An Analysis of Patient Grievances in a Dental School Clinical Environment


Abstract: Patient satisfaction is an integral part of assessing the quality of oral health care. As dental care becomes more impersonal, competitive, and expensive, the potential for patient complaints is on the rise. Dental school clinics may be more vulnerable to patient grievances due to inexperienced student providers, less efficient delivery of care, challenges related to continuity of care, and the complexity of adhering to institutional policies. Effective management of patient complaints can assist both individuals and institutions toward providing the highest quality of care achievable in the demanding dental education environment. Despite the obvious benefit, there is a dearth of recent studies that analyzed complaints in either the private practice setting or dental school clinics. The purpose of this study was to categorize and analyze the complaints received from patients seeking treatment at a large dental school clinic from 2005 to 2008. It was found that the combined complaints for all four years in descending order were regarding appointment, communication, money, quality, and other. No statistically significant association was found between the type of complaint and time of year. Most importantly, it was found that the system for recording complaints needed to be standardized in order to improve the quality of patient care. The findings from this study will not only facilitate adjustment of the school’s current curricula and policies, but could also guide other institutions and private dental practitioners toward better patient care.

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Patient satisfaction is an integral part of quality oral health care. As dental care is becoming more impersonal, competitive, and expensive, the potential for patient complaints is on the rise.\(^1\)\(^2\) It is very important to identify and address patient complaints because doing so will make the delivery of oral health care in any clinical setting more beneficial for both patients and providers. Complaints can arise due to a variety of factors that may or may not be controllable by providers. One study found a moderate relationship between a patient’s dissatisfaction and his or her attitude toward dentures.\(^3\) In that study, patients who had a negative mindset about dentures were more likely to be displeased with them. Patient bias has also been found to play a significant role in whether or not he or she complains—a factor that cannot be controlled by the provider.\(^4\) Older individuals, women, more educated people, and people earning higher incomes have been reported to be more satisfied with dental services.\(^5\)\(^6\)

Many studies have also been conducted in an attempt to identify the provider-controlled issues that influence patient satisfaction with dental care. In 1962, Kriesberg and Treiman\(^*\) used the results of the National Opinion Research Centers interview to show that the public was concerned about a dentist’s personality, his or her skill in reducing pain, and the patient’s fear of what might happen. In 1966, McKeithen similarly found that the dentist’s personality was the most cited feature of a good dentist, followed by skill and then ability to minimize fear.\(^7\) Davies and Ware\(^*\) developed a Dental Satisfaction Questionnaire, which they administered to 3,464 adults in 1982. They concluded that factors that influenced patient satisfaction were access to care, availability/convenience, cost, pain, and quality. Interestingly, that study did not address interpersonal communication between the dentist and the patient. However, Chapko et al.\(^8\) found the dentist-patient relationship to be an important factor. In 1985, Kress and Silversin also
saw communication as an important feature of patient satisfaction, along with facilities, staff, appointment, quality, costs, and the dentist. Meetz et al. found that poor access to care was the major source of patient complaints about a dental office. Patients were very dissatisfied that they had to wait for either an appointment in the future or in the practice’s waiting area. The second largest category of patient complaints that study identified was provider technical competence. When Corah et al. evaluated patient satisfaction, they concluded that a dentist’s empathy and communicativeness correlated with patient satisfaction. Their study also discovered that a dentist’s explicit dedication to pain prevention—along with his or her friendliness and ability to work fast, remain calm, and give moral support—reduced patient anxiety, thereby making the patient more pleased with his or her experience at the dental office.

When dentists were asked in a questionnaire why patients leave a practice, most said it was due to a patient’s change in residence or job. Other minor factors the dentists believed to be causing patients to leave were dissatisfaction with treatment or quality of care, pain, and anxiety control. Bishop found that, of the 33 percent of patients dissatisfied with their oral health care, 56 percent were displeased with the quality of care, 24 percent said the treatment was too painful, 15 percent thought the service was too expensive, and the remainder claimed the dentist was unfriendly.

Dental school clinics may be especially vulnerable to patient grievances since dental students lack the technical expertise and interpersonal communication skills of an experienced dentist. Kress suggested that all dental schools should focus on interpersonal skills development in their curricula since strong interpersonal skills play a vital role in patient satisfaction. A satisfied patient is more likely to stay in a practice, accept treatment, and refer others.

The purpose of our study was to collect and categorize all the complaints received from patients seeking treatment at Tufts University School of Dental Medicine (TUSDM) from 2005 to 2008. The results of this study should provide useful information for reducing the amount of patient complaints, thus improving the patients’ oral health care experience. These results can be used to modify the school’s current curricula and administrative policies in order to improve the quality of care provided in our dental school clinics.

Methods

Data were collected from the TUSDM clinics, which serve the greater Boston area in Massachusetts, with additional patients mainly from Boston and New England (determined by looking through patient zip codes). The clinics include predoctoral and postdoctoral clinics that operate throughout the year and provide various aspects of oral health care. The predoctoral clinics are staffed by third- and fourth-year dental students, while the postdoctoral clinics are staffed by residents in specialty certificate programs in endodontics, oral and maxillofacial surgery, orthodontics, pediatric dentistry, periodontics, and prosthodontics. In addition, clinical fellowship programs are offered in implant dentistry, esthetic dentistry, and craniofacial pain. Tufts also provides patient care in a General Practice Residency program.

Patient care provided at Tufts is comprehensive. This care is provided either completely within our clinics or in partnership with providers in our community (private practitioners, community health centers, etc.). TUSDM also has programs specifically designed to provide comprehensive care to medically compromised patients, patients with special needs, patients with HIV, and individuals who have experienced domestic violence. The TUSDM clinic had 265,736 appointments from March 2005 to June 2008. This care was delivered by an average of 737 pre- and postdoctoral student providers in each of the four years of this study. The number varied due to changing class sizes and staggered student entry into clinic during the year.

Within the university, daily patient grievances are recorded through the clinical affairs department, which can be reached by telephone, e-mail, postal mail, or in person. The complaints are recorded, and the recorder notes pertinent details and the course of action taken to resolve them. Complaint data were available from 2005 to 2008. The number of months of recorded data varied from year to year, mainly due to the individual responsible for recording the complaints being absent during those time periods. Researchers studied the available raw complaint data and formulated four categories: appointment, communication, quality, and money. The appointment category included any complications that came with pairing a student practitioner with a patient. This category included, but was not limited to, complaints due to poor scheduling times, multiple missed appointments, and assignments to new
analysis was completed to study differences between categories and trends across time. Chi-square test for multiple categories was used to determine whether the overall percentage of complaints differed by category. The multinomial logit model\textsuperscript{17} was used to assess whether the association between year and type of complaint was statistically significant. All analyses were conducted using the statistical software package SPSS 16.0.

Results

The clinical affairs office reported a total number of 214 patient grievances from 2005 to 2008. The numbers of grievances, from most to least, fell into the categories of appointment, communication, money, quality, and other (Figure 1). Complaints regarding appointments were prominent in all years. Conversely, the “other” category had very few complaints throughout the four years (Figure 2; Table 1). By aggregating the data across years, the chi-square test for multiple categories indicated a statistically significant difference between the complaint types (p<0.001). When ignoring the other category and re-running the chi-square test for the four remaining complaint types, we found the difference was still significant (p<0.001). However, when studying the association between year and complaint type using

![Figure 1. Percentage of total complaints for each category in study](image)

students. The communication category encompassed any complaints arising from patient-practitioner communication, such as patient complaints about lack of knowledge of the treatment plan and confusion in identifying the student in charge of treatment. Complaints in the category of quality involved the skill and professionalism of the student practitioner, faculty, or staff. These also included provider technical skill, professor decorum, and maintenance of the facility. The money category involved all complaints concerning the system of billing, payment, and insurance processing. All complaints that fell outside these four categories were designated as “other.”

Two researchers and the individual who collected the complaints categorized all the data. Each rater received specific guidelines regarding the defining categories and worked independently. The inter-rater agreement ranged from 88.1 percent to 97.3 percent, with kappa values ranging from 0.852 to 0.964, indicating that there was almost perfect agreement.\textsuperscript{16} As the reliability of the coders was determined, all researchers independently coded the complaints. When a variation in the coding occurred, the complaint was categorized by the majority decision. For example, if two raters coded a complaint as “money” and the third rater coded it as “quality,” then the complaint was coded as “money.” If all three raters disagreed, the complaint was removed from the data. After placing the data into categories, statistical
Discussion

We found appointments to be the predominant category of complaint over the four years of the study, with communication as the second highest overall (Figure 2). While the difference was not significant, these findings support the recommendation made by Kress and Silversin\(^\text{5}\) that institutions should focus on communication. Dental school graduates may be bringing this problem with them from their school clinics into their practices. Due to the limited descriptive nature of the raw complaint data collected, the source of appointment complaints could not be determined with assurance; however, it is definite that both the students and institution share responsibility.

The data were also examined by cross-tabulation in six-month intervals from January to June and from July to December, roughly dividing the year into two academic semesters, spring and fall, respectively. Table 2 presents the distribution of complaint types for each six-month interval, using data from all four years. The total number of complaints received in the January to June semester were significantly higher than in the July to December semester. A chi-square test was conducted to determine if the January-June versus the July-December period was associated with complaint type. It revealed that the association was not statistically significant at the 0.05 level (p=0.381).

Figure 2. Four-year trend analysis of patient complaints for each category

Table 1. Patient complaints in the major categories from 2005 to 2008

<table>
<thead>
<tr>
<th>Year</th>
<th>Appointment</th>
<th>Communication</th>
<th>Money</th>
<th>Quality</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percentage</td>
<td>Number</td>
<td>Percentage</td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>2005</td>
<td>14</td>
<td>30.4%</td>
<td>6</td>
<td>13.0%</td>
<td>14</td>
<td>30.4%</td>
</tr>
<tr>
<td>2006</td>
<td>9</td>
<td>42.0%</td>
<td>5</td>
<td>23.8%</td>
<td>4</td>
<td>19.1%</td>
</tr>
<tr>
<td>2007</td>
<td>20</td>
<td>86.0%</td>
<td>15</td>
<td>22.7%</td>
<td>12</td>
<td>18.2%</td>
</tr>
<tr>
<td>2008</td>
<td>29</td>
<td>30.3%</td>
<td>21</td>
<td>25.9%</td>
<td>12</td>
<td>14.8%</td>
</tr>
<tr>
<td>Total</td>
<td>72</td>
<td>35.8%</td>
<td>47</td>
<td>22.0%</td>
<td>42</td>
<td>19.6%</td>
</tr>
</tbody>
</table>

Note: Percentages may not total 100% because of rounding.
Student dentists are required to manage patient appointments and adhere to the school’s policies that govern the distribution of patients, treatment regulations, and clinic hours. In an institutional clinic, many variables affect appointments, and only through careful collection of complaint data can the true source be discovered and corrected. Interestingly, we found no statistical difference in the number of complaints between semesters, with the exception of the year 2005, mostly due to a large decrease in money complaints. It could be logically expected that we will see a decrease in the number of complaints as students gain more clinical maturity moving from fall to spring semesters. The lack of change observed could indicate either no annual improvement trend, thus minimizing patient complaints, or merely a baseline level of complaint noise that an institution such as TUSDM will receive.

A large majority of complaints stem from appointments, which actually is a problem derived from communication and continuity of patient care. This critical juncture tends to occur at the time of patient transfers when a student graduates. To remedy this problem, a Vertical Integration Protocol (VIP) for patient care could be considered. In such a protocol, a patient would not be assigned to one student (as per the current standard) but rather to a team of students, ranging from first-year to fourth-year. In a VIP, the team leader (the fourth-year student) would perform the more challenging procedures, and the rest would follow accordingly. When the fourth-year student graduates, other team members would then move up in position, and a new first-year would be introduced. Such a protocol would ensure that a treatment plan would not be lost in the shuffle, and appointments and communication would follow. We are considering introducing such a protocol to our current standard of care as an outcome assessment.

Many confounding variables were unavoidable in the study. There was a lack of consistency in the recording of complaints and a recorder bias due to more than one individual receiving the complaints. In contrast, the inter-rater reliability (degree of agreement among raters) was very high among the three individual coders, demonstrating the strength of this model of grouping complaints. Also, the other category—intended to collect complaints that fell outside of the defined categories—was the lowest of all complaint types for all four years of the study. The system of categorization therefore successfully grouped an average of 90.19 percent of complaints into strictly defined categories.

Based on the collected data, we strongly recommend implementing a more standardized complaint collection system. Using a system of this type will streamline interpretation and help remove confounding variables from future analyses. By improving the institution’s and students’ understanding of patient complaints, both sides can receive unbiased feedback that can be used to quickly adjust policy. This system will not only serve to improve patient attitudes but will also streamline the business end of teaching institutional clinical dentistry. We hope that the findings from this study will facilitate adjustment of the school’s current curricula and policies as well as providing guidance to help other institutions.

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Table 2. Distribution of complaint type for each six-month interval using combined data from all four years

<table>
<thead>
<tr>
<th>Complaint Type</th>
<th>January-June</th>
<th>July-December</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appointment</td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>ME</td>
<td>50</td>
<td>32.1%</td>
</tr>
<tr>
<td>Communication</td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>ME</td>
<td>38</td>
<td>24.4%</td>
</tr>
<tr>
<td>Money</td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>ME</td>
<td>33</td>
<td>21.2%</td>
</tr>
<tr>
<td>Quality</td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>ME</td>
<td>22</td>
<td>14.1%</td>
</tr>
<tr>
<td>Other</td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>ME</td>
<td>13</td>
<td>8.3%</td>
</tr>
<tr>
<td>Total</td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>ME</td>
<td>156</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note: Percentages may not total 100% because of rounding.
and private dental practitioners move toward better patient care.

REFERENCES