Dental Hygiene Students’ Attitudes Toward Ethical Dilemmas in Practice


Abstract: This article reports the findings of a survey-based study conducted in 2006 to determine graduating dental hygiene students’ attitudes toward ethical dilemmas in eight areas of practice: substandard care, overtreatment of patients, scope of practice, fraud, confidentiality, impaired professionals, sexual harassment, abuse, and health status. The findings, based on responses from 1,165 students at 141 U.S. dental hygiene programs, indicate that many dental hygiene students do not understand what behaviors in the patient care environment are consistent with ethical practice and which are not. Responding students believe that hygienists have a strong duty to report, intercede, or educate in areas of abuse, sexual harassment, detection of cancer, and smoking cessation. However, they were less likely to report concerns about ethical transgressions such as fraud, inadequate infection control, exceeding practice scope, and failure to diagnose disease when such disclosures could potentially threaten their employment status. Based on the results, we recommend that dental hygiene programs explore curriculum enhancements to improve students’ comprehension of what constitutes fraud and other ethical transgressions and the proper reporting mechanisms.

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The health care community presently deals with issues such as stem cell research, the right to die, priorities in organ transplantation, and care rationing. These medical issues have created significant challenges in patient care, among which is the need for practitioners to always behave in an ethical manner. Advanced technology has created new areas of ethical ambiguity and uncertainty. The challenge for health care practitioners is to do the right thing no matter the personal consequence.

Ethical dilemmas as they relate to patient care are an unavoidable component of health care as delivered by all types of practitioners. Traditionally, care decisions were the sole responsibility of the physician or dentist. A dramatic change in the health care paradigm has been the emergence of allied health care providers. As the health care system has evolved, decision making initially shifted to nurses and pharmacists. Later, chiropractors, physical and occupational therapists, physician assistants, and dental hygienists began taking on additional decision making roles. Many factors have contributed to making allied health providers larger and larger stakeholders. Primary among these is the need to provide the highest level of care at a price that makes economic sense. The outcome of this shift is an ever-increasing scope of practice for most allied health providers. The operant financial paradigm in health services delivery is to allow these allied health providers to do the maximum their education and licensure allow, thus lowering costs, versus a model in which these same services are provided by more highly credentialed providers with an M.D., D.M.D./D.D.S., or Pharm.D.

This shift means that providers with less training and fewer licensure requirements than physicians and dentists are assuming larger roles in decision making and therefore are becoming more involved in ethical decision making. This raises the question of whether allied health care providers are receiving adequate education to deal with ethical dilemmas related to practice. A case has been made that the installation of an ethical compass and development of the ability to make ethical judgments begin during the professional education of health care practitioners.1 The goal of our study was to assess the attitudes of soon-to-graduate dental hygiene students in the United States relative to professional practice and patient care and also to elicit their opinions concerning ethical dilemmas as they prepared to transition from an academic environment to a clinical setting. Specifically, the study focused on...
dental hygiene students’ attitudes about ethical issues in nine areas: substandard care, overtreatment, scope of practice, fraud, confidentiality, impaired practitioners, sexual harassment, abuse, and health status. The study was conducted to provide direction to dental hygiene educators to help them better prepare students for future practice.

Potential ethical issues and dilemmas for these nine areas include the following:

1) **Substandard care**: situations in which there is failure to diagnose, failure to refer, or lack of proper infection control or situations in which dental or dental hygiene services are provided that do not meet the accepted standard of care.

2) **Overtreatment**: situations in which excessive services or services that are unnecessary for the particular case are provided. This category would include unduly influencing a patient’s care decision as a result of one’s position of greater knowledge.

3) **Scope of practice**: instances in which the legally assigned scope of practice is exceeded by a dental hygienist, dentist, or other member of the dental team.

4) **Fraud**: situations in which an insurance claim or other reimbursement mechanism is adjusted to favor the dental office or the patient’s financial situation. Other types of cost containment efforts may be included in this category.

5) **Patient confidentiality**: situations in which patient and/or child-parent confidentiality is jeopardized or the opportunity for informed consent is not provided.

6) **Impaired professional**: situations in which the dental hygienist or other dental team member cannot or should not perform dental care because of a dependence on alcohol, drugs, or other substances.

7) **Sexual harassment**: a wide range of behaviors that a dental team member may observe or be subjected to that can be classified as harassment.

8) **Abuse**: situations in which physical abuse and/or neglect of a child, elder, or spouse is observed or suspected. Such situations have legal requirements that obligate health care providers to report suspected abuse, as well as ethical considerations, in most states.

9) **Health status**: failure to identify and document, in the patient’s medical record, risk factors that may impact the patient’s oral health and to inform the patient of these risk factors.

These definitions and examples were provided to students on the survey used for data collection in this study. The survey questions linked to each of these nine areas and the survey instrument appear in the Appendix.

**Previous Studies Regarding the Nine Categories**

A review of the literature in dental hygiene education revealed a small number of articles addressing these nine ethical dilemmas.

**Substandard care**. To provide a consistently high level of care, it is essential for dental hygienists to constantly engage in professional development. This entails acquiring new skills and knowledge so that they can keep abreast of information technology, scientific advances, and new preventive and therapeutic services. As the field advances, those practitioners who do not advance with it are de facto delivering substandard care.

A proper level of care requires strong clinical time management and good interpersonal working relationships. Efficient time management speaks to the organizational skills of the hygienist that allow the delivery of high level of care. Good organizational skills provide the hygienist with sufficient time to provide proper prophylaxis and periodontal treatment and also allow time for proper infection control between patients. Good communication between the scheduling coordinator and the dental hygienist ensures an efficient and effective schedule, which will allow sufficient time to deliver care and also carry a profitable patient load.

**Overtreatment**. Dental hygienists are strictly governed by a code of ethics that promotes and improves public health through actions, behaviors, attitudes, and an overarching sense of ethical consciousness. Dentistry as a profession should provide care based upon demonstrated need. It is clearly unconscionable to provide unnecessary treatment to either well patients or to those with a serious illness, misleading them into believing that the unnecessary treatment will cause improvement. The bonds of trust between practitioners and patients are one of the cornerstones of the dental profession. These bonds are broken when unnecessary procedures are performed, particularly if they adversely affect the health or welfare of the patient. With the ever-expanding market of dental products and procedures, it is incumbent upon both dentists and dental hygienists not to embellish the truth about these products and procedures for financial gain.
Scope of practice. The scope of practice for allied dental personnel is defined by state dental practice acts. The American Dental Hygienists’ Association defines the hygienist’s scope of practice within five categories of process of care: patient assessment, diagnosis, treatment planning, implementation, and evaluation.° It is our experience that there is a trend in health care delivery to use allied health personnel or extenders to provide care more economically. Witness the development of physicians’ assistants, physical therapy assistants, and dental assistants. Recent research suggests that the scope of practice for a dental hygienist in the future may include a process of care that addresses the possible association between oral and systemic diseases and conditions.° A dental hygienist receives extensive education in the dental hygiene process that should be employed when providing patient care. Dental hygiene education contains an average of 600 supervised preclinical and clinical learning experiences acquired through the process of providing supervised patient care. This allows hygienists to collect and assess data on the periodontal tissues, recognize periodontal disease, and collaborate with the dentist and patient to determine a treatment plan. An integral part of the treatment plan phase is patient health education. Personnel in the dental office not trained to the level and degree of hygienists’ scope of practice should not be performing duties within the scope of practice of dental hygiene. A good example of this would be coronal polishing by a dental assistant untrained in proper technique. When performed improperly, this procedure can cause damage to soft and hard tissues.°

Fraud. Fraud, either intentional or not, frequently occurs by using improper billing codes. All members of the dental team must be cognizant of the American Dental Association (ADA) guidelines related to proper billing.° Proper codes reflect the procedure performed, and there should be no confusion in assigning codes. For example, the periodontal code D4910 is for follow-up patients who have received active periodontal therapy (surgical or nonsurgical). The dentist can make the assessment to move a periodontal therapy patient back to a code D1110 (prophylaxis) after scaling and root planing (SRP) if clinical judgment warrants. Some patients have no signs of disease after SRP, and it is possible to use code D1110 correctly.° The important point is that all coding and billing decisions must be based upon clinical judgments and not financial expediencies. Increasing dental hygiene care by becoming knowledgeable about dental terminology codes ensures that the patient’s procedure is documented and billed properly.°

Unfortunately, fraud can also be blatant and deliberate in dental hygiene. In 2005, the state of Florida arrested a dental hygienist and charged her with one count of organized scheme to defraud.°° The offending hygienist was billing Medicaid for office visits on consecutive days when no services were rendered. The alleged fraud netted some $1,600 and involved falsifying fourteen different files of Medicaid patients between January 2003 and May 2004. This offense is punishable by up to five years in prison and/or a $5,000 fine. Florida’s attorney general stated, “This arrest sends the message that stealing money from Medicaid will not be overlooked, no matter how small the amount involved.”°°

Confidentiality and consent. Similar to that in other venues of health care delivery, privacy is a standard of care within the dental profession. This is dictated internally by the codes of ethics guiding both dental hygiene and dentistry and externally by the Health Insurance Portability and Accountability Act of 1996 (HIPAA).°°° HIPAA in general requires that privacy be maintained in communication with patients, with their paperwork and records, and in intraoffice communication about patients. It requires planning, policy writing, and training of employees to ensure that all personnel in the dental office know the various aspects of privacy.°°°°

The maintenance of confidentiality, however, goes beyond statutory obligation. The cornerstone of trust and confidence that patients have in their health care practitioners is confidentiality. It is central to developing an effective working relationship between patient and practitioner and is a predictor of successful outcomes. Dentists and dental hygienists also have the responsibility to obtain informed consent of the patient for treatment. Informed consent is the patient’s acceptance of a course of treatment based on information provided by a health care provider. The patient must be provided sufficient information about his or her condition and available treatment options.°°°°

Impaired practitioners. Data collected by the National Institutes of Health indicate that the incidence of alcohol abuse in the general population and in the health care professions has steadily increased since 1981.°°° Alcohol use in the dental profession reflects this trend. A study conducted in 2002 demonstrated that alcohol use and abuse were higher among dentists than among physicians.°°°°
A compelling legal and ethical responsibility clearly exists to report a dental team member if he or she is suspected of having a substance abuse problem. The need to protect the public while also promoting the treatment of an afflicted colleague drives this necessary reporting. The reporting should not be done in an accusatory or demeaning manner, but rather should be expressed as caring support. This can be done through programs such as Health Professional Recovery, which works with Well-Being Committees for peer review to interact with professionals dealing with substance abuse.18

A somewhat more complicated case of “impairment” arises with the issue of HIV-positive dental practitioners. In the past, there existed a genuine concern that transmission of HIV from practitioner to patient or patient to practitioner could occur. The current consensus within the scientific community is that the risk of HIV transmission between patient and practitioner groups in dentistry is low. Infected health care workers must place primary emphasis on the manner in which a procedure is performed. They must focus on universal precautions to prevent cross-contamination and less upon the bloodborne pathogen status of the health care worker.19 The ADA’s guidelines state that oral health care providers do not need to be tested for HIV and do not need to disclose their HIV status to their patients. But infected providers are required to consult with review panels so that the necessary precautions in each case can be determined.15

Sexual harassment. Sexual harassment in dental hygiene practice is an unfortunate example of unprofessional and unethical behavior. In a study conducted in Virginia, 54 percent of dental hygienists reported that they had experienced sexual harassment.20 The reported offenders were male dentists in 73 percent of the cases and male patients in 45 percent of the cases. A disturbing finding from this study was that only 1 percent of the victims filed a formal complaint, even though 70 percent of the respondents said that filing such a complaint was an effective strategy to deal with this behavior. While this study was conducted in only one state, it is reasonable to extrapolate these results to all fifty states. Even if the 54 percent figure reported for Virginia is high compared to other states, anything approaching this number suggests a serious lack of professionalism in the dental practice which, if dentists are perpetrators of abuse, represents potential criminal activity.

Physical abuse. Dental hygienists share with other health care providers the responsibility to ask questions about signs and symptoms of physical abuse evident in patients. In dental hygiene, this would primarily mean identifying and inquiring about dental trauma evidenced by injuries to the head, neck, or mouth since more than 65 percent of all cases of physical abuse appear in these areas. Hygienists have the obligation to report suspected or observed abuse in any patient regardless of age.21

While we may think of abuse as being a child-centered problem, hygienists must be aware that physical abuse is also fairly common in the elderly and between spouses. The same level of observation and concern extended towards children should be extended to all patients.22 Another area of abuse that is problematic is workplace violence. Dental offices should have a zero-tolerance policy toward workplace violence. Proper employee training for addressing types of behavior that are unacceptable in the workplace and knowing how to report incidents should be included in the employee handbook and discussed frequently at team meetings.15

Health status. The American Dental Hygienists’ Association (ADHA) believes that oral health is an integral part of total health. Signs and symptoms of many potentially life-threatening diseases first appear in the mouth. Studies have shown that periodontal disease is a risk factor for a number of diseases and conditions including heart disease, diabetes, respiratory diseases, premature births, and low birth-weight babies.22 Dental hygienists play a crucial role in the health of their patients and function as both educators and screeners as they monitor blood pressure, examine the head and neck, and conduct thorough intra- and extra-oral examinations. Hygienists assist dentists with the identification of oral soft tissue abnormalities. This identification is central to the early detection of oral cancer, one of the more common forms of cancer.23

Conceptual Framework and Methods for this Study

The need to prepare graduates of U.S. dental schools regarding appropriate practice attitudes and ethical behaviors has been recently addressed by the national dental and dental education associations. A teleconference, “Renewing Professionalism in Dental Education: Overcoming the Market Environment,” organized by the American Dental Education Association and based on an article published in the Journal of Dental Education,24 and a 2007 Symposium
on Integrity and Ethics in Dental Education\textsuperscript{25} held at the ADA headquarters in Chicago both focused on challenges facing educators to better develop professional and ethical dental practitioners.

Ethics instruction in dental hygiene programs is also essential. The need to provide appropriate ethics instruction in the dental hygiene curriculum has been further demonstrated by the recent inclusion of dental hygiene ethics on the National Board Dental Hygiene Examination.\textsuperscript{26} A recent study\textsuperscript{27} was conducted to assess how ethics is taught in the dental hygiene curriculum. The study revealed that programs have taken measures to employ a variety of teaching strategies but continue to rely primarily on traditional methods of instruction and evaluation such as lectures, discussion, quizzes, and written assignments. The study recommended that dental hygiene programs continue to implement and evaluate instructional methods to simulate real-life experiences and emphasize ethical concepts that promote comprehensive oral health care. The authors of that study also recommended that future studies be done to investigate the effectiveness of ethics instruction within the dental hygiene curriculum.

For our study, a fifty-item survey was used to gather data. Packets of ten surveys and Scantron sheets (on which students “bubble-in” responses) were mailed in spring 2006 to 271 U.S. schools of dental hygiene. Directors were asked to randomly select ten dental hygiene students in their last semester of school to complete the survey. A return envelope for the Scantron sheets was provided. A deadline date of the student’s graduation month was requested. Program directors from 141 schools of dental hygiene (52 percent) returned a total of 1,165 completed surveys.

In developing our survey, we drew on a previously published survey of ethical issues in dental hygiene,\textsuperscript{15} as well as current research findings. The survey used a five-category Likert scale (strongly agree to strongly disagree) to elicit student opinions regarding eight categories of ethical dilemmas most commonly encountered by dental hygienists.\textsuperscript{15} Students were asked to indicate the extent to which they agreed with a statement related to one of the areas of ethical decision making. For example, item 3, in the category “substandard care,” was as follows: “Dental hygienists have a responsibility to generate the highest level of income in a dental practice by ensuring all dental hygiene appointments are filled each day.” The ninth category, health status, which did not appear in the source instrument,\textsuperscript{15} was developed by our research team. This category was created to address recent research findings concerning the relationship between systemic health and findings of an oral health survey.\textsuperscript{9,28}

The final survey consisted of fifty items allocated among the nine categories. The survey was pilot-tested with the 2006 senior dental hygiene class at Clayton State University; these students provided feedback on question structure and wording that was incorporated into the version of the instrument used for this study. No other types of validity measures were conducted.

### Data Analysis and Results

The overall results are shown in Table 1. The data were examined as groups of related questions that elicited the greatest levels of agreement and disagreement among students in order to identify response trends. In considering the findings, it is important to stress that this study only addressed the researched areas prior to students entering dental hygiene practice. Practice attitudes and opinions concerning ethical dilemmas may change after a hygienist is in practice for a period of time.

The respondents perceived abuse to be an area where dental hygienists need to take action when indicators are evident. Six of the eight questions in this category addressed the hygienist’s responsibility to report either suspected or observed child or elder abuse or neglect. Ninety-four percent or greater of the respondents agreed and strongly agreed that it was their responsibility to report such behavior. In responses for the two other questions in the category dealing with suspected or observed abuse, more than 85 percent of students agreed and strongly agreed that it was the hygienist’s responsibility to report evidence of spousal/partner abuse.

Strong positive responses reflecting ownership of responsibility for helping patients maintain or improve their health in areas beyond basic dental hygiene were also noted. Nearly 97 percent of respondents felt that dental hygienists have a responsibility to screen patients for oral cancer. Greater than 94 percent felt that dental hygienists have a responsibility to offer smoking cessation programs if appropriate to dental patients. However, less than 40 percent of the respondents felt they have a responsibility to screen patients for obesity.

The category of sexual harassment also yielded strong positive responses. Eighty-six percent of the
| Table 1. Graduating dental hygiene students’ agreement or disagreement with survey questions, by percentage of total respondents (N=1,165) |
|---|---|---|---|---|---|---|---|
| Question Number | Strongly Agree | Agree | Undecided | Disagree | Strongly Disagree | Strongly Agree + Agree |
| Substandard care | | | | | | |
| 1 | 44.5% | 37.9% | 4.4% | 11.3% | 1.9% | 82.4% |
| 2 | 45.8% | 41.3% | 6.8% | 5.4% | 0.7% | 87.1% |
| 3 | 10.1% | 22.7% | 26.4% | 34.6% | 5.2% | 32.8% |
| 4 | 6.3% | 21.8% | 25.8% | 32.8% | 13.3% | 28.1% |
| 5 | 7.4% | 36.8% | 25.3% | 24.2% | 6.3% | 44.2% |
| 6 | 10.9% | 33.0% | 22.5% | 28.4% | 5.2% | 43.9% |
| 7 | 26.7% | 38.7% | 23.8% | 8.2% | 2.6% | 65.4% |
| 8 | 4.8% | 14.8% | 27.0% | 35.9% | 17.5% | 19.6% |
| 9 | 6.3% | 23.9% | 28.0% | 29.7% | 12.0% | 30.2% |
| 10 | 14.0% | 41.6% | 24.9% | 15.7% | 3.9% | 55.6% |
| 11 | 9.0% | 21.2% | 30.7% | 32.6% | 6.6% | 30.2% |
| 12 | 8.6% | 36.6% | 30.2% | 21.2% | 3.4% | 45.2% |
| 13 | 9.8% | 43.9% | 24.6% | 19.7% | 2.0% | 53.7% |
| 14 | 31.7% | 52.8% | 12.5% | 2.6% | 0.4% | 84.5% |
| Overtreatment | | | | | | |
| 15 | 7.0% | 35.1% | 37.6% | 18.2% | 2.1% | 42.1% |
| 16 | 12.0% | 42.6% | 27.9% | 15.0% | 2.3% | 54.6% |
| Reporting infractions of scope of practice | | | | | | |
| 17 | 6.4% | 24.2% | 32.9% | 32.6% | 3.9% | 30.6% |
| 18 | 31.0% | 49.5% | 14.0% | 5.1% | 0.5% | 80.5% |
| 19 | 23.2% | 43.9% | 25.3% | 6.7% | 0.9% | 67.1% |
| Reporting fraud | | | | | | |
| 20 | 12.6% | 36.6% | 35.6% | 13.9% | 1.2% | 49.2% |
| 21 | 10.1% | 30.8% | 39.2% | 18.0% | 1.9% | 40.9% |
| 22 | 13.8% | 40.8% | 31.6% | 12.5% | 1.5% | 54.6% |
| Reporting breach of confidentiality and consent | | | | | | |
| 23 | 12.4% | 40.7% | 30.6% | 15.1% | 1.2% | 53.1% |
| 24 | 13.6% | 50.3% | 26.1% | 9.4% | 0.6% | 63.9% |
| 25 | 31.6% | 52.7% | 12.0% | 3.1% | 0.5% | 84.3% |
| Reporting the impaired professional | | | | | | |
| 26 | 40.0% | 41.8% | 13.1% | 4.2% | 0.9% | 81.8% |
| 27 | 45.9% | 40.3% | 10.3% | 2.8% | 0.6% | 86.2% |
| 28 | 33.8% | 40.4% | 17.4% | 7.6% | 0.9% | 74.2% |
| 29 | 5.4% | 7.4% | 21.8% | 41.1% | 24.3% | 12.8% |
| 30 | 18.7% | 28.2% | 19.8% | 22.3% | 11.0% | 46.9% |
| 31 | 9.2% | 15.3% | 25.5% | 34.0% | 16.0% | 24.5% |
| Reporting sexual harassment | | | | | | |
| 32 | 39.7% | 46.7% | 9.3% | 3.7% | 0.6% | 86.4% |
| 33 | 46.5% | 45.9% | 5.9% | 1.8% | 0.0% | 92.4% |
| Reporting physical abuse | | | | | | |
| 34 | 69.4% | 25.9% | 4.3% | 0.4% | 0.0% | 95.3% |
| 35 | 64.4% | 30.0% | 4.6% | 0.9% | 0.1% | 94.4% |
| 36 | 74.0% | 22.5% | 3.0% | 0.5% | 0.0% | 96.5% |
| 37 | 68.8% | 26.4% | 4.3% | 0.4% | 0.1% | 95.2% |
| 38 | 66.6% | 28.0% | 4.4% | 0.9% | 0.1% | 94.6% |
| 39 | 71.1% | 25.3% | 3.1% | 0.5% | 0.0% | 96.4% |
| 40 | 52.7% | 32.2% | 10.7% | 4.0% | 0.3% | 84.9% |
| 41 | 61.7% | 27.9% | 8.0% | 2.1% | 0.2% | 89.6% |
| Reporting dental hygienists’ responsibility related to patient’s health status | | | | | | |
| 42 | 46.5% | 42.2% | 7.8% | 3.1% | 0.3% | 88.7% |
| 43 | 40.1% | 47.5% | 8.9% | 3.3% | 0.2% | 87.6% |
| 44 | 50.7% | 43.5% | 4.7% | 0.9% | 0.2% | 94.2% |
| 45 | 29.6% | 50.9% | 15.3% | 3.9% | 0.3% | 80.5% |
| 46 | 18.4% | 44.7% | 28.0% | 8.0% | 0.9% | 63.1% |
| 47 | 14.2% | 30.8% | 32.1% | 20.1% | 2.7% | 45.0% |
| 48 | 11.4% | 28.5% | 34.9% | 22.8% | 2.5% | 39.9% |
| 49 | 73.9% | 22.7% | 3.1% | 0.3% | 0.0% | 96.6% |
| 50 | 43.2% | 41.4% | 11.8% | 3.4% | 0.3% | 84.6% |
respondents felt a responsibility to report observed sexual harassment in the dental office, while 92 percent placed emphasis on reporting harassment directed at them.

In the category of fraud, 48 percent of the respondents agreed it was not their responsibility to report situations in which insurance claims are adjusted to favor a patient or an office’s financial situation. In addition, two-thirds of the respondents demonstrated some degree of disconnect from the responsibility for financial operations of a dental office by replying they did not feel it was their responsibility to ensure all dental hygiene appointments were filled each day or that their role involves an awareness of the status of delinquent accounts of patients seeking dental hygiene services.

A low percentage of students agreed with statements in several of the categories. In these, almost 70 percent of the respondents disagreed, strongly disagreed, or were undecided. For example, in the substandard care category, nearly 70 percent disagreed with or were undecided about the statement that it was their responsibility to inform patients if their employer does not practice proper infection control. Nearly 70 percent disagreed or were undecided that they have a responsibility to inform patients about the dentist’s failure to diagnose, treat, or refer periodontal disease. More than 80 percent of students disagreed, strongly disagree, or were undecided that it was their responsibility to inform the patient about the dentist’s failure to diagnose and restore dental caries; this may be the most notable finding of the study.

In the scope of practice category, nearly 70 percent of students disagreed with the statement or were undecided that they have a responsibility to inform patients when members of the dental team are exceeding the legally assigned scope of practice. In the category of impaired professional more than 75 percent of respondents disagreed, strongly disagreed, or were undecided about the statement that they are responsible to inform the patient if either the dentist or the hygienist is HIV positive.

Conclusions and Recommendations

In our opinion, the findings of this study reflect the apparent ethical and attitudinal ambiguities that exist in the general population and in the dental profession. The dental hygiene students responded strongly to issues that have a high profile in our society: abuse, sexual harassment, detection of oral cancer, and smoking cessation. Overwhelming percentages of respondents felt that dental hygienists have a strong duty to report, intercede, or educate in these areas.

In contrast, the students were far less certain that it was their responsibility to intervene or report unethical or unprofessional behaviors related to fraud, infection control, exceeding the scope of practice, and failure to diagnose disease. Fraud and failure to diagnose are particularly interesting because both can have major implications for license revocation. Most fraud occurs by improper coding of procedures and billing for services not rendered. Such occurrences can have strong legal ramifications. It should be further investigated as to whether students’ casual attitude towards this type of stealing is something ingrained in their basic belief system or this perspective was developed during their education in dental hygiene. Another issue for further study is how to better address responsibility and integrity regarding billing and coding.

Our study indicates that dental hygiene students have unclear conceptions of what is involved in ethical behavior. In some dimensions, the perceptions of most of the survey respondents were consistent with the ethical principles of the dental profession; in others, a disturbing ambiguity was evident. Dental hygiene programs must enhance their curricula to increase students’ comprehension of what constitutes fraud and raise the level of students’ consciousness about why fraud is wrong.

It is not surprising that students provided the least proactive responses (i.e., were the least likely to report instances of unethical or unprofessional behavior) in areas that could potentially threaten their employment if ethical transgressions were identified and addressed. This would explain why student hygienists in this study and practicing hygienists in previous research strongly recognized the need to report sexual harassment, but in the practicing group only 1 percent followed through and submitted a report.

Most dental hygiene programs either have stand-alone ethics courses or interweave ethics into other courses. The responses in our study suggest an apparent disjunction between what is taught and how students perceive practice attitudes and ethical dilemmas. Dental hygiene programs need to further develop separate courses in ethics, integrate practice-based case studies, and emphasize the concepts
throughout the curriculum. Most importantly, faculty members must model appropriate practice attitudes and ethical behavior by being unwavering in their response to inappropriate and unethical behavior by their students in the classroom, in clinic, and in public.

REFERENCES
25. Symposium on Integrity and Ethics in Dental Education, June 7–8, 2007, American Dental Association, Chicago, IL.
Categories of Ethical Issues and Survey Questions That Address Each

1. **Substandard Care**
   Situations in which there is failure to diagnose, failure to refer, lack of proper infection control, or situations in which dental or dental hygiene services are provided that do not meet the accepted standard of care.
   *Survey questions related to this topic: 1–14.*

2. **Overtreatment**
   Situations in which excessive services or services that are unnecessary for a particular case are provided. This category would include unduly influencing a patient’s care decision as a result of one’s position of greater knowledge.
   *Survey questions related to this topic: 15, 16.*

3. **Reporting Infractions of Scope of Practice**
   Instances in which the legally assigned scope of practice is exceeded by a dental hygienist, dentist, or other member of the dental team.
   *Survey questions related to this topic: 17, 18, 19.*

4. **Reporting Fraud**
   Situations in which an insurance claim or other reimbursement mechanism is adjusted to favor the dental office or the patient’s financial situation. Other types of cost containment efforts may be included in this category.
   *Survey questions related to this topic: 20, 21, 22.*

5. **Reporting Breach of Confidentiality and Consent**
   Situations in which patient and/or child-parent confidentiality is jeopardized or the need and requirement for informed consent is not met.
   *Survey questions related to this topic: 23, 24, 25.*

6. **Reporting the Impaired Professional**
   Situations in which the dental hygienist or other dental team member cannot or should not perform appropriate dental care because of a dependence on alcohol, drugs, or other substances.
   *Survey questions related to this topic: 26–31.*

7. **Reporting Sexual Harassment**
   A wide range of behaviors that a dental team member may observe or be subjected to that can be classified as harassment.
   *Survey questions related to this topic: 32, 33.*

8. **Reporting Physical Abuse**
   Situations in which abuse of a child, elder, or spouse is observed or suspected. Such situations have legal requirements, as well as ethical considerations, in most states.
   *Survey questions related to this topic: 34–41.*

9. **Reporting Dental Hygienists’ Responsibility Related to Patients’ Health Status**
   Risk factors that may impact the patient’s oral health.
   *Survey questions related to this topic: 42–50.*
Survey of Graduating Dental Hygiene Students’ Attitudes Regarding Ethical Dilemmas in Practice

Directions: Please indicate your responses related to the following statements on the scantron card provided.

1. A good working relationship between a dental hygienist and a dentist is a predictor of the quality of dental hygiene patient care.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

2. A good working relationship between a dental hygienist and members of the dental team is a predictor of appropriate scheduling of patients for dental hygiene care.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

3. Dental hygienists have a responsibility to generate the highest level of income in a dental practice by assuring all dental hygiene appointments are filled each day.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

4. The role of the dental hygienist involves an awareness of the status of delinquent accounts for patients seeking dental hygiene services.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

5. The role of the dental hygienist requires knowledge of and application skills related to guidelines governing third party payment reimbursement.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

6. The dental hygienist has a responsibility to promote dental and dental hygiene services that generate high levels of income to the dental practice.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

7. Dental hygienists should receive bonuses related to fees generated by dental hygiene services.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

8. Dental hygienists should inform patients about the dentist’s failure to diagnose and restore dental caries.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

9. Dental hygienists should inform patients about the dentist’s failure to diagnose, treat, or refer the patient with periodontal disease.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

10. Dental hygienists have a responsibility to refer patients for treatment of oral diseases if their employer has failed to diagnose and treat the condition.
    A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

11. Dental hygienists have a responsibility to inform patients if their employer does not practice proper infection control.
    A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

APPENDIX (continued)
12. Dental hygienists have a responsibility to inform patients if dental and dental hygiene services have been provided that do not meet the accepted standard of care.  
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

13. Dental hygienists should report patient complaints about another hygienist to the dentist. 
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

14. Dental hygienists have a responsibility to report a dentist to the state governing body when practice rules and regulations are not being followed. 
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

15. Dental hygienists have a responsibility to inform the patient about overtreatment in situations in which excessive services or services that are unnecessary for a particular case are provided. 
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

16. Dental hygienists have a responsibility to avoid unduly influencing a patient’s care decisions. 
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

17. Dental hygienists should inform the patient in instances in which members of the dental team are exceeding the legally assigned scope of practice. 
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

18. Dental hygienists should inform the dentist in instances in which members of the dental team are exceeding the legally assigned scope of practice. 
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

19. Dental hygienists should inform the state governing board in instances in which members of the dental team are exceeding their legally assigned scope of practice. 
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

20. Dental hygienists have a responsibility to report situations in which an insurance claim or other reimbursement mechanism is adjusted to favor the dental office. 
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

21. Dental hygienists have a responsibility to report situations in which an insurance claim or other reimbursement mechanism is adjusted to favor a patient's financial situation. 
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

22. Dental hygienists have a responsibility to report instances in which restorative treatments provided to the patient are not the treatments submitted as an insurance claim or billed to the patient. 
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

23. Dental hygienists have the responsibility to inform patients about situations in which their confidentiality was jeopardized. 
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree
APPENDIX (continued)

24. Dental hygienists have a responsibility to inform parents about situations in which the requirement for informed consent was not met when treating their child.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

25. Dental hygienists have a responsibility to report to the dentist instances in which members of the dental team are breaking patient confidentiality.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

26. Dental hygienists should report to the state governing board situations in which dental hygienists cannot or should not perform appropriate dental care because of dependence on alcohol, drugs, or other substances.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

27. Dental hygienists should report to the state governing board situations in which dentists cannot or should not perform appropriate dental care because of dependence on alcohol, drugs, or other substances.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

28. Dental hygienists should report to the state governing board situations in which members of the dental team, not providing direct patient care, cannot or should not be working in a dental office because of dependence on alcohol, drugs, or other substances.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

29. The dental hygienist has the responsibility to inform the patient if the dentist is HIV positive.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

30. The dental hygienist has the responsibility to inform the dentist if he/she is HIV positive.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

31. The dental hygienist has the responsibility to inform the patient if he/she is HIV positive.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

32. Dental hygienists have a responsibility to report sexual harassment observed in a dental practice.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

33. Dental hygienists have the responsibility to report sexual harassment directed at them in a dental practice.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

34. Dental hygienists have a responsibility to report suspected child abuse.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

35. Dental hygienists have a responsibility to report suspected child neglect.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

36. Dental hygienists have a responsibility to report observed child abuse.
   A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree
APPENDIX (continued)

37. Dental hygienists have a responsibility to report observed child neglect.  
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

38. Dental hygienists have a responsibility to report suspected elder abuse.  
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

39. Dental hygienists have a responsibility to report observed elder abuse.  
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

40. Dental hygienists have a responsibility to report suspected spousal abuse.  
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

41. Dental hygienists have a responsibility to report observed spousal abuse.  
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

42. Dental hygienists have a responsibility to screen patients for hypertension.  
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

43. Dental hygienists have a responsibility to screen patients for tobacco use.  
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

44. Dental hygienists have a responsibility to offer smoking cessation programs if appropriate to dental patients.  
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

45. Dental hygienists have a responsibility to screen patients for eating disorders.  
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

46. Dental hygienists have a responsibility to confront patients suspected of having an eating disorder.  
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

47. Dental hygienists have a responsibility to serve as a member of an eating disorders treatment team.  
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

48. Dental hygienists have a responsibility to screen patients for obesity.  
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

49. Dental hygienists have a responsibility to screen for oral cancer.  
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

50. Dental hygienists have a responsibility to interact with a diabetic’s primary care physician when they observe physical problems.  
A) Strongly Agree  B) Agree  C) Undecided  D) Disagree  E) Strongly Disagree

Thank you!