

Patient Satisfaction in US Army Dental Treatment Facilities

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ABSTRACT

Background. Dental health is an integral part of overall military readiness and patient satisfaction serves as an important motivator for compliance in the provision of dental care to a community.

Methods. Secondary analyses of 17 fiscal quarters of surveys from fourth quarter, FY 2000 through fourth quarter, FY 2004 were conducted for this project. In total, 69,059 surveys with no missing data from Army respondents were analyzed. The report focuses on a descriptive analysis of the results with mean scores of overall patient satisfaction with the clinical experience and their satisfaction with the individual dentist contact.

Results. Overall satisfaction was rated high as the mean score for overall satisfaction with today's visit was 6.49 (SD .91) and overall satisfaction with the clinic's ability to take care of the Soldiers needs was rated 6.38 (SD .91) on a seven point bipolar rating scale. The mean response to rating the number of days waited for an appointment was 3.98 (SD 1.03). The mean satisfaction scores with the dentists were extremely high with the means ranging from 4.48 to 4.64 on a 5-point scale, with five equaling excellent satisfaction.

Conclusions. The results of this study clearly indicate that patients are satisfied with the dental care they receive at military dental clinics. This finding is consistent with previous literature on military dental satisfaction. A training vehicle could be developed to ensure that military dental providers and administrators understand the importance of patient-provider interactions and waiting times to overall satisfaction.

INTRODUCTION

The dental health of a Soldier directly affects the risk of a dental emergency while deployed. Maintaining a high level of good dental health throughout the force is an integral part of overall military readiness as clinical dental resources are not always readily available in the deployed environment. Soldiers must be encouraged to be as proactive in their personal dental health care as they are in other medical areas. Patient satisfaction is a very important element in that effort. Satisfaction is widely recognized as a principal outcome measure of quality throughout the healthcare arena. The Assistant Secretary of Defense for Health Affairs has mandated that military dentistry assess the level of patient satisfaction. Since active duty Army Soldiers receive the bulk of their dental care from the 172 US Army dental treatment facilities around the world, monitoring customer satisfaction in those facilities is an important component of maintaining the highest standards of dental health throughout the force. This study assesses levels of satisfaction in military dental treatment facilities.

LITERATURE REVIEW

Traditionally, dental satisfaction has been assessed by the dentist's technical competence and mechanical precision.¹ Patient opinions played no role in this method of measuring quality. However, eventually consumerism became an integral part of the dental patient mindset, and dentists were forced to "compete" for patients. Consequently, consideration of patient satisfaction became an important part of providing dental services.²

A large body of work in the field of patient satisfaction exists in the dental literature. Ross and Duff found that patients return to the dentist for subsequent care due to

satisfaction with the interpersonal component of the dental relationship rather than the technical quality of the care received.³ Evidence for both medical and dental patient satisfaction studies show that desirable interactions lead to more satisfied patients who better understand and more accurately follow prescribed regimens.^{4,5} A satisfied patient may have a different set of behaviors that ultimately evolve into not only increased satisfaction, but also a healthier individual.

McKeithen⁶ found that personality was the most frequently mentioned feature of an ideal dentist. Collet⁷ discovered that the dentist's personality was the major reason that patients became dissatisfied and changed their dentist. In 1974 Koslowsky et al⁸ also ascertained that patient concerns focused on the dentist's personality and technical competence, and that fees ranked lowest in importance of those factors studied. These pioneering studies all seemed to directly link satisfaction with the interpersonal relations between the dentist and the patient. Whereas dentists often assume that quality equates to technical expertise, Crall and Morris⁹ and Abrams et al¹⁰ found that patient satisfaction did not correlate well to dentists' perception of quality treatment.

In 1999 Newsome and Wright reviewed 46 studies of patient satisfaction and found the factors most commonly identified with dental patient satisfaction were technical competence, interpersonal factors, convenience, costs, and facilities.¹¹ Davies and Ware developed the Dental Satisfaction Questionnaire and found that access, availability/convenience, cost, pain, and quality were all independent elements of patient satisfaction.¹²

Dental patient satisfaction among active duty service members has not been widely studied. Chisick conducted two studies of dental satisfaction among active duty military members.^{13,14} Similar to the civilian studies, Chisick focused on access issues (availability/convenience), provider interpersonal skills, and pain control to determine possible predictors of satisfaction. Costs were not included because active duty military members are not required to pay for dental care. Chisick concluded that active duty personnel were generally very satisfied with military dental care and satisfaction did not vary significantly across demographics. Access was a consistent predictor of decreased satisfaction levels.

METHODS

Survey Instrument

The Department of Defense (DoD) Dental Satisfaction Survey (DSS) used in this project monitors the satisfaction of military beneficiaries who receive treatment in military dental clinics throughout the world. The DSS was developed by a Tri-Service working group in 1998, approved by the DoD Institutional Review Board and implemented in 1999 by the Tri-Service Center for Oral Health Studies (TSCOHS). There is no central dental appointment system, therefore the DSS can not be managed centrally with a traditional mailing of survey instruments to a randomly selected number of patients who have received care in the system. The DSS survey is administered in the individual dental clinics with the use of the Random Appointment Time Slot Generator system which designates the day on which the clinics administer the DSS. On the selected day, front desk personnel administer the survey at the conclusion of the appointment. The surveys are sent to TSCOHS monthly. The surveys are anonymous and do not contain patient identifiers. The survey is composed of 27 questions focusing on access, quality, interpersonal relationships, overall satisfaction with dental care, overall satisfaction with the dental clinic, and demographic data.

This project is a secondary analysis of dental patient satisfaction data. The surveys analyzed for this project were administered between the fourth quarter of FY 2000 and the fourth quarter of FY 2004. A copy of the survey instrument and 17 digitized text files (one per quarter) of data were received directly from TSCOHS.

Variables/Statistics

The 17 text files were imported into Statistical Packages for Social Science, version 12. One master file was created with 658,443 surveys. Those who responded affirmatively about seeing a dentist during the visit and selecting Army affiliation were kept in the study. Those who only saw the hygienist and had a prophylaxis were not included in the study. Questions pertaining to satisfaction with hygienist were deleted. Three questions rating the time patients waited past their appointment were also deleted as there were very few responses to those questions. The result was a data set of 69,059 with no missing data.

This project presents descriptive analyses only. Satisfaction with the individual dentist was rated on a 5-point scale as follows: Poor (1), Fair (2), Good (3), Very Good (4), Excellent (5). Overall satisfaction measures were based on the patient responses to questions concerning their satisfaction with the dental care for “today’s” visit and their level of satisfaction with the clinic’s ability to take care of their dental needs. These overall satisfaction measures utilized a 7-point bipolar rating scale as follows: Completely dissatisfied (1), Very dissatisfied (2), Somewhat dissatisfied (3), Neither satisfied nor dissatisfied (4), Somewhat satisfied (5), Very satisfied (6), Completely satisfied (7).

RESULTS

A total of 69,059 surveys with no missing data from the fourth quarter of FY 2000 through the fourth quarter of FY 2004 were analyzed for this project. The majority of subjects were male (76.5%) and reported being on active duty (97%). The bulk of active duty respondents were enlisted personnel (83.2%) with the remaining subjects being officers. All demographic information is presented in Table 1.

Overall satisfaction was rated high as the mean score for overall satisfaction with today’s visit was 6.49 (SD .908) on a 7-point scale. This indicates a high level of satisfaction classified as between very satisfied and completely satisfied. Overall satisfaction with the clinic’s ability to take care of the Soldiers’ needs was rated 6.38 (SD .905). This rating is also indicative of a high level of satisfaction. The distribution of responses to these overarching satisfaction questions are shown in Table 2. Another important attribute to assess satisfaction is the patient’s predilection to return to the clinic for future needs. Over 97% of respondents cited that, if given a choice, they would return to the Army dental clinic for future care.

Access to care has been shown to be a consistent predictor of satisfaction. This survey contained some surrogate access measures such as waiting times. The mean response to rating the “number of days waited for an appointment” was 3.98 (SD 1.03). Almost 9% of respondents rated the waiting time to be either poor or fair as noted in Table 3. This is a small percentage, but this finding is important as it demonstrates some dissatisfaction with waiting times to make appointments. The survey also revealed that 5.8%

Table 1. Demographics of Survey Respondents

	n	n%
Gender		
Male	52,862	76.5
Female	16,197	23.5
Beneficiary		
Active duty	66,948	97.0
Active duty dependent	1,814	2.6
Retiree	297	0.4
Rank		
E1 – E4	28,204	40.8
E5 – E9	29,218	42.4
Warrant Officer	2,283	3.3
Officer	9,354	13.5
Age Group		
Up to 17 years	610	0.9
18-19 years	5,300	7.7
20-29 years	34,047	49.3
30-39 years	20,079	29.1
40-49 years	7,491	10.8
50 years and above	1,532	2.2

(n=4025) were not seen for their appointment on time. The civilian literature has shown that extended waiting times are consistent with lower satisfaction scores.

The mean satisfaction scores with the dentist were extremely high with means ranging from 4.48 to 4.64 on a 5-point scale, with five equaling excellent satisfaction. Table 3 presents all mean scores and frequency distributions for satisfaction with providers and waiting times. Very few respondents had negative ratings for their provider interactions.

DISCUSSION

This is the first time that satisfaction in Army dental clinics has been assessed over an extended period of time. The results of this study clearly indicate that patients are satisfied with the dental care they receive at military dental clinics. The finding is consistent with the literature on military dental satisfaction. The results are positive and the majority of beneficiaries are very satisfied with the care they receive. This is evidenced by the finding that 93.1% of respondents were either very or completely satisfied with the

Table 2. Frequency Distribution and Mean of Responses to Questions Concerning Overall Satisfaction With "Today's" Visit and the Clinic in General

Response	All things considered, how satisfied are you with the dental care from today's visit?	All things considered, how satisfied are you with the clinic's ability to take care your dental needs?
(1) Completely Dissatisfied	0.9% (n=690)	0.6% (n=426)
(2) Very Dissatisfied	0.6% (n=435)	0.7% (n=496)
(3) Somewhat Dissatisfied	0.3% (n=236)	0.6% (n=365)
(4) Neutral	1.1% (n=756)	1.3% (n=897)
(5) Somewhat Satisfied	3.9% (n=2 699)	5.7% (n=3 933)
(6) Very Satisfied	29.9% (n=20 681)	37.4% (n=25 848)
(7) Completely Satisfied	63.2% (n=43 643)	53.7% (n=37 094)
Mean (SD)	6.49 (0.908)	6.38 (0.905)

Note: n(total) = 69,059

Table 3. Frequency Distribution and Mean of Responses to Questions Concerning Satisfaction With the Dentist and Access to Dental Services

Interaction with Dentist	Survey Responses					Mean (SD)
	(1) Poor	(2) Fair	(3) Good	(4) Very Good	(5) Excellent	
Friendliness and courtesy	0.1%	0.7%	6.1%	20.7%	72.4%	4.64 (0.641)
Attention given to what you had to say	0.2%	0.8%	7.2%	22.6%	69.3%	4.60 (0.672)
Thoroughness of treatment	0.1%	0.7%	7.0%	21.9%	70.3%	4.61 (0.658)
Explanation of dental procedures	0.4%	1.8%	9.4%	23.5%	64.9%	4.51 (0.770)
Amount of time with dentist	0.3%	1.5%	10.2%	25.8%	62.2%	4.48 (0.760)
How much you were helped by dentist	0.2%	1.0%	8.9%	24.5%	65.4%	4.54 (0.713)
Overall quality of care from the dentist	0.2%	0.7%	6.5%	20.6%	72.0%	4.64 (0.650)
Access to Care						
Rating of number of days waited for appointment	1.8%	7.1%	21.9%	29.2%	39.9%	3.98 (1.03)

Note: n(total) = 69,059

received care during that day's visit. Similarly, 93.1% were either very or completely satisfied with the ability of the clinic to take care of their dental needs. The scores for access rate satisfaction as good, but the number of negative responses indicate this to be a source of dissatisfaction for military members.

Dentists working in military dental treatment facilities should be aware of the importance of their interaction with the patient in the determination of overall satisfaction. That interaction is the primary driver of satisfaction. Dentists should be aware of this finding to improve the patient-dentist interaction. This project could not assess whether the severity of the dental needs of the military member affected their level of satisfaction. If patients with more severe and/or urgent needs were found to be less satisfied with dental care, they may not be as likely to return for their needed care and thus would have an increased probability of being a dental casualty. Unfortunately, while all military dental clinics use a common dental classification system to identify the patient's levels of urgency for care, the information was not collected in this survey. A study design that incorporates the military's dental classification system ratings for a patient with their level of satisfaction would allow exploration of the correlation of a patient's current dental needs severity with their level of satisfaction.

The results of this study may be generalized to military beneficiaries seeking care in Army dental treatment facilities. There are a few limitations for the results. One limitation is that this survey evaluated satisfaction of those who actually accessed the dental clinics, as opposed to all eligible beneficiaries. The second limitation revolves around the 5-point scale that assessed satisfaction with providers and waiting times. This 5-point scale had no true neutral and thus skewed the responses toward satisfaction. A new survey format has corrected this so a true neutral will be available in the future. Future studies should attempt to focus on all eligible beneficiaries and not only users of military dental facilities.

CONCLUSIONS

Satisfaction with the level and the perceived quality of care provided by dentists in military treatment facilities are high. Access to care measures receive good ratings, but there is some discontent with the ability to make appointments. The authors suggest that a simple training vehicle be developed so that military

dental providers and administrators understand the importance of patient interactions and waiting time as factors in overall patient satisfaction.

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CORRECTION

In the October – December 2005 issue of the *AMEDD Journal*, the table “Brooke Army Hospital Residents 1947 – 1962” in the article “Development of Army Residency Programs: Pathology at Fort Sam Houston” contained incomplete information for several entries. Correct information for those entries is provided herein. The *Journal* regrets the error.

NAME	BIRTH	SCHOOL	RESIDENT	DEATH	LOCATION
Grahm, Harvey P.	1917	Duke '52	57-61	12/17/99	Suwanee, GA
Keller, Edward S.	1924	McGill '55	57-58	11/26/90	Everett, WA
Lardinois, Clifford C.	1919	Wisconsin '51	52-55	10/13/94	Huron, SD
Snyder, Dale R.	1927	Pennsylvania '54	56-59	10/27/02	McLean, VA
Van Auken, Howard A.	1904	Michigan '31	48-51	10/18/83	San Antonio, TX