Emergency Department Volunteers:

Defining the Position and its Effect on the Patient Experience

A thesis submitted to the University of Arizona College of Medicine – Phoenix
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Abstract

Background: Patient satisfaction continues to be an important issue with our nation's healthcare system especially with the adoption of Value Based Purchasing for hospital reimbursement. With the use of Honor Health Scottsdale's large number of volunteers, we hoped to design and develop a program that will improve satisfaction for patients presenting to a community based Emergency Department.

Objective: To evaluate the impact of Emergency Department Volunteers on the patient experience.

Methods: Patients in the intervention groups either had an encounter with a trained volunteer or were given an information pamphlet describing their emergency department visit. Patients in the control group received usual emergency department care without exposure to the above interventions. All groups completed an online patient satisfaction survey. Statistics were performed to compare the 3 groups on the patient experience.

Results: 1009 patients were enrolled in the study. Patients who had a volunteer encounter M=4.66 or received the pamphlet M=4.72 rated their emergency department higher than the control patients M=4.19 ($p < .001$ for both). The highest level of satisfaction was among the patients who received the informational pamphlets. There was no significant difference between the volunteer encounter or the pamphlet ($p = 0.06$).

Conclusions: The use of volunteers as well as an informational pamphlet can improve the patient experience in the Emergency Department.

Keywords: Patient-centered care, Quality of Health Care, Surveys and Questionnaires

Abbreviations: CMS, Center for Medicare and Medicaid Services; VBP, Value Based Purchasing Program; ED, Emergency Department; HCAHPS, Hospital Consumer Assessment of Healthcare Providers & Systems.

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1. Introduction

In October 2012, the Center for Medicare and Medicaid Services (CMS) began reimbursing hospitals based on the Hospital Value Based Purchasing Program (VBP). In addition to performance on clinical core measures, hospitals also are financially rewarded or penalized based on inpatient satisfaction scores or HCAHPS (Hospital Consumer Assessment of Healthcare Providers & Systems). Currently, only in-patient satisfaction is used; however, EDCAHPS (Clinician and Group or Emergency Department Consumer Assessment of Healthcare Providers & Systems) will likely be used in the near future.

Several studies have evaluated the use of interventions in the Emergency Department to improve patient satisfaction including public health promotions by a public health specialist as well as pamphlets or videos to manage a patient's expectations in the emergency department [1,2], while other studies sought to test the effect of increased information to the patient to improve their experience. One study found that patients desire information on the ED process [3], while some studies have showed varying results [1,2].

In our study, we sought to design and implement a volunteer program with delineated tasks for the patient encounter in the Emergency Department to improve patient satisfaction. We hypothesized that the patients exposed to volunteers would have higher patient satisfaction scores than those who were not.

The primary endpoint for this study was patient satisfaction as measured by a patient satisfaction survey developed by the U.S. Department of Health and Human Services.

2. Methods

2.1 Study Design

This was a prospective study designed to find interventions that improve the patient experience. The study period was from October 2013 to February 2015. The institutional review board at Honor Health Scottsdale approved the registered study protocol. CONSENT Study coordinators entered data into a secure, web-based data collection instrument. The Scottsdale Healthcare Research Institute provided funding for the study. The research team remained unaware of the study-group outcomes until data extraction in March 2015.

2.2 Site and Study Population

Honor Health Scottsdale Shea is a community based facility located in Scottsdale, Arizona with 45,000 emergency department visits per year. All physicians are board certified or board eligible in emergency medicine. All discharged emergency department patients were eligible for the study. Exclusion criteria were: patients <18 years old, severity of illness precluding the ability to complete a survey, patients with a brief length of stay that precludes entry into the study, altered mentation as deemed by the medical provider and admitted patients.

2.3 Study protocol

A brief initial closed assessment survey was given to 50 volunteers that were former ED patients to identify areas where volunteers can have the highest impact on the patient experience. The survey consisted of 3 questions: What areas of discussion should a volunteer focus to optimize the ED experience, What actions should a volunteer perform to optimize the ED experience, List any other behaviors for a volunteer to optimize the experience. No identifying information was obtained from the volunteer/former patient. Additionally, prior studies have demonstrated the importance of 5 keys areas in patient satisfaction: empathy, wait times, technical competence, pain management, and information dispensation (Welch 2010). Data from the survey and literature were compiled by the investigators to develop key areas of focus. The volunteers (diplomats) were educated by the investigators on these key

topics. Volunteers were asked to structure their encounters with patients to these identified areas. The volunteers carried laminated cards describing these key topics (Figure 3). Volunteers were verbally tested as a group on the areas we identified as the most important for patient satisfaction and all volunteers involved also shadowed both physicians and nurses during shifts to develop an understanding of workflow and emergency department processes.

The study was a cross-sectional analysis performed over a period of seventeen months. Recruitment of patients occurred from October 2013 to February 2015. ED patients were randomly selected (Figure 1) to one of 3 groups: Group 1 received a laminated card describing the processes of the ED (Figure 2); Group 2 had contact with a volunteer whose interaction was based on the identified areas of patient satisfaction. (Figure 3). Group 3 was given neither of the 2 above interventions. Prior to discharge from the emergency department, research assistants administered a patient satisfaction survey (Figure 4). The rating scale ranged from 0 to 5. The first statement on the tablet began with the following statement, “By answering these questions, I am implying consent in this research study.” The research assistant provided the patient with an electronic tablet that contained the survey. The research assistant was available if the patient required assistance in the use of the tablet or reading of the survey. The tablet was then collected from the patient. All tablets were password protected and secured in a locked office within the Emergency Department. No personal or confidential data was obtained from the patients. Patients were categorized electronically to one of the 3 above groups.

Figure 1: Group selection

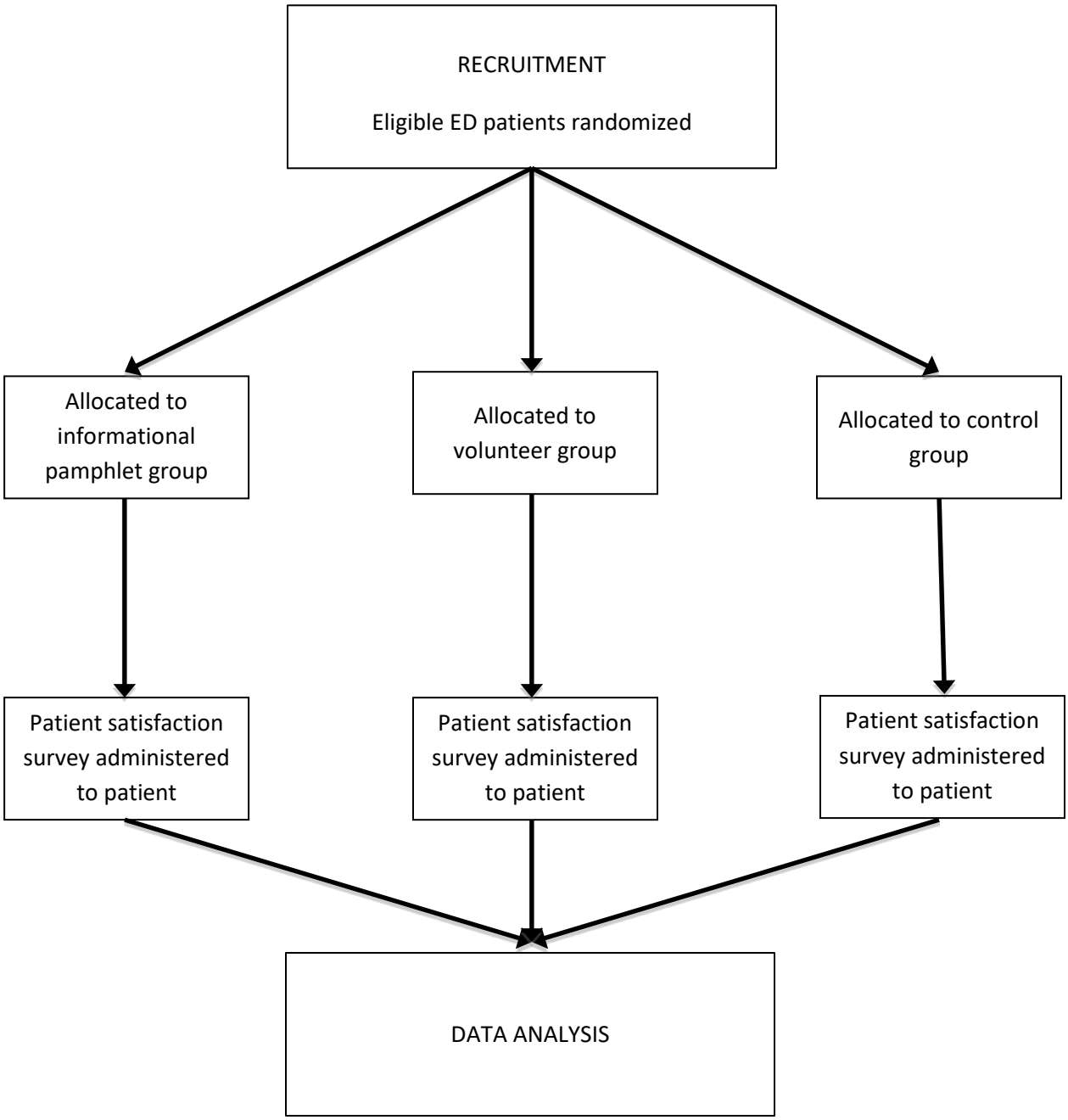


Figure 2: Laminated card provided to Group 1

ical history, health issues and medications so we can provide the best care.

What happens after I am triaged?

Our goal is to have you seen by one of our expert emergency providers and receive quality care as quickly as possible. Please understand that priority must be given to those with life-threatening emergencies. Although your situation may have been the most severe when you arrived, others may have been brought to our hospital "behind the scenes" by ambulance or helicopter and have more life-threatening conditions.

What will the doctor do?

The doctor will review your medical information and assess your condition. He or she may order lab studies or imaging tests, which provide vital information for determining the best treatment.

A lab study generally means drawing your blood, with the results available in 30-90 minutes.

Imaging tests can mean X-rays, ultrasounds or CT scans. The time required to undergo imaging tests and receive results depends upon many factors, such as the severity of your condition, number of patients requiring the tests and arrival times. Please keep in mind that a CT or ultrasound test will increase your wait time. Imaging tests are interpreted by a radiologist, who will discuss the results with your emergency room physician.

Will I be admitted to the hospital?

Your emergency room physician will decide whether you can be discharged from the emergency department or need to be moved to a hospital unit.

If you are to be admitted, our goal is to move you to the appropriate unit as quickly as possible. We also will advise your primary care physician or a hospitalist about your condition. A hospitalist is a physician who works in our hospital rather than a practice and is specially trained to care for hospitalized patients.

If you are discharged home, we will provide specific medical instructions for you to follow and recommend timely follow-up with your doctor or specialist. If you do not have a primary care physician, we can provide a list of community physicians.

If you have questions or concerns about your emergency room visit, please see one of our emergency room volunteers or contact our nurse supervisor at 480-323-3810.

Figure 3: Volunteer Information

Tipping Cows Aint Cool

Timeline, Comfort, Assurance, Check-ups

Smile

Mighty Mouse

Introduce

Listen

Empathize

Figure 4: Patient Satisfaction Survey

1. What is your age? 0-12, 13-19, 20-29, 30-39, 40-49, 50-64, 65+
2. What is your gender? M, F

How would you rate the following: 0,1,2,3,4,5 (for all questions to 26) (0 is poor, 5 is excellent)

3. Your satisfaction with today's emergency department visit.
4. Your general health.
5. Ability to get in to be seen.
6. Ease to find the emergency department
7. Lobby and waiting room were comfortable and clean
8. Exam room was comfortable and clean
9. Time in waiting room
10. Time in exam room
11. Waiting for tests to be performed
12. Waiting for test results
13. Front desk personnel were friendly and helpful
14. Nurses and technicians listen to you
15. Nurses and technicians were friendly and helpful to you
16. Nurses and technicians answer your questions
17. Physician and/or physician assistant listen to you
18. Physician and/or physician assistant spent enough time with you
19. Physician and/or physician assistant answer your questions
20. Physician and/or physician assistant were friendly and helpful to you
21. Physician and/or physician assistant gave you information you can understand
22. Physician and/or physician assistant considered your personal or family beliefs
23. Physician and/or physician assistant involved other doctors and caregivers in your care when needed
24. Physician and/or physician assistant gave you good advice and treatment
25. Registration personnel explanation of charges
26. Keeping my personal information private
27. Do you understand the instructions for your care after you leave the ED? Yes/No
28. Would you send your friends and family to us? Yes/No

The patient satisfaction survey, developed and assessed to be valid and reliable by the U.S. Department of Health and Human Services, consisted primarily of 24 number-scale questions that assessed satisfaction or dissatisfaction with various aspects of the ED (U.S. Dept). Figure 4 represents a modification of the patient satisfaction survey from the Midwest Clinicians Network. This tool was also deemed valid and reliable per a Study for the Midwest Clinicians Network Study as well as directly from the Office of Quality and Data, Health Resources and Administration (H. Combs, personal communication, March 5, 2013). Also, the survey's validity was supported by the fact that modified versions of these are used in multiple health centers in the United States including the Arizona Department of Health Services. A modified version is used at multiple heath centers according to the Midwest Clinician Network (A. Campbell, personal communication, March 5, 2013).

2.4 Data Analysis and Statistics

A compiled score from the survey was used. Baseline date (age, gender, self-perception of health) was obtained for all studies patients. Continuous data was compared using the independent-test. Ordinal logistic regression adjusted for age was used to compare the three groups on the individual patient satisfaction survey questions. All data were entered and analyzed using IBM SPSS version 24. Data analysis was performed on 1,009 patients. The a priori alpha for all statistical tests was set at .05. A one-way between subjects ANOVA was conducted to compare satisfaction ratings between the control, flyer, and volunteer groups.

Expected variables: health care professionals treating the patients and baseline beliefs and values of the patient. Approximately 5-10 volunteers were used to minimize variation.

Use of the pamphlet and volunteer intervention were both hypothesized to improve the patient satisfaction score. We hypothesized that both would demonstrate a significant difference with the volunteer arm showing a greater difference.

A power analysis was performed to assess for the number of patients needed with the following assumptions: 80% (0.80) power and a type I error of 0.05. 323 cases per group were required or 969 total patients. The power analysis was for a one-way fixed effects analysis of variance with 3 levels. The criteria for significance was set at 0.05. The analysis of variance was non-directional.

We hypothesized a 10% difference between the 3 groups. The effect size was 0.10, which would yield a power of 0.080.

3. Results

50 volunteers that were former patients responded to the closed survey. 4 areas emerged as the area of focus in the volunteer training: expectation of time, keeping the patient informed, comfort measures, and quality discussion of the hospital. The training for the diplomats were designed around these 4 areas.

A total of 1009 patients were enrolled in the study: 331 were randomized to the volunteer group, 332 to the pamphlet group and 344 to the control group. Descriptive statistics for the study participants are reported in Table 1. The analysis of variance indicates that there were significant differences in mean satisfaction ratings among the three groups, $F(2, 1006) = 61.51$, $p < .001$, $\eta^2 = 0.07$. Post hoc comparisons revealed significantly higher satisfaction scores for the volunteer group ($M = 4.66$, SD = 0.53) than the control group ($M = 4.19$, SD = 0.95), $t(673) = 7.267$, $p < .001$, $d = .61$. Satisfaction was significantly higher for the flyer group ($M = 4.72$, SD = .77) compared to the control group ($M = 4.19$, SD = 0.95), $t = 5.89$, $p < .001$, $d = .38$. No differences on satisfaction were observed between the volunteer and flyer group ($p = .06$). Descriptive statistics for satisfaction scores are reported in Table 2. Table 3 depicts the mean satisfaction by the 3 study groups.

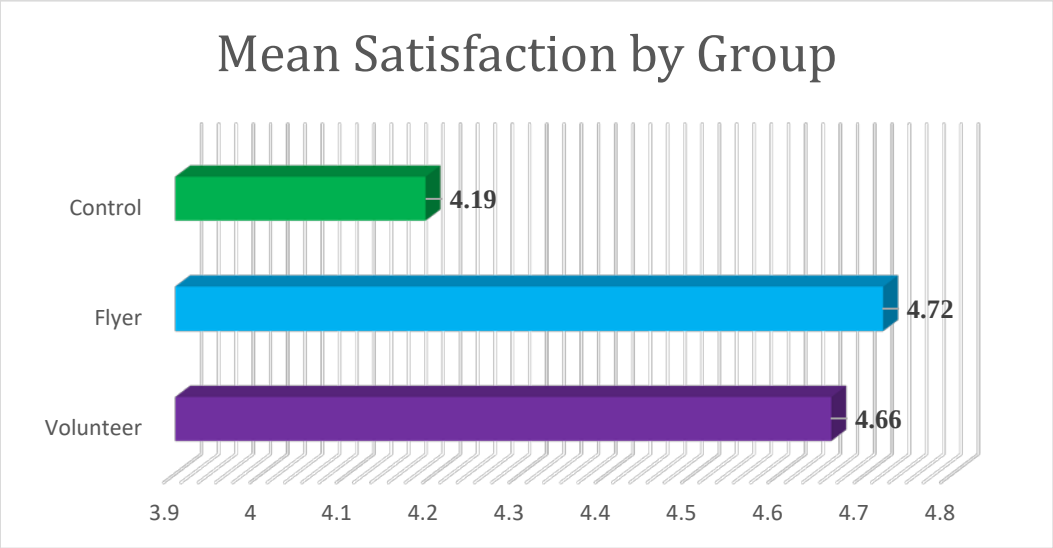
Descriptive statistics for the study participants.

Table 1			
Descriptive statistics of study participants			
	Group		
	Volunteer (n = 335)	Flyer (n = 334)	Control (n = 332)
Gender			
Female	183 (54.6%)	164 (49.1%)	213 (61.9%)
Male	110 (32.8%)	152 (45.5%)	119 (34.6%)
Not Reported	42 (12.5%)	18 (5.4%)	12 (3.5%)
Ethnicity			
American Indian/Alaskan	11 (3.2%)	14 (4.2%)	17 (5.1%)
Asian/Pacific Islander	8 (2.4%)	8 (2.4%)	8 (2.4%)
Black/African American	8 (2.4%)	7 (2.1%)	7 (2.1%)
Hispanic/Latino	14 (4.2%)	15 (4.5%)	21 (6.3%)
White/Caucasian	251 (74.98%)	273 (81.7%)	236 (71.1%)
Not Reported	43 (12.8%)	17 (5.1%)	43 (13.0%)
Age			
18-19	7 (2.1%)	14 (4.2%)	11 (3.3%)
20-29	38 (11.3%)	39 (11.7%)	40 (12.0%)
30-39	53 (15.8%)	44 (13.2%)	58 (17.5%)
40-49	46 (13.7%)	59 (17.7%)	52 (15.7%)
50-59	45 (13.4%)	58 (17.4%)	61 (18.4%)
60-69	39 (11.6%)	32 (9.6%)	62 (18.6%)
70-79	39 (11.6%)	47 (14.1%)	28 (8.4%)
80-89	19 (5.7%)	21 (6.3%)	10 (3.0%)
>89	8 (2.4%)	4 (1.2%)	4 (1.2%)
Not Reported	41 (12.2%)	16 (4.8%)	6 (1.8%)

Descriptive statistics for satisfaction scores

Table 2								
Descriptive Statistics on Satisfaction by Group					95% Confidence Interval			
	N	Mean	SD	SE	Lower Bound	Upper Bound	Min	Max
Volunteer	331	4.66	0.53	0.03	4.60	4.72	2.36	5.00
Flyer	332	4.72	0.42	0.02	4.68	4.77	2.75	5.00
Control	344	4.19	0.95	0.05	4.09	4.30	1.30	5.00
Total	1009	4.52	0.72	0.02	4.48	4.57	1.30	5.00

Table 3


Mean Satisfaction by Group
Control
Flyer
Volunteer
4.19
4.72
4.66
3.9
4
4.1
4.2
4.3
4.4
4.5
4.6
4.7
4.8

4. Discussion

In our study, the use of volunteers in the Emergency Department improved the patient experience. Also, the use of an informational pamphlet demonstrated positive changes in our patient satisfaction.

We felt that the initial closed survey was valuable for providing the groundwork for our volunteers. Understanding patient expectations and working to meet them is as important as any external modalities that improve satisfaction. Time to seeing a physician has historically been the most important factor in patient satisfaction. The volunteers were asked to convey realistic times in the emergency department visit such as average length of stay and time to testing. One study demonstrated that this information should begin in the waiting room and that informed patients are more calm [7]. Moreover, some studies have demonstrated an increase in satisfaction when patients are informed of the waiting time [7,8], while others have suggested that estimates of service completion time did not affect satisfaction [9]. Other studies have demonstrated that hourly rounding had no effect on patient satisfaction and actually increased the use of call bell activation [11]. One study demonstrated that keeping both patients and their families informed was more important than any other studied variable [10]. Our study supports that knowledge of the ED process and information related to wait time had a positive effect on the patient experience.

Feedback from emergency department staff and the volunteers themselves felt that volunteers assisted most with the empathetic approach and provided important comfort measures, however volunteers felt that obtaining a blanket or getting a drink for a patient was perceived as even more positive if a provider rendered this service. Volunteers also felt that patients wanted to feel confident about their choice of hospitals and as a result, we asked the diplomats to discuss their reasons for choosing Honor Health Scottsdale as the location to volunteer to convey the volunteers' confidence in our health care system to the patient. Lastly, volunteers and staff felt that patients did not want to feel forgotten. Unfortunately, in a busy emergency department, the sickest patient received priority and the less acute patients sometimes wait longer. We felt confident that the volunteers would fill the time void that was sometimes left

during a busy day.

Many hospital use patient advocates to improve patient satisfaction [12]. Similar studies have used patient liaison nurses to inform patients of delays and assist with comfort measures [13]. However, because of continued financial restraints felt by hospital systems, another paid staff member is not always feasible. Our study demonstrates that a trained volunteer can enhance the patient experience.

Our study did not address whether the specialized training of volunteers is necessary to improve patient satisfaction and if this needs to be repeated in other institutions to achieve the same effect. Future studies comparing specially-trained volunteers to the current standard would be useful.

Our healthcare system is well respected in the community of Scottsdale. Engaging community members to volunteer in the hospital was invaluable to enrichment of the hospital and community relationship. Such bonds have promoted a loyalty and confidence in our hospitals by the surrounding community.

Our study also demonstrated a high level of satisfaction to those who received an informational pamphlet. This is in contrast to the Sun et al study that demonstrated no significant difference when an ED educational form was used [14]. Other studies have demonstrated a positive effect. Variability in results could be related to differences in published topics or distribution time as some materials may have been distributed later in the visit and had less of an impact. Patients received the pamphlet as soon as they were placed in an Emergency Department room.

Core measure compliance continues to put pressure on hospital systems in the United States. However, high patient experience is not only important for hospital reimbursement, patient outcomes are improved when patients are satisfied with their care. No external intervention will be as valuable as an empathetic medical provider. The mainstays for optimal patient experience still exist; sit down with the patient, touch the patient, do not seem rushed, maintain eye contact, listen patiently and minimize medical jargon. With the results of this study, information related to the process and duration of the ED visit should also be a part of

the patient discussion to optimize the patient experience. As we are faced with more external pressures that limit time with the patient, providers should appropriately use resources to improve patient care. Our study demonstrates that both volunteers and informational pamphlets are valuable resources that hospital systems should consider.

4.1 Limitations

This study was performed at one community based hospital; therefore, our results may not be generalizable to other hospitals. Variations in clinician practice style and patient demographics could contribute to differences in patient responses.

5. Conclusions

This study demonstrates that volunteers in the emergency department as well informational pamphlets improve patient satisfaction. Further studies combining the 2 interventions are warranted to assess whether a synergistic positive effect exists.

5.1 Funding

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