic. The Consultation and Relational Empathy (CARE) survey was utilized to assess patient satisfaction with student presence during medical visit and were distributed upon patient check-in. The survey included 11 closed-ended questions, using a 5-point (e.g., poor, fair, good, very good, excellent) likert scale, assessing perception of care (respect, attention, understanding, compassion and clear explanation of the problem). In addition, demographic information was also collected along with questions assessing reason for visit and presence of student during the exam. Consent forms were distributed to patients along with the survey at check in and completed and uncompleted forms will be dropped off in a sealed box by the patient as they exit the office. Patients had the opportunity to refuse student presence as well as refuse survey participation without penalty. Only completed forms were considered. Patient surveys were anonymous and providers as well as staff did not have access to the surveys. Collection of surveys were completed by a research assistant at the end of each clinic day. Patients seen on days when a medical student was present were considered part of the 'Study group' while those seen on days when a medical student was not present were considered part of the 'Comparison group'. Each participating physician office was required to collect 15 surveys per group (study and comparison) for a total of 30 surveys per 6 providers and an overall total of 180 participants. Study will be considered complete when appropriate numbers of surveys are collected. Currently, we are reporting on data received.

### **Results and Discussion**

A total of 75 patients from the family medical faculty offices completed the surveys. Of those 75 patients, 43 were seen by preceptor alone while 22 were seen by preceptor and student. Seven patients refused to have a student present during the examination. Demographic analysis of the data collected did not result in a statistically significant difference between the study and comparison groups in age, gender, ethnicity or health status. The two groups did differ by reason for visit, being seen by their regular physician and having been seen by a student in the past, but the difference was not statistically significant. Perhaps a difference might become apparent as the number of completed surveys increases. Typically, if a medical student was not present it was because the patient was not afforded the opportunity. Patients who did refuse to see a

medical student were typically younger (36 yrs of age), have a new health problem, seeing their regular physician and had been seen in the presence of a medical student in the past. Patient satisfaction did not differ by presence or absence of medical student.

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	Medical Student	No Medical Student	P < .05
<b><u>Age</u></b>	45.5	47.41	ns
<b><u>Gender</u></b>	54.5%	61.5%	ns
Female	45.5%	38.5%	
<b><u>Ethnicity</u></b>	65.2%	62.7%	ns
White	21.7%	17.6%	
Hispanic	0%	7.8%	
Black	8.7%	7.8%	
Asian/PI	4.3%	3.9%	
Other			
<b><u>Health Status</u></b> <sup>1</sup>	3.32	3.31	ns

	Medical Student	No Medical Student	P < .05
<b><u>Visit Reason</u></b>	<b>29.4%</b>	<b>45.8%</b>	ns
New problem	58.8%	52.1%	
Ongoing problem	11.8%	2.1%	
Physical			
<b><u>Regular Physician</u></b>	<b>90.5%</b>	<b>82.1%</b>	ns
<b><u>Student in Past?</u></b>	<b>95.7%</b>	<b>77.4%</b>	*

