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Patient Satisfaction in a Safety Net Urology Clinic

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Abstract

Introduction: Patient satisfaction has become an important metric in medicine. In this study, we aim to identify modifiable factors contributing toward poor satisfaction amongst patients in a safety net urology clinic. We hypothesize that wait times and long distances traveled to clinic will have the largest contribution toward negative patient experiences.

Methods: We conducted a cross-sectional study of adult patients presenting to the urology clinic at Zuckerberg San Francisco General Hospital. Participants completed a survey using the RAND Patient Satisfaction Questionnaire-18 after their clinic visit. Associations among demographic factors, wait times, use of a translator and satisfaction were examined.

Results: Two hundred patients, 19 to 90 years old (median age 62), were enrolled. Overall, 65% of patients were satisfied with their experience in our clinic. Our results demonstrated a significant association among race, language and overall satisfaction scores ($p=0.009$ and $p=0.003$, respectively). Multivariable analysis showed that those who waited more than an hour to see a physician were less satisfied compared with those who waited less than 15 minutes (OR 0.25, 95% CI 0.08–0.74). Similarly, those who used a translator were less satisfied than those who did not use a translator (OR 0.29, 95% CI 0.08–1.01).

Conclusions: In a safety net urology clinic, language differences and wait times may contribute to poor patient satisfaction. Future efforts toward improving language interpreter functionality and decreasing patient wait times will likely improve patient satisfaction.

Key Words: patient satisfaction, urology, ambulatory care

Abbreviations and Acronyms

PSQ-18 = RAND Patient Satisfaction Questionnaire-18

ZSFG = Zuckerberg San Francisco General Hospital

The importance of the patient experience has elevated with the implementation of the Affordable Care Act and the incorporation of satisfaction metrics for Medicare and Medicaid reimbursement.^{1–3} Similarly, online reviews of physicians and their practices have become ubiquitous and

serve as platforms for patient feedback.^{4,5} These metrics not only reflect patient experiences, but they can impact patient compliance and perception of physician and practice quality.⁶

There are many factors that contribute toward patient satisfaction: clinic wait times, perceived management

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quality, interaction with the provider, outcomes from procedures, provider and resource availability and cost.^{6,7} Little is known about what impacts patient satisfaction in safety net settings. Vulnerable populations are especially in need because they are more susceptible to harm, poor health literacy, lack of access to care and have worse health outcomes.⁸ These populations are at risk for receiving lower quality of care and historically have lower rates of compliance; it is important to evaluate factors that may lead to lower levels of satisfaction because this may impact patient compliance.^{9–11}

Zuckerberg San Francisco General is the safety net and level 1 trauma hospital serving the underinsured and uninsured of San Francisco County. ZSFG treats over 100,000 patients per year, 5,000 of whom are unique to the urology clinic. The population of ZSFG is comprised of 32% identifying as Hispanic and 15% as African American. Twelve percent speak Chinese and 20% speak Spanish primarily.

We aimed to identify factors contributing to patient satisfaction in the urology clinic at ZSFG.

Methods

Study Population

We conducted a cross-sectional study of adult (>18 years old) patients who presented from November 2018 to February 2019. We excluded anyone with cognitive or communicative disabilities or who spoke a primary language other than English, Spanish or Chinese. Our study was approved by the Institutional Review Board of the University of California of San Francisco (IRB No. 18-26119). This was a convenience sample of patients who expressed a willingness to take a survey after their clinic visit. Surveys were administered by a trained nonprovider. The providers during this time period were White or Black native English speakers. Encounters with nonEnglish-speaking patients were all conducted using a phone interpreter.

Outcome

Our primary outcome was patient satisfaction. Satisfaction scores were measured using the Patient Satisfaction Questionnaire (PSQ-18), which was completed at the conclusion of the appointment. The PSQ-18 is a validated standardized patient satisfaction instrument that assesses patient satisfaction in a health setting using 18 questions (see supplementary Appendix 1, <https://www.urologypracticejournal.com>).¹² The survey assesses overall satisfaction and 7 subdomains including general satisfaction, technical quality of care, interpersonal manner, communication, financial aspects, time spent with the doctor and accessibility of care. Although not validated, the survey was translated into both Spanish and Chinese, following

the specifications provided by RAND Health Care.¹³ All nonEnglish-speaking patients were given the survey ahead of time but advised not to complete it until after the visit so that they could ask questions while a translator was present.

Each question was answered on a 5-point Likert scale. Each answer was then scored from 1 to 5, such that a score of 4 and 5 was associated with satisfied, and very satisfied, respectively. The lowest possible score was 18, and the highest score was 90.

For our analysis, all scores were dichotomized to “satisfied” or “unsatisfied” based on RAND guidelines. Per RAND grading guidelines, the cutoff score for overall satisfaction was 63.¹² The satisfaction cutoff score for the domains of general satisfaction, interpersonal manner, communication, financial aspects and time spent with the doctor was 7, and the cutoff for the domains of technical quality and accessibility was 14.

Predictors

Predictors associated with the outcome were modifiable and nonmodifiable. Potentially modifiable factors included wait times from clinic arrival to provider entering the room and need for a translator. The nonmodifiable factors included patient demographics (race/ethnicity, gender, language and age), travel time from home, mode of transportation, whether the patients were responsible for the care of others at home and patient status (new vs followup).

Statistical Analysis

All data were analyzed with Python (version 3.8, Python Software Foundation, Fredericksburg, Virginia).¹⁴ Covariates were compared in a bivariate analysis across the 2 groups (satisfied vs unsatisfied patients) in each domain of satisfaction using chi-square or Fisher exact testing for categorical variables and analysis of variance for continuous variables. We then conducted a logistic regression analysis to predict patient satisfaction by the exposure variables listed above. We included all clinically significant covariates in the selection process to construct the final multivariate model. All tests were 2-tailed. A *p* value of 0.05 or less was defined as the limit of significance.

Results

Study Population

Two hundred patients were enrolled. The median age of our cohort was 61 years old (19–91). Patient demographics are presented in table 1 and reflect our population at large.¹⁵

Primary and Secondary Outcomes

The median PSQ-18 satisfaction score was 68 (range 39–90), with 65% of patients reporting satisfaction (ie scored above 63). The mean satisfaction score for general satisfaction was 7.6, 7.9 for interpersonal manner, 8.2 for communication, 7.7 for financial aspects and 7.5 for time spent with doctor. The mean scores for technical quality and accessibility were 15.5 and 13.45, respectively.

For overall satisfaction, 83% of White patients and 84% of Black patients were satisfied compared with only 67% of Hispanics, 54% of Asians and 73% of those identifying as “other” ($p=0.009$). Seventy-nine percent of English speakers were satisfied compared with 60% of Spanish speakers and 46% of Cantonese or Mandarin speakers ($p=0.003$). Only 48% of those who used a translator were satisfied compared with 80% who did not ($p=0.001$; table 2).

The most significant factors contributing toward satisfaction in the subdomains were race/ethnicity, language and use of a translator (tables 3 and 4). Ninety-five percent of Black patients were satisfied with interpersonal manner compared with 73% of Asian patients, 88% of White patients, 73% of Hispanic patients and 91% of patients of all other races ($p=0.02$). Ninety-three percent of Black patients were satisfied with communication compared with 90% of Asian patients, 86% of White patients, 73% of Hispanic patients and 91% of patients of all other races ($p=0.01$). Eighty-one percent of Black patients were satisfied with financial costs compared with 60% of Asian patients, 95% of White patients, 73% of Hispanic patients and 82% of patients of all other races ($p=0.05$).

For communication, 93% of English speakers were satisfied compared with 78% of Cantonese or Mandarin speakers and 67% of Spanish speakers ($p > 0.001$). Eighty-two percent of English speakers were satisfied with financial costs, 48% of Cantonese or Mandarin speakers were satisfied and 69% of Spanish speakers were satisfied ($p=0.01$).

Table 1.
Demographics of 200 patients

Median age (range)	62 (19–91)	
No. gender (%):		
Men	150	(75)
Women	46	(23)
Transgender	5	(2)
No. race/ethnicity (%):		
White	42	(21)
Black	43	(22)
Hispanic	55	(28)
Asian	48	(24)
Other	11	(6)
No. language (%):		
English	131	(66)
Spanish	42	(21)
Chinese	26	(13)

Table 2.
Overall satisfaction by factors

	No.	% Satisfied	p Value
Age (yrs):			
<60	90	72	0.33
≥60	110	68	
Gender:			
Men	149	69	0.34
Women	46	70	
Race/Ethnicity:			
White	42	83	0.009
Black	43	84	
Hispanic	55	67	
Asian	48	54	
Other	11	73	
Language:			
English	131	79	0.003
Spanish	42	60	
Chinese	27	46	
Patient Type:			
New	61	70	0.340
Followup	138	68	
Wait time (mins):			
<15	41	85	0.160
15–30	61	72	
31–60	48	75	
>60	47	53	
Travel time (mins):			
<15	28	68	0.580
15–30	72	71	
31–60	74	77	
>60	22	55	
Mode of transportation:			
Car	65	71	0.080
Public transportation	95	69	
Uber/Lyft/taxi	10	90	
Walk	5	40	
Ambulance	0	Not applicable	
Disability shuttle service	4	100	
Other	14	86	
Translator:			
Yes	54	48	0.001
No	146	80	
Caring for others at home:			
Yes	53	68	0.630
No	147	74	
Perceived expense:			
Yes	20	60	0.860
No	180	72	
Time off from work/school:			
Yes	40	65	0.380
No	160	74	

For use of translator services, 70% of those who used a translator were satisfied with technical care compared with 84% who were satisfied who did not use a translator ($p=0.001$). Only 58% of those who used a translator were satisfied with interpersonal manner compared with 91% who did not ($p=0.001$). Seventy percent of those who used a translator were satisfied with communication compared with 93% who did not ($p=0.001$). Of those who used a translator, 53% were satisfied with financial costs compared with 84% who did not ($p=0.001$).

Table 3.

Satisfaction by domain

	Technical Quality		Interpersonal Manner		Communication	
	% Satisfied	p Value	% Satisfied	p Value	% Satisfied	p Value
Age (yrs):						
<60	80	0.23	80	0.70	83	0.72
≥60	80		84		88	
Gender:						
Men	77	0.18	83	0.34	86	0.65
Women	87		76		85	
Race/ethnicity:						
White	88	0.170	88	0.020	86	0.010
Black	86		95		93	
Hispanic	75		73		73	
Asian	79		73		90	
Other	73		91		91	
Language:						
English	84	0.150	92	4.320	93	>0.001
Spanish	69		64		67	
Chinese	78		59		78	
Patient type:						
New	84	0.390	80	0.790	90	0.200
Followup	78		82		84	
Wait time (mins):						
<15	83	0.690	85	0.600	90	0.770
15–30	80		85		85	
31–60	83		77		88	
>60	74		79		83	
Travel time (mins):						
<15	68	0.200	75	0.140	75	0.020
15–30	79		88		92	
31–60	86		84		91	
>60	77				73	
Mode of transportation:						
Walk	60	0.490	100	0.570	60	0.080
Public transportation	79		79		83	
Drove/car	80		86		91	
Uber/Lyft/taxi	90		90		100	
Ambulance	Not applicable		Not applicable		Not applicable	
Disability shuttle service	100		100		100	
Other	93		86		100	
Translator:						
Yes	70	0.001	58	0.001	70	0.001
No	84		91		93	
Caring for others at home:						
Yes	81	0.890	83	0.920	89	0.500
No	79		82		85	
Perceived expense:						
Yes	70	0.260	70	0.130	65	0.003
No	81		84		89	

Multivariable analyses (table 5) demonstrated that those who traveled 15 to 30 and 31 to 60 minutes to their appointment had higher odds of being satisfied than those who traveled less than 15 minutes (OR 3.7, 95% CI 1.32–10.53; OR 6, 95% CI 1.76–20.57, respectively). Followup patients had higher odds of being satisfied with time spent with the doctor (OR 2.2, 95% CI 1.09–4.42) than new patients, and those greater than 60 years old had higher odds of being satisfied with communication (OR 1.03, 95% CI 1–1.06). Patients who waited longer than 60 minutes to see a physician had lower odds of being satisfied (OR 0.25,

95% CI 0.08–0.74) compared with those who waited less than 15 minutes, and those who used a translator had lower odds of being satisfied (OR 0.3, 95% CI 0.08–1.01). Not using a translator had increased odds of being satisfied in the domains of interpersonal manner, communication and financial aspects.

Discussion

Our findings demonstrate unique factors that may impact patient satisfaction in a safety net setting. Although 65% of

Table 4.

Satisfaction by domain

	Financial Aspects		Time with Doctor		Accessibility	
	% Satisfied	p Value	% Satisfied	p Value	% Satisfied	p Value
Age (yrs):						
<60	73	0.32	74	0.24	48	0.68
≥60	75		75		50	
Gender:						
Men	76	0.83	74	0.36	50	0.91
Women	72		78		50	
Race/ethnicity:						
White	95	0.050	88	0.060	55	0.680
Black	81		84		58	
Hispanic	73		71		45	
Asian	60		65		48	
Other	82		73		27	
Language:						
English	82	0.010	79	0.300	52	0.520
Spanish	69		69		38	
Chinese	48		67		56	
Patient type:						
New	74	0.800	67	0.070	49	0.920
Followup	75		79		50	
Wait time (mins):						
<15	80	0.120	88	0.019	54	0.020
15–30	72		75		57	
31–60	85		75		56	
>60	66		68		30	
Travel time (mins):						
<15	75	0.090	75	0.800	46	0.320
15–30	76		78		42	
31–60	81		77		57	
>60	55		68		45	
Mode of transportation:						
Walk	80	0.830	40	0.140	40	0.590
Public transportation	74		75		53	
Drove/car	75		77		45	
Uber/Lyft/taxi	90		90		30	
Ambulance	Not applicable		Not applicable		Not applicable	
Disability shuttle service	75		100		75	
Other	86		93		50	
Translator:						
Yes	53	0.001	70	0.290	43	0.140
No	84		78		52	
Caring for others at home:						
Yes	83	0.160	68	0.080	49	0.950
No	73		80		49	
Perceived expense:						
Yes	60	0.067	80	0.650	55	0.550
No	78		75		48	

patients were satisfied with the care, there was a clear discrepancy in satisfaction among the different race/ethnicities and languages spoken in our patient population. Use of a translator and long wait times had a negative impact on patient satisfaction. By highlighting factors crucial to our patients' clinic experiences, we have identified ways to improve satisfaction in the future and potentially improve patient compliance and urological health.

Satisfaction is an important metric in health care.^{1–3} The Affordable Care Act has included the use of patient experience surveys such as the Hospital Consumer Assessment of

Healthcare Providers and System as part of the requirement for reimbursement, leading to providers and hospitals striving to improve satisfaction.¹⁶ Although this metric is measured at ZSFG, it is often not shared with the providers, and the compliance rates are often low. Our study provides specific, real-time insight into the urological outpatient clinical experience of ZSFG patients.

Our cohort was composed of vulnerable patients who historically are known to experience a higher rate of health care disparities leading to poorer health outcomes.¹⁰ Specifically, the patients seen at ZSFG are from a lower

Table 5.

Satisfaction drivers

	Odds Ratio	95% CI
Overall satisfaction:		
No translator	Reference	Reference
Translator	0.29	0.08–1.01
Travel <15 min	Reference	Reference
Travel 15–30 min	3.73	1.32–10.53
Travel 31–60 min	6.02	1.76–20.57
Wait time <15 min	Reference	Reference
Wait time >60 min	0.25	0.08–0.74
Satisfaction with interpersonal manner:		
Travel <15 min	Reference	Reference
Travel 15–30 min	5.55	1.56–19.81
Travel 31–60 min	4.34	1.04–18.16
Satisfaction with technical quality:		
Travel <15 min	Reference	Reference
Travel 15–30 min	3.3	1.09–9.99
Travel 31–60 min	4.63	1.32–16.17
Male	Reference	Reference
Female	4.63	1.02–15.99
Satisfaction with communication:		
Travel <15 min	Reference	Reference
Travel 15–30 min	8.21	2.09–32.27
Travel 31–60 min	5.31	1.31–21.52
<60 yrs old	Reference	Reference
>60 yrs old	1.03	1–1.06
Satisfaction with financial aspects:		
Travel <15 min	Reference	Reference
Travel 15–30 min	3.58	1.15–11.12
Travel 31–60 min	4.86	1.26–18.73
No time off from work/school	Reference	Reference
Time off from work/school	0.33	0.12–0.87
No translator	Reference	Reference
Translator	0.14	0.03–0.68
Satisfaction with time with doctor:		
New patient	Reference	Reference
Followup	2.19	1.09–4.42

socioeconomic status and are primarily underrepresented minorities or immigrants. It is unknown whether being vulnerable correlates with lower satisfaction rates given the paucity of data regarding drivers of satisfaction in this population. A study of largely underserved patients conducted at Bellevue Hospital in New York attempted to understand how vulnerable populations define quality of care and found that patient experiences were largely influenced by patient-doctor relationships.¹⁷ Our study builds on this work and for the first time, to our knowledge, identifies some of the unique drivers of patient satisfaction among this population.

English speakers had higher satisfaction rates than Spanish or Chinese speakers. Because no provider was fluent, all of the nonEnglish-speaking encounters required a phone translator, given in-person translators were only available upon special request. Beyond the language barrier, translator phones at times had poor audio connections. It has been shown that in-person or video interpreters are superior to ad hoc or unprofessional interpreters when it comes to satisfaction and patient care.^{18–20} Although there is no significant

evidence to demonstrate superiority over one particular translational modality, it has been shown that phone interpreters are associated with lower rates of established rapport and subject to connectivity issues.^{21,22} Our data will help to advocate for improved translational services in the outpatient setting.

White and Black patients were the most satisfied, with rates of 83% and 84%, respectively. Interestingly, White and Black were the represented races among the urology providers, which may explain our findings among Asians and Hispanics. Dale et al demonstrated that patients often seek care from providers who look like them.²³ Similarly, Benkert et al found higher patient satisfaction rates among those who shared the same race as their provider.²⁴ A known cause of the existing health care disparities is the lack of trust minority patients have and lack of physician education of unfamiliar cultures.^{8–10} This trust is likely strengthened when patients have providers who look similar to them. Past studies have found that patient race/ethnicity can impact physician behavior that is often detected by patients.²⁵ These findings suggest there may be a role for cultural humility immersion programs and diversity promotion to limit these biases.

Patients on average were satisfied in every domain except accessibility to a urologist. Our current approach for managing referrals is to process within 3 days, create an appointment via phone, and set reminders via text message and letter. With this particular population, it can often be difficult to communicate as many are homeless and lack reliable addresses or working telephones. Difficulty communicating with vulnerable populations has been thought to be due to a lack of mistrust, health literacy and access to resources.^{9–11} We recently switched to the EPIC electronic medical record, which we hope will facilitate the ability of patients to access providers more easily through a web portal.

Dissatisfaction with long wait times to see a doctor was confirmed in our study. However, this did not represent the majority of our cohort. Only 23.5% of patients waited more than an hour to see a physician, and 24% waited 31 to 60 minutes. Prior studies have similarly shown that long wait times to see a doctor are a strong, negative factor of the patient experience.^{7,26} Long wait times can be physician, patient, treatment or system related, likely caused by several factors in our clinic including available staffing, space and clinic templates. Further, studies have shown that boredom contributes toward perceived long wait times.²⁷ Proposed solutions in the literature include higher provider-to-patient ratios, fewer appointments per day and satisfying patient boredom with entertainment devices. It is quite impractical, however, at a safety net hospital to provide a concierge medicine approach or occupy patients in the waiting room with iPads or televisions because of a lack of resources.

Limitations to our study include selection bias with convenience sampling. Patients were asked prior to their appointment whether they would be willing to participate afterwards, and those patients with limited time or in a poor disposition would decline or leave before survey administration, skewing our results to those happier with their care. Further, we defined wait times through patient estimation, which may be inaccurate and influenced by other factors. There is no universally accepted method of measuring satisfaction. Instrument measures vary by hospital and tend to measure different domains. The PSQ-18, although validated in English, is not validated in other languages. However, RAND health care-provided translating specifications were followed. Further, the PSQ-18 incorporates many aspects of satisfaction and covers the key dimensions of satisfaction consistent with prior literature.²⁸ Finally, RAND Health guidelines mandate calculating scores regardless of patients answering the question. Therefore, a question that may have been skipped would be counted as “0.” As a result, scores may seem lower than they otherwise would have been. To compensate, we only included surveys that were at least 60% complete to mitigate this potential bias.

Strengths of our study include incorporating a diverse patient cohort and availability of surveys in multiple languages with access to an interpreter if there were questions. The surveys were administered by a trained nonprovider to eliminate any concerns for coercion. Although our results are not generalizable given the unique patient population in a unique urban environment, we believe the factors driving satisfaction are more universal in nature.

Conclusions

The majority of urology patients seen at ZSFG are satisfied. Nonmodifiable factors such as race, language and distance traveled had the biggest impacts on satisfaction. White and Black English speakers had the highest satisfaction rates. Increasing accessibility and satisfaction for Asian and Hispanic patients may require cultural training, in-person translations and more immediate appointments given difficulty with consistent phone/mail communication. Efforts should be made to shorten wait times and promote diversity to limit provider-patient relationship biases and increase the language fluency among the staff.

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