Issues in Decision Making: Should I Have Orthognathic Surgery?

Hillary L. Broder, Ceib Phillips, and Sharon Kaminetzky

This article reviews theoretical issues related to self-perception and decision making in patients with dentofacial disharmony. The decision-making process among patients seeking treatment for severe malocclusion is not well understood. Using phone interviews and chart audits, attitudes, behaviors, and demographics of 118 patients for whom orthognathic surgery was recommended within the past 2 years at 2 university-based dentofacial centers were examined. The mean age was similar (24.6 and 24.2 years) at both sites. Gender and ethnic distributions differed slightly. The northeast site (UMDNJ) had 50% females and 36% white, while the southeast site (UNC) had 77% females and 79% white. Treatment decisions were comparable across sites: approximately 60% of the patients chose orthognathic surgery, 30% chose orthodontics only, and 10% were undecided, waiting, or under observation. No perceptual differences across sites were observed. More than 50% of patients reported awareness of their condition since early adolescence; 11% indicated that someone else (eg, dentist) made them aware of their problem. Twenty percent said the timing for seeking care was related to financial security or schedule flexibility. Fifty percent reported aesthetics and function were their primary motives. Focus groups/interviews were held (orthognathic v orthodontics only; 2 groups per site). Emerging themes included the importance of patient-doctor communication and interpersonal skills (patient education, patience, and willingness to use “my words,” take time to explain), the importance of the patients’ readiness to change, and availability of resources such as social support and finances/insurance. Knowing someone who had completed treatment at their facility was a significant facilitator expressed across sites. No insurance and fear were relevant barriers in the orthodontic group only. The decision-making process is multifaceted. Interpersonal communication skills (rapport, understanding), enabling resources (financial, social support), and psychosocial factors (stress, motivation) were primary factors in patients’ decision making. Implications for clinicians are presented as well. (Semin Orthod 2000;6:249-258.) Copyright © 2000 by W.B. Saunders Company.

For patients whose facial skeleton or dentoalveolar problem is too severe to be completely camouflaged or masked by orthodontics alone, orthognathic surgery in conjunction with orthodontics is recommended. Orthodontics alone can provide dental correction but cannot alter underlying disharmony. The decision-making process used by a patient (“Should I have any treatment?” “Which treatment should I have?” “When should I have treatment?”) is multifaceted. This process is difficult to explore because the factors that influence the process range from the concrete factors to more subtle and often abstract factors such as psychosocial issues. (Table 1). Attempts to understand patients’ decision making is further complicated by the complex process that precedes seeking a treatment consultation: recognition that a problem exists, wanting to make a change, and finally, actively...
seeking possible solutions. Accepting change involves several specific stages from precontemplation to action.

Biological, functional, and health processes can be clearly linked to a patient's motivation to seek treatment for a dentofacial disharmony. Dentofacial problems impact on the patient's quality of life (QOL). In fact, a recent report from a randomized clinical trial of fixation techniques used in mandibular advancement indicated that the presurgical psychosocial health-related QOL dimension approached the level observed in patients with chronic obstructive pulmonary disease or oropharyngeal cancer. Specific oral problems reported by patients include difficulties in biting, chewing, swallowing, drooling, speech, and oral hygiene problems. The link of psychosocial factors to a patient's treatment decisions are more difficult to delineate, although self-image, social, and interpersonal issues are consistently reported as motivations. This article includes a review of theoretical issues related to patient self-perception and decision making in patients with dentofacial disharmony, interviews and focus group data from a recent cohort of subjects who have sought a treatment consultation at 2 dentofacial centers, as well as discusses research findings and clinical implications.

**Theoretical Considerations**

**Developmental and Psychosocial Issues**

The association of physical attractiveness with socially desirable qualities and unattractiveness with undesirable attributes is well documented. Even children as young as 3 years of age show a preference for attractive preschoolers as friends and judge unattractive children as more antisocial. In the preadolescent, how much a child likes his or her appearance and their perception of their attractiveness is highly related to their global feelings and beliefs about themselves. This is especially relevant because children and adolescents are particularly influenced by the feedback of others, and are more likely to experience some psychosocial “hurt” when teased about their facial appearance than adults. The mouth and teeth are the important attributes in facial attractiveness and are frequently the focus of negative comments. The majority of individuals seeking treatment for severe malocclusion report childhood teasing at home. In a study of children under 16 years of age, those with increased overjet (>7 mm) were 5.5 times as likely to report having been teased when compared with those children with lesser overjets. Even as adults, subjects who self-report early experiences of being teased for unattractiveness associate them with long-term negative effects on body image and feelings of self.

The positive relationship between dentofacial esthetics and social desirability is especially important during adolescence, because the development of social competence during adolescence is greatly influenced by peer relations. Social isolation from peers can cause loneliness, anxiety and inhibition, and peer problems in childhood have been considered by some as possible early markers of psychologic problems in adolescence and adulthood. A strong relationship appears to exist between self-perceived body image, unattractiveness and depression, but no relationship has been found between depression and objective attractiveness. Negative thoughts, in general, including a negative view of self, are found more frequently in anxious and depressed children and may be important in the genesis of social anxiety. Although preadolescents and adolescents may not recognize the potential long-term psychosocial consequences of skeletal and/or dental anomalies, parents of adolescents who have completed orthodontic treatment endorse the importance of appearance in a future social and economic context. Treatment is not sought for a child simply for esthetic reasons, but for the improvement in psychosocial functioning and economic opportunity that is perceived as a potential corollary of treatment. Scant data are available across ethnic groups but evidence from the National Health and Nutrition Examination Sur-

---

**Table 1. Factors That May Influence the Decision-Making Process**

<table>
<thead>
<tr>
<th>Subtle/Abstract Factors</th>
<th>Concrete Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social issues</td>
<td>Financial resources</td>
</tr>
<tr>
<td>Psychologic well-being</td>
<td>Health care provider</td>
</tr>
<tr>
<td>Social support</td>
<td>Time availability</td>
</tr>
<tr>
<td>Self-worth</td>
<td>Morphologic findings</td>
</tr>
<tr>
<td>Expectations for self and future</td>
<td>Physical problems</td>
</tr>
<tr>
<td>Patient/clinician interaction</td>
<td></td>
</tr>
</tbody>
</table>
vey (NHANES III) suggests that increasing numbers of patients from lower and middle socioeconomic groups are seeking care. Research reports in adults confirm the complexity of the interactions between physical attractiveness, social status, self-concept, and psychologic well-being. How a person views him or herself tends to influence the way a person thinks others view him or her and how a person thinks he or she looks has a strong influence on social and personal outcomes and on motivation for orthognathic surgery. People with unattractive faces often report that they see themselves as less outgoing, less popular, and less socially skilled. Negative self-perceptions can have an adverse effect on psychosocial adjustment by generating self-consciousness which can manifest in shyness, social anxiety, and low self-esteem. The magnitude of the effect that positive or negative feedback and social interaction has on feelings of self-worth and self-esteem depends on several factors: (1) the frequency and consistency of the person’s perception of the feedback, (2) who is providing the feedback, and (3) the importance of the feedback of the individual and the situation. Dentofacial disharmony and/or severe malocclusion is usually not a sudden occurrence but rather represents a progressive discrepancy during development. The impact of the skeletal/dental problem on the individual may be more highly related to the development of the problem and the feedback from peers and family than to the actual severity of the problem. There are no substantive data regarding the effect of dentofacial problems on social and psychological development in pre-and early adolescence and future decision making.

Psychologic Well-Being

Psychologic distress plays a complicated and sometimes contradictory role in treatment-seeking behavior. For example, health-seeking behaviors are typically thwarted in patients immobilized or functionally impaired with severe clinical depression or anxiety. However, the emotional uneasiness and unhappiness experienced either transiently or long-term by less severely affected anxious or depressed patients may trigger them to seek medical solutions as a relief from their emotional discomfort. Approximately 25% of individuals seeking care for dentofacial disharmonies had sufficient elevated distress to qualify as a positive diagnosis on a well-documented and highly valid standardized psychologic instrument, the SCL 90-R. Some anxious patients may report a long-term history of anxiety in both social and vocational settings: act nervous or worried that they look different, are stared at, or are being treated differently because of their morphological problem. Depressed patients will report low self-esteem and gloominess. Such patients may have patterns of behavior characteristics, ie, learned helplessness and hopelessness, which make treatment-seeking for self-improvement unlikely. However for a variety of reasons people experiencing psychologic distress frequently evolve to the “action” stage of Prochaska’s change model and are ready to break patterns of behaviors and address long-term concerns. Believing that one can impact one’s health status, known as self-efficacy, is theoretically linked to health promotion behaviors.

In some psychologic disorders, such as body dysmorphic disorder and obsessive-compulsive disorder (OCD), the need to seek treatment is not directly related to the presence of a problem. A patient with a body dysmorphic disorder has a distorted body image characterized by obsessive thoughts and concerns about their perceived physical “defect.” Such distorted thought patterns typically result in consecutive treatment requests for nonexistent or very minor facial differences. These patients will have a significant history of “doctor-shopping” to correct their imperfections. OCD is a more generic and prevalent psychologic disturbance. Individuals with OCD are obsessed with their thoughts and behaviors associated with their specific concern(s) and can become so impaired that they cannot adhere to treatment regimens and are rarely satisfied regardless of the objective outcome of treatment. A 38-year-old woman with OCD was referred for counseling to the lead author after she discontinued contact with friends, church, and took a leave of absence from work subsequent to undergoing orthognathic surgery for a severe Class II malocclusion. Contrary to the patient’s perspective, data from models and radiographs postsurgery confirm treatment success. The patient reported “looking weird” and felt that
the dentist had not done what she wanted and ruminated about her perceived multiple imperfections and needs. This scenario illustrates perceptual differences and expectations between the treatment team and the patient, and that psychologic disorders may be associated with treatment decisions. In essence, changing the morphology will not “rescue” patients and satisfy their underlying mental health problems.

Patient-Doctor Communication

The last area in patient decision-making highlights interpersonal communication between the patient and doctor. Listening to patient concerns, addressing patient expectations, educating the patient and using language understandable to the patient are reportedly key elements in successful interpersonal communications in health care. Such elements are underscored in cross-cultural communication as well as when treatment decisions include dental surgical intervention. The impact of information-transfer may be correlated with the manner of the presentation of information as well as the mode of presentation. According to persuasion theory, such variables influence decision-making in health care. Therefore, issues such as communication style (e.g., acceptance, avoiding scare tactics, appealing to values) and mode of presentation are important elements in persuasion—that is, “communication to change attitudes or move others to action.” To date, scant information is available linking treatment decisions with patient-doctor interaction among patients with dentofacial deformity. However, clinical experience and anecdotal accounts indicate that even when options are presented fully and clearly, body language, voice inflection, and choice of words can be persuasive components influencing medical treatment decisions. Patient fears, especially when invasive options are discussed, may also impede interpersonal communication. To better understand issues involved in decision making among individuals seeking consultation for dentofacial disharmony, a 2-center study was undertaken.

Methods

Between 1998 and spring 1999, 33 patients at the University of Medicine and Dentistry of New Jersey (UMDNJ) and 85 patients at the University of North Carolina (UNC) were evaluated for possible surgical treatment options. Chart audits and telephone interviews were conducted to confirm their treatment decisions and to obtain demographic information, primary reason for seeking treatment, and availability of insurance.

To explore issues related to consumer decision making (e.g., motivations for care, facilitators, barriers to care), focus groups and semistructured individual interviews were held with individuals from both institutions. Beginning in the 1980s, these techniques have been used increasingly as a research tool when there is a need to better understand consumer perceptions, service utilization and adherence. Qualitative and descriptive analyses were used to identify specific factors and themes within and across groups and centers.

Individuals who were evaluated at the institutions within the past 18 months and had not undergone orthognathic surgery were contacted by telephone and asked to participate in focus groups in accordance with Institutional Review Board (IRB) protocol. Subjects were paid $40 for their participation. Each group was composed of a homogeneous group of patients with dentofacial disharmony: those who elected orthodontics only, and those who chose orthodontics in conjunction with surgical treatment (orthognathic group). Each group discussion lasted approximately 1.5 hours. Two discussion groups with both patient groups at each site were completed. Group discussions were audiotaped, transcribed, and analyzed independently for themes across subject group and institutions.

Results

Chart Audit/Telephone Interviews

The average age of the patients was quite similar (24.6 and 24.2 years) at the 2 centers. Gender and ethnic distributions were slightly different. UMDNJ, the northeast center, had 50% females and 50% males, 36% being white; whereas UNC, the southeast center, had 77% females and 23% males, 79% being white. Treatment decisions were quite similar: more than half of the patients elected to have orthognathic surgery, about one-third of the participants chose orthodontics only, and approximately 10% were undecided,
waiting, or under observation. The pattern of treatment decisions was similar for males and females, but not for whites and nonwhites (Table 2). A larger proportion of whites chose orthognathic treatment compared with the nonwhites who were mostly African American. The majority of patients who had medical insurance elected orthognathic surgery. However 40% of those with no medical insurance chose surgery.

Additional interview data revealed that across sites, more than 50% of patients had been aware of their problem for a long period of time (eg, “ever since I can remember”). Responses regarding initial awareness ranged from 8 years of age to 20 years old with most individuals reporting initial awareness in the early adolescent period. Approximately 11% of the total patient pool indicated that another individual (professional and/or family/friend) had made them aware of their problem, typically that person being a dentist or family member/friend. Twenty percent responded that the reason for seeking treatment at that particular time was related to financial security or schedule flexibility. Such responses (eg, financial) were elicited by 42% of the orthodontic only respondents compared with 15% of the orthognathic group. Additionally, older patients cited these decision making issues related to finances and scheduling more frequently than the younger patients. More than 50% of the patients indicated that the desire to improve social status/appearance was the most important reason for seeking care at this time. Other stated motives included physical complaints like sinus or headaches, vocational aspirations, and/or pragmatic issues such as “finished growth.”

Focus Group/Structured Interviews

The interview schedule/focus group guide and sample responses are presented in Table 3.

The majority of the subjects report that word of mouth was the most pervasive mode of finding out about care and the dental school facility. Approximately 75% of patients had sought treatment before with only 25% of them having actually had previous orthodontic treatment. Regarding the timing of treatment, the responses varied from social support, knowing someone who had treatment, to access to care issues, eg, insurance or job security. Motives for treatment related to aesthetic, social, and vocational advancement. Other QOL concerns, eg, speech/ communication and eating as well as resolution of health problems were also cited.

In analyzing the expressed facilitators and barriers to care, several major themes regarding decision making emerged. These included intrapersonal issues (stress, health attitudes, social support); interpersonal communication (patient-doctor relationship); and specific health care delivery system factors physical environment, access to care) (Table 4).

For all subjects, intrapersonal issues impacting on QOL were significant. As previously reported, problems ranged from medical health issues such as headaches and oral facial pain, to aesthetic concerns. Vocational aspirations like wanting to do “camera work” and commercials were expressed reasons for seeking care now. Speech, sinus/nasal problems, and social teasing were also issues. Yet the predominant theme was that the facial/dental “problem” represented a long-standing unresolved concern (ie, unfinished adolescent business). Almost all of the discussants described “baggage” or social anxiety from their early adolescence. One male in his late 20s from the NJ orthognathic group said: “This (the treatment) is like an investment in myself.” A 25-year-old woman talked about going to school and the timing being right for self-improvement. One man said, “My fantasy would be to go back to Costa Rica and see all those guys that used to make fun of me. I would just tell them who I am... When this is over I will do whatever I want in public: talk, smile, whatever. There are no limits.” Another male uttered: “Af-

**Table 2. Percentages of Subjects Who Chose Different Treatment Options**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Male (%)</th>
<th>Female (%)</th>
<th>No Insurance (%)</th>
<th>Has Insurance (%)</th>
<th>White (%)</th>
<th>Nonwhite (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ortho and surgery</td>
<td>53</td>
<td>59</td>
<td>40</td>
<td>63</td>
<td>61</td>
<td>47</td>
</tr>
<tr>
<td>Ortho only</td>
<td>35</td>
<td>32</td>
<td>55</td>
<td>29</td>
<td>28</td>
<td>47</td>
</tr>
<tr>
<td>Other*</td>
<td>12</td>
<td>9</td>
<td>5</td>
<td>8</td>
<td>12</td>
<td>6</td>
</tr>
</tbody>
</table>

* Either refused treatment, undecided, or waiting pending insurance.
Table 3. Focus Group Questions and Responses Among Health-Seeking Individuals With Dentofacial Disharmony

<table>
<thead>
<tr>
<th>Questions</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How did you find out about the school?</td>
<td>Word of mouth—friends, relatives, dentists</td>
</tr>
<tr>
<td>2. Have you sought treatment elsewhere?</td>
<td>Eighty percent yes</td>
</tr>
<tr>
<td>3. Have you been treated elsewhere?</td>
<td>Seventy five percent no</td>
</tr>
<tr>
<td>4. What is the payoff or motive for you to get care?</td>
<td>Social/ appearance, job, unfinished business, health, speech</td>
</tr>
<tr>
<td>5. What influenced you to get treatment now?</td>
<td>Reputation of the school, social support, access to care, knowing someone who had treatment, patient-doctor interaction, timing</td>
</tr>
<tr>
<td>6. When did you first know you had a problem?</td>
<td>Twenty years ago, early adolescence, 14 years old, 20 years old</td>
</tr>
<tr>
<td>7. What made getting care easier for you?</td>
<td>Insurance coverage, children are grown, transportation, payment plans</td>
</tr>
<tr>
<td>8. What were barriers or things that turned you off about getting care?</td>
<td>Cost, low knowledge, waiting, poor communication, logistics, unclean facility</td>
</tr>
<tr>
<td>9. What is the best way to advertise or let people know about care?</td>
<td>Word of mouth, internet, pamphlets in other offices, home mailings, finders’ discount for referring future patients</td>
</tr>
</tbody>
</table>

ter treatment is over I might meet someone and could have a lot of fun. I was the odd man out all the time.” Yet other members concentrated on more concrete issues like “eating a steak and carrots, speaking more clear so everyone understands me.”

The timing issue, that is, the resolution of specific stressors in one’s life, was remarkable among the older patients, in particular. Now having grown children, time for myself, money saved, insurance, transportation, and a regular job were among some of the intrapersonal factors facilitating the health-seeking behaviors. One patient in the orthodontics only group mentioned having inheriting some money.

Regardless of site, group participants iterated the importance of their social support system. Most of them said that it was their decision but conferred with others to legitimize their concerns and endorse their treatment-seeking behaviors. Each of the orthognathic patients had either known someone who had had such care or was favorably impressed with the doctor-patient communication about treatment. Several of the orthodontic individuals said that low knowledge and/or cost were expressed reasons for not having had prior care. “I have wanted to fix my teeth forever, but my mother could not afford it when I was young.” Another explained: “I never knew that adults could get braces.” For a couple of the patients, the severity of the problem was not apparent to them until a treatment simulation was shown. One 48-year-old female patient remarked, “I never knew I looked so bad. I didn’t know that everyone saw me looking that way.” Several other younger patients were impressed with the visual presentation (treatment simulation; before/after CD/or slides). One older adolescent remarked: “I really like the 3-D stuff—it showed me how I would look and I liked how I was gonna look.”

The relevance of the patient-doctor relationship and effective communication were paramount across sites. Having confidence and trust in the doctor was iterated repeatedly. My doctor is terrific, really knows what he is doing.” Another scenario related went like this: “I would
not go to that guy, it was like a salesman’s pitch and I didn’t think he was concerned about me.” A couple of members in the orthodontics only group mentioned that they had had more than one postgraduate student taking care of them and resented having “lost” their doctors. “I kind of formed a bond with her, she was really sweet and I looked forward to meeting with her every month.” In short, continuity of care and the doctor-patient relationship were frequently recounted facilitators to care. Positive personal attributes used to describe their doctor or the ideal health provider/team members included: “kind,” “caring,” “funny,” and “knowledgeable.” Patients also discussed the importance of using words that they could understand. Individuals from working class backgrounds and ethnic minority populations explicitly expressed their concern about “being taken seriously” and not “being talked down to.”

Regarding barriers to accepting care, several health system issues were presented. Concern about cleanliness was expressed across groups at both sites. “Personally I am really picky, I like everything clean. Sometimes I come from work and really need to go to the bathroom, but the bathroom has nothing to do with the chair the doctor works in but if is a dirty bathroom, then I am thinking they do not really keep this place clean.” Complaints about the waiting time, the length between appointments, securing financial coverage and treatment plans were discussed. The feelings about the equipment and structure varied: “I like it simple, the bells and whistles don’t spin me.” “I like the cost—I accept that a school may have older stuff, but the price is real good.” It was commonly believed and valued that patients felt that the cost reduction was a major factor in choosing the dental school. Cost of care was another frequently mentioned potential barrier. One emerging theme in the orthodontic only treatment groups was concern about the consequences of surgery, ie, temporary and/or permanent sensory disturbances, swelling and pain, and extent of facial change (“too much” or “why bother”).

In short, multiple issues are relevant in patients seeking care for dentofacial disharmony. Patient needs, priorities, education, health values, and backgrounds are diverse and appear to impact on decision making.

Discussion

Focus group data across groups and sites corroborate that treatment decisions are influenced by several factors related to the doctor-patient interaction: having confidence in the doctor’s ability, attributing positive personal characteristics like caring, feeling that the doctor was concerned about the patient’s well-being, and educating the patient.6,45,47,53

The emphasis on visual presentations of treatment or knowing others who have had such treatment is likely related to reducing fear of the unknown in the patient. Further, the importance of social support was often cited in patients accepting treatment. Realistic expectations and positive support are important components with theories on enhancing patient education as well as acceptance and adherence with treatment regimen.54-56 Yet such issues may be overlooked in providing treatment consultation among patients with dentofacial disharmony and remain largely unexplored when examining treatment decisions.

Both interview and focus group data underscore that access to enabling resources such as third-party payors (insurance coverage) is a major facilitator to decision making but not necessarily predictive of treatment decisions. Although increasing numbers of patients are becoming more aware of orthodontic and/or orthognathic surgery, health care policy is becoming increasingly stringent regarding coverage for what is deemed “elective care.”53 For instance, Medicaid is required to cover orthodontics for severely affected children in all states; however, there are reports nationwide of increased difficulty of third-party payor endorsement for orthognathic treatment. Therefore, conflict accessing care within our current health care system is created.

Focus group and interview data support that treatment-seeking behaviors were related largely to social and aesthetic concerns that interfered with people’s daily lives.4 Despite the democratic inclination to decline that morphology is related to one’s happiness and success, facial attractiveness appears correlated to psychologic distress and a strong underlying motivator for treatment among dentofacial patients.6 Across groups and sites, patients recounted emotionally painful interpersonal experiences (eg, teasing) supporting prior reports.17,19,20 The results reinforce 2
previous reports that more than 50% of the patients felt "disadvantaged" socially by their appearance, and indicated that these feelings influenced their decision for treatment. These expressed concerns were rooted to earlier child and adolescent experiences, thereby lending credence to the notion that body image and self-concept are formulated early and can impact on future health-seeking behaviors. In short, decision-making is multifaceted involving long-term concerns which are often abstract and not readily apparent.

Interestingly, the findings support the readiness to change model, as the issue of thinking about and knowledge were only prerequisites for accepting change (treatment). Resolution of personal stressors (eg, graduation from school, financial security) was also associated with health-seeking despite patients' longstanding issues about their facial disharmony. Therefore, appropriate "timing" for treatment includes factors other than physical growth.

Although the sample size is small and no generalizations can be made, the results highlight potential differences in access to care and decision making across cultures. Given technological advancements in terms of treatment options as well as delivery of information (eg, videoimaging), the interrelationships among decision making, ethnicity and socioeconomic status are unclear and warrant further consideration. Therefore, in addition to access to care, effective communication and delivery of information and care may be dependent on personality and cultural factors in the patients. This notion had previously been addressed in the context of mode of delivery and style of presentation in oral surgery and recently has received attention in the context of health care beliefs and utilization across cultures. After viewing her projected video image of before and potential after treatment, the response of the 48-year-old woman from rural NC regarding her unawareness of "looking so bad" may reflect denial, different values and priorities, and/or low knowledge. Regardless of the reason, this scenario underscores potential cultural factors in patients. Such unresolved issues challenge orthodontists to investigate some of these more subtle, social variables as dental professionals seek to understand the decision making process in patients with dentofacial disharmony.

**Implications for the Clinician**

Based on prior reports, clinical experience and research findings from the principle authors, and the findings from the focus groups, the following implications for clinical practice emerge:

- Accepting the diversity of patient concerns without making value judgments, which inhibit patients from sharing openly. Fostering inhibition serves as a barrier to care in patients. Allow patients to ask questions and encourage them to discuss this matter with their support systems.
- Providing patients with background on the philosophy of your health team, your experience, the facility's compliance with OSHA regulations, etc. Such information will address potential concerns about the competence, experience, and cleanliness of the facility.
- Informing the patient about what can and cannot be achieved. Use of visual aides helps most patients. Whenever possible, allow patients to speak with others who have had such care. Word of mouth and knowing others who have had care typically reduces patient fear of the unknown. Avoid the word "fix," as this implies something is broken and may conjure or support unrealistic expectations in the patient.
- Screening patients for psychosocial distress, using either standardized questionnaires which can be scored with a computer program or perhaps developing or using health checklists and/or mental/health questionnaires for patients to complete. Discussing the patient's history of present concern is critical in understanding the patient's expectations and assuring the patient/family that you care and are interested in them. Why now? Is an excellent question to follow-up with their histories. Typically the patient who accepts treatment is aware and can readily answer this question. If the patient is unable to answer, it is a "red flag" that should be addressed or at least noted. If the patient's motivations are exclusively "other" directed, adherence can be problematic. In such patients, the timing may not be right. Some patients who return for treatment report that they did not wear their retainer, etc, because of immaturity (got treatment early because my parents thought I needed it). Remember who is the identified...
patient. The motivation of the support system (significant other, parent) is important, but the patient’s motivation is a better predictor of adherence.

- Checking patient understanding is essential. If patients repeat questions, it is often helpful to provide a written summary. In addition, pay attention to the repeated questions (eg, cleanliness, issues) as such information may indicate unresolved issues of concern to the patient. The medical history form should query the patient about obsessive thoughts and rituals, history of depression, anxiety, reasons for visits to mental health practitioner, health care utilization, (eg, has sought other health care for similar facial concerns within the past year?).

- Asking to meet another person who may be providing social support during the pre- and postoperative period. Patients and their support systems may need to be clear about their expectations as well as facilitating the coordination of efforts to ensure adherence with treatment regimen and satisfaction with care. In the case of the individual who can not identify a support system, this may be a “red flag” regarding his or her psychologic development.

- Developing a cadre of specialists who you can consult with and to refer to when addressing the multiple associated features in patients with dentofacial disharmony. In addition to the more obvious physical concerns (eg, otolaryngeal, etc), addressing psychosocial needs and consulting with mental health professionals may be warranted.

- Knowing your biases and preferences. Accepting and respecting patients’ questions, concerns, histories, and motives are crucial in developing and tailoring the potential treatment plans for every patient.

- Providing written summary material is essential as clarity of explanations at the consultation visit may not be completely understood or remembered. Such information also facilitates patients dealing with insurance, employees, other health providers, and the patients’ significant others.

Acknowledgment
The authors thank Dr Diane Rekow for her support as well as Amit Desai and Erin Kazmierski for their help in organizing the focus groups.

References