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A Study of Decision-Making Strategies For

Resolving Common Ethical Dilemmas

Encountered By Fourth Year Dental Students

Judiann Stern

A Thesis

In

The Department

Of

Education

Presented in Partial Fulfillment of he Requirements
For the Degree of Master of Arts (Educational Studies) at
Concordia University
Montreal, Quebec, Canada

February 2003

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ABSTRACT

A Study of Decision-Making Strategies for the Resolution of Common Ethical
Dilemmas Encountered by Fourth year Dental Students

Judiann Stern

The purpose of this study is to explore the decision-making process used to
resolve ethical dilemmas experienced by undergraduate dental students. Various
pedagogical approaches were considered and a modified decision-making strategy
based upon a synthesis of current models was suggested. The research
methodology included a literature review of articles obtained through a Medline
search.

Data collected from student essays over a four-year period provided a list of
common ethical dilemmas encountered by undergraduate dental students. A survey
tool was designed using four of these situations and distributed to third and fourth
year students and dentists having more than five years of clinical experience to
determine the underlying ethical principles used in resolving ethical conflicts.

Two main conclusions can be drawn from this study. Dental programs have
an obligation to include the teaching of ethics and are most successful when it is a
part of the curriculum every year. The second conclusion is that in general,
experienced clinicians more than students, and men more than women, tend to take
into consideration context as well as professional principles when resolving ethical
dilemmas.

ACKNOWLEDGEMENTS

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Chapter I - Introduction

The Significance of the Study

In the past most health professionals have been exempt from public scrutiny. More recently though, society and government are reassessing their expectations of the health professions and the responsibilities that they want them to assume. The health professions are now under pressure to re-evaluate their behavior and to ensure that they set ethical and technical standards that are above those that might otherwise be externally imposed (Creuss & Creuss, 1997; Hensel & Dickey, 1998).

The dental professional is often challenged by ethical dilemmas. Dentists cannot provide dental care to their patients unless they can operate a financially responsible practice. The professional must make decisions as both a caregiver and an entrepreneur. There is concern that the ethical sensitivity and behavior of the dental professional will be in conflict as a result of these two above mentioned distinct motivations (Anderson, 1996). Ethical conflicts have a variety of sources: requests for fraudulent insurance claims, substandard delivery of care, patient autonomy and confidentiality.

Dental schools have a responsibility to sensitize and educate students to be able to handle these and other ethical dilemmas in a professional manner (American Association of Dental Schools, 1989; Self, Baldwin & Wolinsky, 1992; Berk, 2001). The transition from dental student to self-employment requires that students are knowledgeable about how to resolve ethical conflicts. Dental programs must incorporate this reality and provide curriculum that helps students identify, anticipate and resolve ethical dilemmas. New graduates need to be cognizant of and comfortable with the traditional professional values inherent in the patient/doctor relationship. An essential element in the development of professional ethics is an awareness of internal personal values and external professional responsibilities that

determine our responses to difficult situations. Because of diverse client populations, dental schools in large cities may be more successful in promoting sensitivity to their students to the cultural and attitudinal diversity of individuals than schools located in more mono-cultural areas.

The Research Problem

The purpose of this thesis is, firstly, to identify common ethical dilemmas encountered by fourth year dental students and, secondly, to examine the process that they use to resolve these situations. In order to better understand and explore these issues, five sources of information were drawn upon for this study. Two sources involved literature reviews of accepted references and three were based on original research. One literature review examined articles related to ethics in the health professions. The other literature review included information on three related areas: (a) a review of how dental ethics is taught, (b) a review of existing theoretical models relating to the acquisition of ethical sensitivity and (c) a review of research tools that are used in evaluating ethical sensitivity. The first source of original data was acquired from essays written by three different classes of fourth year dental students over a four-year period in a North American university dental program. The second source of original data was derived from the results of a questionnaire administered to third and fourth-year undergraduate dental students and clinical instructors having more than five years of experience. The third source of original data was obtained by my participation as an observer in a six member tutorial group composed only of fourth year dental students that met once a month over a six-month period.

The hypothesis of this paper is that more experienced dentists make decisions based on knowledge and experience. Underlying the hypothesis is the belief that students resolve ethical dilemmas based on moral responsibility (principle-driven),

while clinicians, who are more removed from the academic setting, respond to conflicts dependent upon an awareness of moral responsibility and the situation (context-driven). Principle-driven and context-driven decision-making strategies involve the same values but are representative of different theories of ethics.

The main questions that this study sought to investigate are:

- What are the common ethical dilemmas encountered by fourth year dental students?

- What steps should be included in a decision-making model for fourth year dental students?

- Do gender and/or experience effect which theory of ethics is most commonly applied in resolving ethical dilemmas?

- Do students and their clinicians apply different criteria in decision-making?

The impetus for the exploration of this topic was prompted by two unpublished informal studies that I carried out: (1) comparing the impact of two different curriculum styles on the acquisition of ethical sensitivity, and (2) exploring common ethical dilemmas experienced by fourth year dental students. Both were done as a course requirement towards my master's degree. The first paper looked at the difference between two different teaching philosophies that impact on the acquisition of ethical sensitivity by fourth year dental students: didactic pedagogy and problem-solving learning. Though the difference was small, the group that was taught using a problem-based learning methodology yielded a more principled response to ethical dilemmas. The study used the six-step Kohlberg model to evaluate ethical sensitivity.

This paper reflects my thoughts accumulated as a clinical instructor at a dental school for more than ten years. The experience has given me insight into the kinds of

ethical dilemmas that students actually encounter in their clinical setting and how they attempt to resolve the ensuing conflicts.

Definitions

Ethics

The Cambridge Dictionary of Philosophy defines ethics as "moral facts which are based upon community moral beliefs, reactions or attitudes....and are decided by introspection of values by all reasonable people" (The Cambridge Dictionary of Philosophy, 1999). Ethics is expressed as moral behavior used to resolve complex situations. Morality is a mixture of emotions, thoughts, values, and obligations. Moral development is neither clearly understood nor extensively studied. Ethics are fluid principles or values that are reflective of a community and its cultural milieu. Ethics exist relative to the social and cultural circumstances in which they arise. Ethics can be further broken down into four divisions: theories of ethics, applied ethics, metaethics, and moral psychology. For the purposes of this paper all but metaethics will be addressed. The theories of ethics will be addressed in the sub-section, *Values and Principles*. Applied ethics will be discussed in the sub-section, *Philosophy of Ethics* and moral psychology will be discussed in the sub-section, *Theoretical Models for the Acquisition of Ethical Sensitivity*.

Professional Ethics

Professionalism and ethics are closely intertwined. Professional organizations write their own code of behavior or ethics that their members must observe. In addition, licensing bodies also have their own code of ethics. These guidelines are usually more stringent than those demanded by government regulatory bodies. However, there is sometimes a gap between the written word and the intent.

Bebeau, Born, and Ozar (1993) noted that professionals do not necessarily share the same perception regarding their professional role and what the values of justice, veracity, and beneficence actually mean. While most professionals are knowledgeable of the socially accepted values, Bebeau et al question whether these values "actually guide professionals in their daily actions" (p. 27). This paper looks at how dental students process ethical situations and the values that they rely upon in making their decisions. The strategy learned during their dental education provides a template for them upon graduation so that they may be more cognizant of the values that will guide them throughout their personal and professional life.

Ethics applied to health care professionals is referred to as bioethics and includes adherence to community morality and awareness of community expectations (Rest, 1979; Garrett et al 1989; Holmes, 1993; Purtillo, 1999). However, while the community may have one expectation, prevailing political policies must respect the rule of the majority and provide programs for the benefit of the general population. Thus health professionals are then pulled to act in two different directions. Governments usually take the utilitarian or teleological approach to health care. In order to distribute health care services fairly, excellence is replaced by mediocrity, that is increasing accessibility at the expense of excellence in order to provide basic care for the greatest number of people. Individual communities prefer a deontological approach that demands the very best care for each member of the community.

Values and Principles

Each author uses terms that are referred to as values that may or may not match others but will have the same meaning. Also, some of the authors refer to these same terms as values and others use the word principles. Rezler, Schwartz,

Obenshain, Lambert, Gibson and Bennahum (1992) identify seven values in their Professional Decisions and Values Test (PVD): (1) autonomy, (2) beneficence, (3) confidentiality, (4) harm avoidance, (5) justice, (6) professional responsibility, and (7) truth. These do not all match other authors but the intent is the same. Self et al (1992) identify the following four terms as principles: (1) autonomy, (2) equality, (3) justice, and (4) respect for individual dignity. Myser, Kerridge, and Mitchell (1995) identify the following as the four main bioethical principles: (1) autonomy, (2) beneficence, (3) justice and (4) non-maleficence. Kimbrough and Lautar (2003) discuss seven core values identified in the American Dental Hygiene Association Code of Ethics (ADHA): (1) autonomy (self-determination), (2) confidentiality (non-revealation), (3) societal trust (integrity), (4) non-maleficence (avoidance of harm), (5) beneficence (doing good), (6) justice (fairness), and (7) veracity (truthfulness) (p.20-26). The American College of Dentists (ACD) (2000) has adopted a set of core values that reflect the character, charter and mission of the College and are indeed very similar to the ADHA. These values are singled out and listed below because they are nationally recognized. Dentists who behave in a morally responsible way heed the following values:

Autonomy –	A patient's right to self-determination although the dentist has a responsibility to inform the patient of contemporary standards of oral health care.
Beneficence –	A dentist's responsibility to do good and avoid harm to the patient.
Compassion –	The act of caring, identifying with the patient's emotional well-being and relieving pain by a dentist.

Competence –	The patient's right to expect the accepted standard of care by a dentist.
Integrity –	Behavior that exemplifies the Professional Code of behavior.
Justice –	Treating patients fairly.
Professionalism –	Having a sense of responsibility to set oral health care standards and serve the public.
Tolerance -	Accepting the multi-cultural fabric of our community.
Veracity -	Refers to truth and honesty in the doctor/patient relationship.

While rarely a concern for dentists, I believe that there is another value that should be added to the above list. This additional value could be identified as, sanctity for life. All dental health personnel are required to have knowledge of basic life saving skills in case of a life-threatening crisis for a patient while under a dentist's care. The immediate response is to use the UABC (unconscious, airway, breathing and circulation) protocol and call for help.

An ethical dilemma results when more than one of the above mentioned values can be used to legitimately resolve a conflict. Then a person must choose between the values. In order to do so a health provider must then rely upon their own personal principles to make the final judgement. In my opinion there is a difference between values and principles. Principles reflect the underlying motivations that direct our actions. Is there one correct principle? People may use different principles depending upon the situations. The principle that we choose relies upon the values learned during our socialization experiences and the sense of professionalism acquired through education and role modeling. Figure 1 on the following page shows the interplay between ethical theories, principles, values and action. Each theory of ethics has its own premise. A basic principle arises out of each premise. Values are

the expressions of our conscience that accompany every principle. The final action

that is taken is based upon one of three theories of ethics. Each theory has a guiding

principle and is supported by core values (Holmes, 1993).

Figure 1. **The Connection Linking Ethical Theories and Decision Outcomes**

Ethical Theory

(Teleology, Deontology, Virtue)

determines the guiding

Principle

(Teleology : health care for the greater good,
Deontology : moral obligation prompts actions, regardless of consequences
Virtue : core values and wisdom because the consequence of action is examined)

that relies on

Values

(autonomy, beneficence, compassion, competence, integrity, justice,
professionalism, tolerance, veracity)

that leads to a final

Action

(Beauchamp & Childress 1989).

Three ethical theories that categorize different perspectives are called teleology

(based on outcomes providing the greatest good), deontology (based on core

principles) and virtue-driven (based on core principles balanced by consideration of

the consequences to the patient). Each theory promotes a distinct motivation for

acting in a certain way. The derivation of each theory will be discussed later in the

sub unit entitled *Philosophy of Ethics*. Teleology suggests that the ends justify the

means, or that the consequence or outcome is more important than the method used

to obtain the results. Deontology suggests that actions taken are the result of a moral obligation or duty. Decisions are taken regardless of the consequences. Virtue driven theory combines moral responsibility with wisdom so that both the method and the consequence of the action is considered before deciding upon the appropriate action (Beauchamp & Childress, 1989; Garrett , Baillie & Garrett, 1989; Scott, 1990; Holmes, 1993; Purtillo 1999).

Each theory uses a specific premise to explain the ensuing action. For example, governments usually support programs that are based on a fair distribution of health care resources. This belief is transformed into action by care that is commonly needed by the greatest number of people. This approach is based on the teleological principle that the ends justify the means. Thus, the range of services and quality of care can be sacrificed in order to serve the public. While there is a need to adhere to fiscal responsibility it does not address the needs of those who require a greater sophistication of treatment. For example, Quebec offers free basic dental care to those who qualify for unemployment benefits. If one of these individuals requires surgical extraction of teeth due to oral cancer, there is no coverage under medicare for osseous reconstruction and implant therapy even though these people are unable to be fitted with dentures. However, the government can justify its actions by showing that it does provide free dental care to a large segment of the population who are unemployed. Providing uniform care limits individualized care.

Choosing between the primacy of the group or the individual is a tough decision. Private dental clinics implement the principles inherent in the deontological theory of ethics. A dental practice is made up of individual patients. Treatment procedures are individualized and treatment options are selected by evidence-based study or by a mix of didactic and practical knowledge. Practitioners who provide care only to those patients who agree to the ideal treatment plan are rooted in a deontological

perspective. If this same practitioner changed his approach and took into consideration the personal limitations of the patients and altered the treatment plan from ideal to what would be best considering the status of his patient then his approach would reflect a virtue based ethical theory. Wisdom is derived from years of clinical experience and a socio-economic and psychological sensitivity to patients. However, combining professional responsibility with wisdom increases the moral dilemma in decision making.

The professional values used to support a decision are the same regardless of the guiding principle and ethical theory. Dentists have a moral obligation to follow the professional values listed above. However, they also have personal values that they have acquired during socialization within their own cultural setting. Common initial responses to dilemmas appeal to our personal values such as: fairness, honesty, and respect. Similar values are described by the American College of Dentists (2000): justice, veracity, and integrity. Sometimes the importance of individual values may differ on a personal and professional level. Dilemmas can arise in relation to the dentist, patient, peer, authority, or institution setting.

Ethics as a Code of Behavior

Philosophers in Plato's time spent much time discussing the characteristics of virtuous behavior and identifying high ideals. They debated the basic motivations behind mans' actions and their pursuant behavior. The prevailing belief was that man had an innate sense that goodness is a necessary element for survival. Philosophical interpretation suggests that man places a value on the good in life and his behavior tries to reflect the attempt to be fair and live in harmony. Ethics is a philosophical concept that reflects this belief and manifests itself by acceptance of a basic code of moral behavior necessary for the common good of all (Holmes, 1993).

Moral psychologists are concerned with how and why people become the type of moral beings that they are. In his book *Moral Personhood: An Essay in the Philosophy of Moral Psychology*, Scott (1990) explains what he believes is the basis for the development of moral behavior. He hypothesizes that a code of behavior was needed in order to "place limitations upon the nature and variety of beliefs...to ensure the survival of the species" (p. 77).

Philosophy of Ethics

Ethics is the philosophical study of morality. A simplified look at the philosophical study of morality reveals two main perspectives: descriptive and normative. Descriptive ethics is the factual investigation of how people reason and act, that is, their beliefs and behaviors (Cambridge Dictionary of Philosophy, 1999; Kimbrough & Lautar, 2003). Studies done in descriptive ethics look only at current moral behaviors but do not attempt to judge them (Beauchamp & Childress, 1989). This perspective focuses on the "folk" mentality of what people perceive to be right, based on well-delineated values, rights, and obligations (Scott, 1990). Patients expect dentists to provide them with fillings that will last a long time and fit well.

Normative ethics is a philosophical study of what constitutes morally acceptable behavior so that people may live in harmony. Philosophers consider what constitutes the fundamental principles of what is right and wrong. They use intellectual reasoning to justify their conclusions. Going through the process of developing a Professional Code of Behavior is an example of normative ethics. Normative ethics refers to behaviors that are generally accepted as desirable and therefore become the standard or "norm" (Kimbrough & Lautar, 2003). This approach tries to identify the underlying principles of good and bad, what is right and what is wrong. Patients

expect dentists to provide care that has been well documented through evidence-based research.

Normative ethics gives rise to three different ethical theories: deontology (principled), teleology (utilitarian), and virtue (principled and teleology) (Garrett et al, 1989). A review of the basic differences in characteristics between the three perspectives can be found on page 103, Table 18 entitled, Models of Ethical Theories.

Teleology uses a utilitarian or consequential approach to behavior. This theory emphasizes the rightness of any action by the resultant consequences. Teleology is a context-driven philosophy based on doing the "greatest good for the greatest number" (p. 2). It also encompasses the belief that "the ends justify the means". Actions are right or wrong based only on their consequences. A utilitarian perspective evolved during the socio-political climate of England in the 1880s (Holmes, 1993). Adherents of this philosophy tempered altruistic beliefs with the need for efficiency.

Deontology uses a principled approach to behavior. This theory emphasizes the moral duty and responsibility that a person must assume when making an ethical decision regardless of the consequences (Garrett et al, 1989). A deontological perspective is concerned with the principle behind any actions taken based on core values such as: autonomy, mal-beneficence, beneficence, justice and veracity (Purtilo, 1999; Kimbrough & Lautar, 2003)). The philosopher who has had the most impact on health care is Immanuel Kant (1724-1804). He believed that correct behavior was guided by a conscience of moral responsibility and should be followed regardless of consequences or context (Scott, 1990).

Virtue theory considers both moral duty and the effect that action has on a patient. It combines moral values with practical wisdom to choose the best possible

course of action. A high sense of moral ethic and consideration of the consequences of actions are both necessary in order to make a well-considered response (Garrett et al, 1989; Purtillo, 1999). This theory uses a deontological sense of moral responsibility combined with a teleological sense of consequences. Health related issues often have more than one possible outcome. Consideration of the consequences of the decision helps to determine the best response to take. The emphasis of this theory is on combining moral duty with context. This theory relies on the accumulated knowledge or wisdom of the practitioner in combination with a committed sense of professional duty in order to make the morally correct decision.

Chapter II - A Review of Relevant Literature

Section A: Teaching Dental Ethics

Background

Dental schools teach Ethics and Jurisprudence as a part of their dental school curriculum. In light of changing pedagogical methodologies and an increasing public scrutiny of standards and expectations of dentists, dental schools have had to re-evaluate existing curriculum practices (Rest, 1982; Bebeau, 1985; Hicks, Dale, Hendricson, & Lauer, 1985; Odom, Beemsterboer, Pate & Haden, 2000; Berk, 2001).

Many authors have contributed their perspective to the controversy concerning the formal teaching of medical and dental ethics. Hafferty and Franks (1994) note that the development of ethical sensitivity is derived from a mix of formal education, individual personalities, existing cultural context and moral environment. Their investigation underscores the reality that students who enter a health professional program do so with a pre-existing set of ethical values already predisposed to that of a professional (Pellegrino, 1989). However, it is recognized that socialization into the norms of a professional environment can also modify personal beliefs of medical and dental students (Rest, 1988; Self et al, 1992 ; Hafferty & Franks, 1994; Myser et al, 1995; Saterwhite & Saterwhite, 2000).

While it is a longstanding belief that a formal course in ethics is capable of altering and improving a student's ethical sensitivity there are some restraining factors (Rest, 1988). In an article by Self et al (1992) discusses the difference between what can be taught and what can be evaluated. They also make the distinction between teaching and interpretation. It is possible to teach students a process but it is not possible to teach students the values that they should take as their own. The authors write, "there is a distinction between teaching moral values and teaching moral reasoning" (p.178).

Knowledge does not necessarily mean the adoption of a practice. A major challenge in teaching ethics is in understanding how students transform theoretical knowledge into good decision-making and applied clinical practice (Self et al, 1992; Hafferty & Franks, 1994; Myser et al, 1995). Research done by Bebeau et al (1993) noted that while dentists were able to describe acceptable work values, it was questionable whether these values were actually practiced by all dentists.

The most successful outcome of an ethics education occurs when professional values and personal values are congruent and the individual does not make a distinction between acting professional and being professional. If the two sets of values do not mesh then dentists may be considered as technicians who perform good work and are therefore considered to "do good dentistry". However, if their personal and professional values mesh then they are considered "good dentists" (Hafferty & Franks, 1994). Does this then mean that as part of the selection process we should also demand an ethical sensitivity test along with the current mandatory dexterity and cognitive tests? A review of the authors and their conclusions regarding the need to include ethics in health education can be found on page 103, Table 19, entitled Ethics in Health Education.

Professional Obligation

Professionalism incorporates the aim of high treatment standards along with an awareness of moral or ethical sensitivity. The Dental Act in Quebec includes a Code of Ethics for dentists which serves as a guide for what is considered professional behavior. It discusses the duties and obligations that the members have in relation to the public, patients, and their profession. In reference to education, it states in the second and fourth division the responsibilities that are inherent to the profession (Guide du Dentiste, 2000).

2.03 A dentist shall promote measures of education and information in the field in which he practices......He must also do what is required to ensure such education and information.

4. *Contribution to the advancement of his profession*

4.044.01 A dentist shall, as far as he is able, contribute to the development of his profession through the exchange of his knowledge and experience with his colleagues and students, and his participation in courses and continuing education.

Guide du Dentiste (May, 2000).

As part of accreditation each dental school is required to meet the academic standards set by a commission composed of public and oral health care professionals in education. This commission reflects the professional standards of the American and Canadian Dental Associations. The purpose of the commission is to ensure an adequate learning environment so students can graduate from a dental faculty with a minimum set of competencies in order that they may practice independently. The curriculum requirements include courses in Biomedical Sciences, Behaviorai Sciences, Clinical Sciences, and Integrated Courses. Of these four subjects and forty-six final competencies there is also a section entitled Ethics and Professionalism that cites three competencies (American Dental Association, 1995, 2001).

2.20 Graduates must be competent in applying ethical, legal and regulatory concepts to the provision and/or support of oral health care services.

2-21 Graduates must be competent in the application of the principles of ethical reasoning and professional responsibility as they pertain to patient care and practice management.

2-22 Graduates must recognize the role of lifelong learning and self-assessment in maintaining competency.

(American Dental Association, 1995, 2001)

How the dental schools choose meet these competencies is an individual matter. The course curriculum that is developed for the students reflects the importance and seriousness that the staff attach to it.

The ethical responsibility of a practitioner is expressed in the following statement, "A dental practitioner must always provide oral health care for patients in an ethical manner in accordance with legal requirements as stipulated at the national and provincial levels" (ACFD, 2001, p.39). In all fairness to the guidelines set by the commission one can accept the brevity of reference to ethics because of the enormity of material that must be included in its accreditation manual. But its silence on ethics is still present.

While dentistry appears to be mainly a technical profession, its practitioners require a base of knowledge in order to make well-informed, scientific evidence-based decisions. What distinguishes a profession from a trade is its wealth of cognitive theory. Dental associations and dental faculties should request that requirements for accreditation include more credit hours be given to moral and ethical development.

Universities also have professional obligations. They are obliged to follow ethical guidelines in the presentation of course material. Berryman (2000) discusses guiding principles for faculty members to follow in her thesis, *Attending to the Ethical Principles in Canadian Universities*. She notes that professors have an obligation to encourage critical inquiry through a blend of teaching strategies (p. 46-8).

Universities are committed to adhering to the Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans. This council is an incorporation of

the Canadian Institute of Health Research (CIHR), the National Science and Engineering Research Council (NSERC) and the Social Sciences and Humanities Research Council of Canada (SSHRC). Its goal is to develop acceptable standards of ethical conduct for research involving human subjects. Staff must be familiar with the ethical standards of this council in order to do research. Faculty may adhere to strict ethical standards with regard to research, but are they able to translate this knowledge into clinical instruction? Students involved in research projects may be in a similar situation. Having a decision-making strategy helps to bridge the transfer of skills from theory to practice.

Dental Ethics Curriculum

Formal course work, periodic evaluation, and testing have been shown to encourage students to take the study of ethics seriously. Students need a formal theoretical framework of cognitive knowledge in order to help them identify, analyze, and resolve ethical dilemmas throughout their professional experiences. Exams are an important part of any course as it provides feedback on student understanding and facility. Savullescu, Crisp, Fulford and Hope (1999) cite three reasons why an evaluation of a formal ethics course helps:

1. Evaluation helps in determining if the teaching has had any impact on the students;

2. Promotes awareness that health professionals are accountable for their ethical competence;

3. Effects what we want students to know about ethics.

Research studies have tried to determine the most effective teaching strategy as well as how best to integrate the material into the course curriculum. This paper reviews teaching approaches that have been instituted by different dental schools (Bebeau, 1985; Hicks, Dale, Hendricson & Lauer, 1985; Nash, 1996; Ismail, Bader &

(Bebeau, 1985; Hicks, Dale, Hendricson & Lauer, 1985; Nash, 1996; Ismail, Bader & Kamerow, 1999; Black, 2000; Odom, Beemsterboer, Pate, & Haden, 2000; Berk, 2001; Zarkowski & Graham, 2001). Appendix 2, 3 and 4 describe ethics curriculum from three different dental schools who have proactively tried to enrich their programs with a working understanding of ethical sensitivity. A description of the dental program at the University of Minnesota, School of Dentistry is given in Appendix 2 on page 110. Both Bebeau and Rest who have been referred to extensively in this paper are associated with that school so that one would expect an innovative ethics program. Appendix 3 on page 111 profiles the ethics program at University of Detroit, Mercy School of Dentistry for the year 2000. Appendix 4 on page 113 describes the ethics program at McGill University, Faculty of Dentistry. Their ethics curriculum has been evolving over the past six years when their program changed from teaching by disciplines to teaching core components. The first year and a half of the program is joined with medicine and dental students start to learn their specialty in the second half of the second year.

The Canadian Dental Commission for Accreditation fosters the integration of theoretical and practical knowledge (American Dental Association, 1995, 2001). They suggest that teaching strategies and student learning activities use problem-solving learning to promote decision-making and critical thinking skills. Kenny (1998) believes that evidence-based learning helps students adhere to the bio-ethic values of beneficence, mal-beneficence, justice, and autonomy when treating patients.

Increasingly, dental curriculum has become problem-oriented. The implementation of an evidence-based pedagogical style incorporates a problem-oriented strategy by an integration of theoretical knowledge, clinical skills, and judgmental ability. This approach emphasizes to the students the need to apply the most current scientific findings (Kenny, 1998; Black, 2000; Berk, 2001).

Recent trends in dental education show a shift away from teaching individual subject material to an integration of different subjects called core components in the curriculum. This new approach allows ethics to become a part of the curriculum throughout all the undergraduate years. Methodology includes lectures, small inter-actional tutorial groups, use of vignettes, reading, and role modeling. A combination of various pedagogical techniques encourages student introspection and self-knowledge. Inclusion of ethics in every year allows students to address the conflicts that are unique to them as they go through their undergraduate training (Berk, 2001).

Christakis and Feudtner (1993) wrote about their experience as peer group leaders. They identified the need for small group sessions throughout a student's experience in dental school. A study done by them cited benefits for students who participated in small group discussions conducted within a value neutral atmosphere. They wrote that effective instruction also includes discussion of relevant ethical issues that are pertinent to students. Active participation by the students in the form of open discussions allowed students the opportunity to share their experiences in handling ethical dilemmas. They concluded that, "some components of ethical education must be participant-driven and developmentally stage-specific..." (p.249). While situations may differ, the process of resolving an ethical dilemma remains the same at whatever level the student is.

The use of manufactured vignettes or case studies, rather than student-generated dilemmas sometimes serves as a starting point for illuminating ethical dilemmas (Hebert, Meslin, Dunn, Byrne & Reid, 1990). A danger in relying upon contrived individual studies is the lack of emotional component that represents professionals' feelings. Searching for the solution to a case study presents the ethical dilemma as a tool or a game rather than an internalization and representation of a larger community. Hafferty and Franks (1994) cite three limitations of teaching

ethics by case study alone: (1) lack of recognition of the school as a moral agent, (2) absence of a personal involvement, and (3) emphasis of an external or task orientation rather than an internal commitment. Pattison, Dickenson, Parker, and Heller (1999) support the idea that case studies tend to narrow the focus of the problem too much and are often discussed in an emotionally neutral setting. Higgs (1999) also points out that the literary style in which the case study is presented can subtly influence a student's perspective. It makes a difference if the presentation is matter of fact, personal or in the third person. However, within a broader teaching context, vignettes can provide a basis for discussion and context for theoretical principles. I believe that vignettes can serve as a starting point for novice students that are trying to transform knowledge into practical application.

Self et al (1992) advocates a specific course in ethics. They found that the formal teaching of an ethics course to medical students promotes an increase in the growth and development of moral reasoning. Applicants enter into the health professions with a predisposed ethical sensitivity to nurture. Mitchell (1993) supported his belief that course content and pedagogical strategies need to acknowledge the inherent values of their students and be designed to help students adopt the values associated with professionalism. A review of the authors and the conclusions that they have drawn in their articles about ethics curriculum can be found on page 104, Table 20, entitled Pedagogical Considerations in Ethics Curricula.

Malek, Geller, and Sugarman (2000) studied the impact of an intensive six-day course on bio-ethics for licensed health professionals. Participants were asked to answer an open-ended questionnaire both before and after. The study was designed to determine how participants change their understanding of ethical issues as a result of further education using lectures, discussion, and small group problem-solving exercises. Participants felt that their confidence levels increased because

they were better able to articulate their understanding of ethical dilemmas. Undergraduates benefit from ethics courses by gaining in knowledge and ethical sensitivity while licensed professionals benefit by experiencing an increased level of self-confidence about their knowledge, ethical sensitivity, and decision-making skills. This study suggests that experience and additional continuing education courses are needed to hone problem-solving skills in ethical dilemmas. Is instruction necessary for one to gain insight into their ethical maturity?

Most literature on ethics curriculum focuses on ways of evaluating students' moral sensitivity and decision-making abilities rather than describing a complete ethics curriculum at a school. Odom et al (2000) conducted a survey in 1998 on the type and description of ethics courses taught at both public and private dental schools. He received a response rate of 84% overall, with 86% from the public sector and 79% from the private sector. The results indicated 61% of the schools teaching ethics had a course in the first year, 22% in the second year, 47% in the third year and 47% in the fourth year. Twenty-two institutions taught ethics in more than one year. More than one form of instruction was used and the most common methodologies included lecture (83%), case discussion (76%), and other inter-actional formats (64%) and that more than one teaching methodology was often used. The credit hours given to ethics ranges from a one credit hour course (65%), to a two hour credit course (19%), and a three hour credit course (8%).

Bebeau (1985) presented an outline of the ethics curriculum developed and implemented at the University of Minnesota School of Dentistry in 1985. The dental faculty integrated ethics over the four-year undergraduate program. The course material is related to the ability and experience of students in each year of study. Bebeau emphasizes the need for workshops and instructor to adequately prepare faculty to facilitate group discussions.

The three programs, University of Minnesota School of Dentistry, 1985, the University of Detroit, Mercy School of Dentistry, 2000, and McGill University, Faculty of Dentistry, 2002 are described in the Appendices on pages 110-113. These dental programs illustrate how ethics can be incorporated in the curriculum throughout the undergraduate program.

Hidden Curriculum

The most often unrecognized source of ethical instruction occurs in the form of a "hidden curriculum" or unintentional education. A lot of knowledge that is learned in schools is conveyed informally. It is often done very subtly through social exchanges or by example. Hidden curriculum is a source of ethical dilemmas and becomes a constraint on learning. Hidden curriculum can be found: (1) in the moral orientation of the educational institution and its instructors, (2) in role modeling, (3) in peer interactions and (4) in general clinical experience (Hafferty & Franks, 1994).

The educational environment is enveloped within a broader set of values determined by the social and institutional community. Mitchell (1993) describes the different ethic orientation of students from the Middle East as opposed to those who are educated in Western schools. The institutional values may differ from the personal values of students from diverse backgrounds and these students need remedial assistance in resolving the difference.

Besides technical ability and theoretical knowledge, dental faculty tend to role model professional behavior in order to perpetuate their culture. For this reason it is necessary for dental faculties to provide professional development in ethics consistent with the school standards (Bebeau, 1985: Malek et al, 2000). Revisiting ethical theory and practice for experienced dentists can improve their confidence levels and help them become more fluent with the content of the student curriculum.

Role modeling is one example of how hidden curriculum might interfere with the intent of the program. It is difficult to impart the true meaning of ethical sensitivity unless an atmosphere of professionalism prevails within the dental faculty and curriculum (Lange & Friedman, 1985; Hafferty & Franks, 1994).

Depending upon the values and behavior of the more influential person role modeling can be a positive or negative experience. Committed dental educators are focused on teaching alone. Administrative personnel who act as clinical instructors wear two hats when teaching. They are responsible for both the financial viability of the clinic as well as the efficacy of the students' technical skills. Students are very sensitive to the contradictory messages given by staff and are aware of the unspoken directive to be expedient even at the expense of learning. Students who adopt ethical perspectives similar to their instructors are rewarded in the form of acceptance, high marks, and good evaluations. Instructors and upper classmates serve as potential role models. Smith, Fusilier, Bagramain, and Bottomley (1969) described what makes a good educator "good". They concluded that although students and educators agreed on what constitutes a "good" instructor, the instructors rated themselves higher than the students did.

Lange et al (1985) reporting on the student perception of faculty role models, found that students are most influenced by their peers, followed by their clinical demonstrators, and least influenced by members of the faculty who give most of the lectures. Satterwhite and Satterwhite (2000) used a questionnaire to study observable unethical conduct of medical students throughout the educational process. By assessing the impact of disparaging comments made about patients by their peers, they noted that some students change their concept of what constitutes unethical behavior. Over a four-year period 70% of students indicated that their personal code of ethics had not changed. However 25% of participating students

indicated a change in their acceptance of derogatory remarks made about patients. This study indicates that role modeling and peer participation have the ability to make a subconscious impact on individuals' concept of professional ethics. Their findings suggest that:

1. Students may develop two standards of ethical behavior, one as a professional and another as an individual;

2. Students might change their values without being consciously aware of their transformation; and

3. Students feel cornered into doing what they believe is necessary in order to graduate but not necessarily what they consider ethical.

General clinical experience has been found to impact on students' value systems. Steinberg (1973) found that students are influenced by poorly managed clinical experiences. Lange et al (1985) wrote that situational factors such as time schedules and insecurity affected student values. Hicks et al (1985) studied the effects of reducing senior clinical requirements and concluded that clinical requirements put pressure on students and lead them to lower their ethical standards in order to "do what they have to do" in order to graduate. They advocated comprehensive patient care in place of minimum requirements. Clinical competency requirements and authority figures such as teaching staff and /or upper classmen present a powerful block for undergraduates to stand up against. A student who disagrees with the treatment choices or clinical standards of his/her clinical instructor is at risk of receiving a poor rating for work done even though the student is behaving as a caring professional.

A longitudinal study by Loupe, Meskin, and Mast (1979) found that the values of dentists, ten years after graduation was similar to that of first year dental students. This finding suggests that a "hidden curriculum" does exist within a dental clinic

curriculum and that it conflicts with formal education of the students to develop a personal code of ethical behavior. The provision of an ethics seminar and facilitating experience would help staff to review basic ethical principles and values that are being taught to the students. It would also serve to sensitize instructors to the challenge created in student/instructor interpersonal relations. A review of the authors and their identification of educational constraints may be found on page 104, Table 21, entitled Identification of Educational Constraints.

Another possible source of conflict generated in the dental clinic curriculum is tied to the institutional policies and protocols. Should institutions adapt to student needs and cover the cost of treatment for a patient who cannot pay for treatment but has dental needs that would provide a student with a wonderful learning opportunity? Faculties may verbally commit to a policy of comprehensive patient care but may actually encourage students to proceed with more expensive active treatment before thoroughly completing preventive care for financial and learning reasons. What are the students learning in this situation?

Strategies for Resolving Ethical Dilemmas

Making well-informed decisions takes self-knowledge, acquired knowledge, belief in oneself (character), and practice. As well, one should know the values that guide most of our behavior, such as: honesty, fairness, respect, and confidentiality. Bio-ethical decision-making includes principles of: beneficence, non-maleficence, autonomy, and justice and the concepts of informed consent, futility, quality of life, personal values, professional norms, community expectations and the law (Beauchamp & Childress, 1989; Kenny, 1998; American College of Dentists, 2000). Ethical dilemmas occur when one value is at odds with another and the decision-maker has to decide which value will prevail in that specific situation.

Rest (1982) described a decision-making process for ethical dilemmas that incorporates both cognitive and affective responses. His model is based on theoretical explanations of ethical maturation and acknowledges the overlapping of personal reasoning and attitudes. The following process has four stages and links moral reasoning to moral behavior:

1. Interpret the situation,

2. Interpret the morally ideal course of action,

3. Decide what values are the most important, and

4. Execute and implement what one intends to do.

Purtillo (1999) has a model that blends some of the components from Rest (1982) and some from the guidelines of the Canadian Dental Association (2000) *Code of Ethics*. Those using her protocol must be aware of the different theories of ethics in order to analyze the problem. However, she does not include reference to a professional Code of Ethics as a guide to behavior. The following is the six-step process that she proposes that students use in ethical decision-making:

1. Gather the relevant information – clinical data, patient input, logistical factors,

2. Identify ethical dilemmas,

3. Use ethical theories as a means to analyzing the problem – deontological or teleological,

4. Explore practical alternatives,

5. Commit decision to action, and

6. Evaluate the situation and outcome.

The Canadian Dental Association (2000) outlines a suggested ethical decision-making format for dentists in their Code of Ethics. This process distinguishes between elements of decision-making and the actual decision-making model. The

first step is to know the elements involved before taking an action. The elements

include:

1. Assessment of the facts,

2. Clarification of the ethical problem,

3. Determination of the stakeholders,

4. Identification of options and alternatives,

5. Partnership and collaboration, and

6. Balance conflicting principles and obligations.

The actual decision-making model has four steps: (1) determine the alternatives,

(2) determine the ethical considerations, (3) determine the considered judgement of

others, and (4) rank the alternatives.

The Canadian Dental Association (CDA, 2000) guide was the format that each

student used in the small group to resolve an ethical dilemma that I attended as an

observer. The general discussion that accompanied each presentation helped the

students to pinpoint the main and/or underlying ethical problem more precisely. They

used the Code of Ethics guide to help them determine the appropriate professional

response. However, the students were not aware of any personal guiding principle

that influenced their final decision. Each shared their immediate response to the

conflict. I describe this as a gut feeling based on what was they believed was right or

wrong or fair and just. I wondered whether the values they cited were determined by

personal experience or from their dental education. This format requires the clinician

to have more knowledge, insight and wisdom than dental students have acquired. In

Chapter III Research Design and Methodology, subsection Methodology III – The

Decision-Making Process, I will put forth another decision-making model useful for

students when confronted with ethical conflicts. This model incorporates features of

all the above and has two additional components: initial response and re-evaluation.

Section B: Theoretical Models on the Acquisition of Ethical Sensitivity

Background

A literature review of theoretical models and studies was done to provide a greater understanding of the acquisition of ethical sensitivity and the development of a moral perspective (Kohlberg, 1958; Rest 1979; Gilligan, 1982; Scott, 1990; Holmes, 1993; Navaez, Getz, Rest & Thoma, 1999).

Most literature in this area begins with Piaget (1932) who researched the sequential cognitive development in children (Rest, 1979). Kohlberg (1958) further studied the moral development in adolescents based on Piaget's theory. His hypothesis was that moral reasoning is a cognitive ability whose stages of development are age related and not influenced by cultural background.

Rest (1979) did studies based upon the work done by Kohlberg. He shared Kohlberg's general orientation but joined with other moral psychologists to reinforce the idea that ethical sensitivity undergoes developmental stages of moral maturity and is context dependent. He believed that behavior is totally interconnected between cognition and affect. He also developed a simple, reliable and valid test that supported a theoretical model based on hierarchical moral development.

The study of moral development and acquisition of ethical sensitivity falls within a subdivision of psychology called moral psychology (The Cambridge Dictionary of Philosophy, 1999). Moral psychologists recognize the influence of emotions, freedom of choice and personality on the development of morality. Authors James Rest, Carol Gilligan, Robert Holmes and George Scott are regarded as moral psychologists. They have studied and developed different theoretical models that help to understand the acquisition of ethical awareness and how an individual responds to an ethical dilemma. Gilligan (1982) did studies that demonstrated gender differences in the perception of ethical sensitivity. She contested the conclusions drawn by

Kohlberg because his studies were only based upon the responses of boys and young men. Gilligan (1982) and Gilligan and Attanucci (1988) studied the moral development of girls and young women and found that women arrive at ethical decisions from different perspectives. Moral ethicists Scott (1990) and Holmes (1993) take a broader view of moral development by suggesting that caring and compassion are a component in moral development. After considering the various models is it possible that caring and justice are interdependent elements of ethical maturity? A review of the main authors mentioned above and their insights into the acquisition of ethical sensitivity and their theory can be found on page 105, Table 22, entitled Theories on the Acquisition of Ethical Sensitivity.

Cognitive Model

Kohlberg's work (1958) on justice-based stage development served as a model for researchers in the realm of ethical sensitivity. His theory uses three levels of moral development known as pre-conventional morality, conventional morality and post-conventional morality to describe ethical development. The three levels are further subdivided into six stages. Each stage describes a different motivating factor or value for ethical behavior. The first level operates on the need to respond to authority and/or punishment and then ego. The second level responds to peer pressure and social conscience. The highest level is not influenced by social convention but is motivated by altruistic values of individual rights and principles of justice and equality. His approach is uni-dimensional in that it only considers cognition to be sufficient to explain the development of ethical sensitivity.

Rest's work (1979) evolved from the Kohlberg model of cognitive development. Unlike Kohlberg, he believed that moral decision-making was context dependent. His bi-dimensional approach considered both cognition and the affective state to be

important in the development of ethical sensitivity. His interpretation explained how people could fluctuate between different stages depending upon which motivating factors were most pressing. The following statements identify the four major processes that must occur in order for a person to conduct a moral act.

- The person must be aware of the situation.

- The person must be able to define the morally correct action to act.

- The person must be able to put moral responsibility over personal values.

- The person must have sufficient strength of character to follow through on his duty.

Rest (1979) used six different stages that were similar in nature to Kohlberg's to explain moral development. Stage I is based on obedience. Stage II is based on egotistical deal-making. Stage III needs the approval of others. Stage IV relies on the need to follow the law. Stage V is based on the need to accept social responsibility. Stage VI values social co-operation based on altruistic motives.

He developed the Defining Issues Test (DIT) that supports the hypothesis of cognitive-development and the influence of context (Rest, 1979). His work greatly contributed to the establishment of a paradigm of research in moral development (p. xi). He concluded that:

- Moral judgement is developmental.

- Moral development requires cognitive processes.

- Moral judgement includes non-cognitive variables like attitude.

(Rest, 1979, p. xi)

Social Model

Robert Holmes uses descriptive ethics to explain two different ways of considering the moral development of individuals: (1) ethical sensitivity correlates with social compassion and (2) ethical sensitivity requires a maturing cognitive component. Gilligan (1982) emphasizes the profound influence that social relationships have on moral development while Kohlberg emphasizes stages of moral development. The population that Kohlberg used to develop his theory was limited to boys and young men. His results indicated ethical maturity was conceptualized in terms of rules and principles.

Gilligan (1982) repeated the same study with girls and young women and found that amongst this group ethical maturity was directly related to the recognition of responsibility for one another in social and community relationships. She believed that Kohlberg has a serious gender bias since his study only included men. By using his model she believed that women would not be recognized as being able to rise above social conscience in ethical development, stage 3 of his model. Other authors disputed her interpretation. Gilligan (1988) modified her interpretation and emphasized the moral orientations of care and justice (Self et al, 1992). She wrote, "ethics is related to caring and commitment rather than rational decision making" (p. 32).

Gilligan's research (1982) revealed that men and women arrive at ethical decisions from different perspectives. Men tend to act from an orientation of justice and fairness while women respond from an orientation of care and commitment. Moral psychologists Holmes (1993) and Scott (1990) support Gilligan's hypothesis by confirming that the traits of caring and compassion enhance moral conduct and are characteristic of moral behavior. Even though high scores in the Kohlberg test model suggest a higher reliance on the universal values of fairness and equality is it not

possible that Gilligan's orientation of caring and commitment also encompasses

fairness and equality? Perhaps the notions of justice and caring do intersect when

one considers that a "moral principle is a tool for analyzing a situation in its entirety"

(Holmes, p. 223).

Professional Model

Bebeau et al (1993) and Veatch (1972) suggest a different way of understanding

ethics as it relates to ethical sensitivity in health professionals. Bebeau et al

described four theoretical models that might characterize the treatment orientation of

dentists: (1) a guild model (authoritarian), (2) a service model (caretakers), (3) an

agent model (knowledgeable), and (4) a commercial model (entrepreneurial). Each

model represents an underlying behavioral attitude that reflects the individual's value

system. The underlying value of a dental professional would then be related to how

they perceive their professional role to be. Veatch (1972) devised five models to

describe ethical approaches to medicine, some of which share similarities with the

Babeau et al model. He describes (1) the engineering model (technician), (2) the

priestly model (authoritarian and knowledgeable), (3) the collegial model

(collaboration between patient and clinician), (4) the contractual model

(entrepreneurial), and (5) the covenant model (dedication).

The guild model is based on an authoritarian approach. Because these

professionals believe that patients should follow their advice without question they

might rely on the value of trust when resolving ethical dilemmas. The service model

emphasizes the care-taking role of professionals. These individuals feel a strong

responsibility to serve their patients and might rely on the value of beneficence in

decision-making. The agent model represents professionals who see themselves

mostly as knowledgeable dental consultants. As a result they believe that patients

"hire" them for their skills. Therefore they might rely on the value of (patient)

autonomy in ethical dilemmas. The commercial model represents professionals who see themselves as selling a product. These professionals feel that they must provide good dental care in order to be competitive. Because of the contractual nature of their belief they may rely on the value of justice when resolving ethical dilemmas (Bebeau, 1993).

These models attempt to explain the motivations of dentists behind their actions. I believe that the Bebeau and Veatch models oversimplify personality traits and social orientations. In their own way they are similar to the theories of ethics that also try to explain the influencing motivation in decision-making. People are usually a blend of prototypes. While the above models highlight different perspectives, the truth is that to survive in practice, a dentist must be able to adapt to his patient attitudes and have a mix of the above personality traits in order to develop a clientele and maintain an efficient and effective practice. I would expect that the longer a dentist is in practice the more blurred the distinctions become. What is useful from this simplistic model is an explanation of how some individuals have a bias and might favor one value over another as a determinant in decision-making. However, these models do not supplant the guiding underlying principles inherent in the theories of ethics.

Interpretation

A common thread runs through all these models. Many of these studies support the idea that cognitive development, social maturity and moral responsibility are inter-related. The reported studies in this paper indicate that ethical sensitivity can be modified through education and learning experiences. As health professionals it is recognized that students enter health profession faculties with a pre-existing set of basic values and an already developed sense of moral responsibility and

conscience. Exposure to professional standards and behavior help to hone professional attitudes by graduation. Experience continues to influence one's degree of ethical sensitivity and how we respond to situations. The above models may suggest who we are at certain points in our lives but what I believe is that we are an amalgamation of the different models that Bebeau and Veatch describe.

Section C: Research Tools for Evaluating Ethical Sensitivity
Background

Several theoretical models and tests have been devised to demonstrate the acquisition of ethical sensitivity. An extensive literature review of the various research tools used to evaluate ethical sensitivity and reasoning was done (Stolman & Doran, 1982; Bebeau, Rest & Yamoor, 1985; Rezler, Schwartz, Obenshain, Lambert, Gibson & Bennahum, 1992; Self et al, 1992; Bebeau, Born & Ozar, 1993; Myser, Kerridge & Mitchell, 1995; Arnold, Blank, Race & Cipparrone, 1998; Savulescu, Crisp, Fulford & Hope, 1999). Answers from these tools provide feedback to instructors regarding student awareness. They also substantiate the belief that ethics is a subject that can be taught and should be included in a dental curriculum.

The four components in the process of resolving an ethical dilemma as seen by Rest (1982) correspond to:

1. Recognition or interpreting the situation,

2. Reasoning or interpreting the morally ideal course of action,

3. Rating or deciding what values are the most important, and

4. Reacting or executing and implementing what one intends to do.

During the last twenty years a number of tests have evolved that aim to test a student's ability to resolve ethical dilemmas. There are tests available for each of the four steps listed above. The following tools help in assessing a student's ability to

recognize an ethical dilemma. The Dental Ethical Sensitivity Test (DEST) written by Bebeau (1985) has students listen to radio dramas that relate to the most commonly recurring ethical problems. The students' immediate responses to each situation are taped and are later evaluated by a dentist. The Modified Essay Question (MEQ) developed by Siegler, Rezler, and Cornell (1982) evaluates students on the basis of their written responses to simulated case studies. The Objective Structured Clinical Exam (OSCE) by Mitchell, Myser, and Kerridge (1993) assesses the clinical competence of undergraduate medical student. A supervising doctor observes and records the interaction between a student and their patient at a first appointment. The Socio-Moral Reflection Measure (SRM) by Gibbs and Widaman (1982) tests for both recognition and reflective thinking.

There are two tests used to assess the level of ethical reasoning: the Defining Issues Test (DIT) by Rest (1970) and the OSCE, already described above. The DIT is a multiple-choice exam that offers five options to each moral dilemma. Respondents must sequentially select their choices in order of preference. A review of the authors and the different tests that assess ethical sensitivity throughout the problem solving process can be found on page 106, Table 23, entitled Tests for Assessing Ethical Sensitivity.

Tests for Recognition of an Ethical Problem

The first standardized test to examine ethical sensitivity was developed by Kohlberg (1958) and called the Moral Judgement Interview (MJI). It was devised in order to measure moral development in adolescents and adults (Self et al, 1992). This test "involved a thirty minute semi-structured interview in which subjects were presented with three moral dilemmas and asked a set of open-ended questions" (Self et al, p.368). Evaluators then assigned each answer a value based upon

Kohlberg's six stages of moral development. It was a lengthy test and took a long time to evaluate the responses. This test associated the motivating decision-making value with a corresponding stage of ethical maturity. Motivation ranges in ascending order from the need to respond to authority and/or punishment and then ego, to peer pressure and social conscience, and ultimately to altruistic values of individual rights and principles of justice and equality. Kohlberg's work and testing tool influenced many moral psychologists. Among those were Gibbs et al (1982) who developed the Socio-Moral Reflection Measure (SRM) that tests for both recognition and reflective thinking.

Determining a student's ability to think through a moral conflict can be difficult to assess. Smith et al (1994) revealed that some medical students' process moral conflicts better than others when interacting with a patient. The problem may be that some students perform better verbally while others prefer to write out their thoughts (Gibbs et al, 1992). Students who interact poorly with patients will not do well on simulated clinical case studies but may perform better on the written portion of exams. Because of this preference it is difficult to determine if the knowledge can be converted into useful behavior.

The Objective Structured Clinical Exam (OSCE) is a performance-based test that evaluates the student's ability to recognize a dilemma and their ability to reason. Monitors observe a student in a clinical setting interacting with a real or mock patient. The evaluation of moral reasoning and ethical judgement is based on five behavioral parameters:

1. Elicitation of the patient's view of the problem;

2. Student articulation of the problem;

3. Elicitation of patient comprehension of possible treatment;

4. Collaboration between student and patient regarding treatment, and

5. Demonstration of shared responsibility.

<div align="right">(Savulescu et al, 1999).</div>

Mitchell et al (1993) uses a learning pyramid to explain the development of ethical competence. The process moves from cognition to performance. The application stage requires a combination of theoretical knowledge and inter-actional skills. Performance is a result of the meshing of the lower stages in combination with personal motivation and institutional values. This paradigm suggests a "KNOW-CAN-DO" approach to assessing ethical dilemmas. These researchers used an Objective Structured Clinical Exam (OSCE) to judge a student's moral reasoning ability when the student is with a patient. It was their conclusion that evaluation of competence in ethics required more than a written examination but also an opportunity for students to demonstrate what the student knows, can do and actually does with a patient. However, this kind of evaluation "does not assess what students perceive to be ethically relevant and how they link ethical knowledge with clinical practice to make ethically justifiable clinical decisions" (Myser et al, p.30).

The DEST developed by Bebeau (1985) also tests the ability of students to recognize ethical problems likely to arise in a dental practice. Data obtained from 700 dentists in the state of Minnesota were used to create several radio dramas that reflected commonly occurring ethical problems. Students listened to a scenario and had to verbally respond immediately to the situation posed. The student's response to ethical awareness was evaluated afterwards using criteria developed by dentists and moral philosophers. The better the student understood the moral dilemma and possible reactions, the higher the student scored. This test supports the commitment to teaching ethics and provides useful feedback to the student and teacher on their understanding of the topic. The Modified Essay Question (MEQ) is an assessment tool that can be used in pre-clinical years to measure the sensitivity of students to

ethical issues (Siegler et al, 1982; Myser et al, 1995). The MEQ used a modified

essay question based on a case vignette and the evaluation was done relying on a

prewritten model answer.

Tests for Reasoning

Rest (1979) created the Defining Issues Test (DIT) which was based upon a

modification of the MJI test by Kohlberg. It simplified the Kohlberg design by

converting to a multiple-choice format. It is simple to administer and its results are

very reliable. The evaluation is computer generated. The DIT describes a number of

moral dilemmas. Five statements follow each scenario. Students are asked to

sequentially rank the statements on a five-point scale of importance starting with the

most preferred response. This test is often given prior to an ethics course and again

after formal teaching to determine the improvement in moral awareness and

understanding. The results of this test throughout the years has substantiated the

cognitive development theory and correlates well with personality tests and attitude

and behavior measures.

Several researchers have tried using a vignette-based instrument to evaluate

ethical reasoning. Hebert et al (1990) and Mitchell et al (1993) both used a vignette-

based instrument to evaluate ethical sensitivity to the issues of autonomy,

beneficence, mal-beneficence, and justice. The evaluation of student responses was

determined by a consensus of five evaluators. With their model they were able to

demonstrate that ethical sensitivity becomes eroded in the later part of medical

school.

For any tool to give meaningful data the measuring instrument must be reliable,

meaning the same score regardless of evaluator, and valid, meaning that it must

measure what it is intended. Savulescu et al (1999) carefully followed this dogma

when devising the vignette-based tool to assess ethical thinking skills. The aim was to create a user-friendly evaluation scheme that would maximize test reliability and validity. A case study was presented followed by a series of questions. The student was asked to give his prime response and then had to justify that answer based on the provided statements.

Tests for Rating, Reaction Tendencies and Underlying Values

Rezler et al designed a diagnostic tool called the Professional Decisions and Values Test (PDV) to "assess action tendencies when faced with ethical dilemmas and to identify the underlying values" (1992, p. 7). This test was administered to two consecutive years of students entering law and medicine. Their responses were then compared. The results indicated that law students were more concerned with professional responsibility while the medical students were more concerned with justice (p. 16). The test consists of ten case vignettes each describing a different ethical dilemma. For each problem there are three alternative actions to choose from and seven reasons to explain the chosen action. The student had to indicate the actions and reasons in sequential order from most to least preferred (p.8).

The Medical Ethics Inventory (MEI) developed by Stolman and Doran (1982) focuses on the values most important in determining an action response. Their test integrated professional values and general values and surveyed medical and non-students. The test consisted of twelve ethical dilemmas for which there was no right or wrong answer. Six value statements followed each dilemma and the respondent had to sequentially rate their response in order of preference. The values categories included: aesthetic, economic, political, religious, social, and theoretical.

Interpretation

Of the nine tests discussed above, only one test was specifically designed for dental students, the Dental Ethical Sensitivity Test (DEST) by Bebeau et al (1985). Three more of these tests could be adapted for use in a dental ethics curriculum: DIT, PDV, and MEI. The MEI is the only test that acknowledges the overlap of personal and professional values that motivate our reasoning powers and reactions. Testing is usually done pre- and post- course to assess the changes in the ethical awareness of students.

The purpose of these diagnostic tools is to provide feedback to students and staff as to the effectiveness of the ethics curriculum. These tests provide an objective tool that reveals the moral maturation of individual students. They also serve to reinforce the importance that the profession puts on ethical sensitivity to the students.

Chapter III. Research Design and Methodology

Background

The review and analysis of the literature on this topic suggests that further study

of the decision-making process of ethical dilemmas is warranted and in order to look

more closely at the decision-making process of fourth year dental students, new data

needed to be collected. My examination of this topic includes three areas of

research: (a) defining the situations where students encounter ethical conflicts, (b)

evaluating the models of ethical theory commonly used in resolving ethical conflicts,

and (c) exploring the decision-making process used by students. The resources for

the research included:

- Background documentation obtained through literature review,

- Data obtained from a previous unpublished study of common ethical dilemmas

  encountered by fourth year dental students,

- Responses obtained from a questionnaire personally developed to assess the

  influence of the different ethical theories, and

- Notes taken during tutorial sessions that reveal the values students refer to in

  professional decision-making.

The data resource for the questionnaire was derived from a compilation of ethical

dilemmas described by three different classes of fourth year dental students. These

essays were written over a four-year period between 1996 and 2000. Five of the

questions requested demographic information and the last five were statements that

described an ethical dilemma. Each ethical scenario was followed by three possible

choices of action. The action choices were based on the principles relating to the

three different models of ethical theory researched in my literature review.

The tutorial sessions provided an additional source of data. Although the fourth

year dental class was fairly evenly divided along gender lines, by virtue of the way

that the groups were formed, this group was all female. Each student presented an ethical dilemma that they had encountered in the clinic and then explained how they resolved it. Observation of how students processed the conflicts helped me design a new pedagogical model that I think would be useful for teaching the ethical decision-making process. While not experimental, this research is coupled with 11 years of experience as a dental hygiene instructor during which time I have been witness, firsthand, to some of the moral dilemmas referred to in the preceding section of this paper.

The data gathered to undertake this study has not been documented in any other study that I have read. Some ethical dilemmas have been referred to in other studies but a general exploration of the topic has not been undertaken to my knowledge. Exploration of the values that students use to arrive at decisions has not been done in the manner in which I have undertaken in this study. This exploration thus attempts to probe the decision-making process from a different perspective.

Methodology I- Common Ethical Dilemmas

As mentioned earlier, one of the sources of information came from a personal unpublished study carried out as a course requirement of common ethical dilemmas encountered by fourth year dental students. The data revealed a variety of conflicts that students experience in a clinical setting involving peers, instructors and patients. As a requirement for the fourth year ethics course, students had to write a personal essay in which they described an ethical dilemma that they had encountered during their four years of undergraduate training. Each essay was read and the type of conflict and possible solutions were noted. While some situations that were described might occur only because of their status as a student, the decision-making process would be the same for any professional conflict. The list is not intended to be

a comprehensive study of all possible conflicts but rather a list of the more memorable ethical incidents that was shared by each student. The following situations are a synthesis of the encounters that dental students experienced in the clinic:

Financial

1. Receiving monetary gifts from patients – the ethical dilemma was whether or not to accept the money and whether this action contravened the ethical protocol of the clinic.

2. Treating patients who cannot afford dental care – the ethical dilemma pitted professional caregiver against financial restraints.

Treatment options

3. Resolving a conflict of interest between the patient and the clinic – the ethical dilemma was deciding who came first in the execution of treatment needs.

4. Having to decide between what treatment the patient wanted and what would be considered healthy dental choice – the ethical dilemma caused the student to consider who makes the ultimate decision for treatment.

5. Having to correct dental treatment rendered by another student who had since graduated – the dilemma was how much or little to tell the patient.

6. Being a witness to and/or part of a difference of opinion about treatment plans - the ethical dilemma was how to maintain patient confidence and deliver the appropriate treatment.

7. Treating patients with special needs – the ethical dilemma involved having to decide what the patient wanted and what would be considered the healthy dental treatment.

Appointments

8. Having to handle patients who cancel appointments at the last minute – the ethical dilemma was whether or not to remain available to the patient and how to execute that decision.

Insurance fraud

9. Being asked by patients to falsify dental insurance claims by altering the date or the amount – the ethical dilemma challenged the student's concept of fairness and legal obligation.

Deleterious behavior

10. Being a witness to and/or the recipient of behavior not considered to be professional - the dilemma was what to say to whom or to say nothing.

11. Identifying deficient infection control strategies used by peers or clinical instructors – the ethical dilemma was what to say to whom and how without suffering personal consequences.

12. Receiving a request for a non-dental related prescription from a patient – the ethical dilemma concerned the area of realm of professional expertise.

These situations can be organized into five main conflict areas that students encounter on a continuing basis:

- Financial
- Treatment options
- Appointments
- Insurance fraud
- Deleterious behavior

Methodology II- The Questionnaire

Another source of original data was the use of a survey tool that focused on ethical theories. A questionnaire was devised to reveal the underlying principle that influences the choices made by students and clinicians. The questionnaire is based on a combination of a modified version of the Professional Decisions and Values Test (PDV) and the Medical Ethics Inventory (MEI). It is a pen and paper test that briefly describes five commonly recurring ethics dilemmas for which there are no right or wrong answers. The dilemmas were selected based on the situations revealed by students in their essays. Each ethical dilemma was described and respondents were asked to sequentially select the statements in order of preference. The value portion of the PDV (Professional Decisions and Values) test was not used. The general values used in the MEI (Medical Ethics Inventory) test were not included. It takes five minutes to complete as there are only five demographic questions and four conflict statements. (Appendix 1, p 109).

An initial pilot study was done with five dental residents and five supervising dentists. The purpose of this trial run was to verify the clarity of the questions. Participation was voluntary and completely anonymous.

Upon completion and analysis of the pilot study, questionnaires were distributed to three groups of people residing in a large center in Canada: third and fourth year dental students and clinical instructors having more than five years experience. Analysis of the data obtained from the survey allowed comparison of decision-making principles based on gender and experience. It was made clear to all participants that there were no right or wrong answers and the purpose of the study was explained to every person. Participation again, was voluntary and completely anonymous.

The conflict statements were based upon ethical dilemmas that students had identified in their essays. The action statements following each scenario reflected the principles related to each of the three previously mentioned models of ethical theory:

- Teleology-   the ends justify the means by providing uniform dental care,

- Deontology-   decisions are dictated by the professional principles of duty and obligation, and

- Virtue-   equal consideration is given to basic professional responsibilities and patient needs.

Methodology III- The Decision-Making Process

The tutorial sessions provided my last source of original data for understanding the decision-making process. The group that I observed was composed of only women and therefore did not permit any observation of gender differences that might have provided different insight. I acted as an observer in the group and listened to the thoughts and opinions that each student expressed. At each informal session one student would relate an ethical conflict that arose out of their clinical experience and how they resolved the dilemma. Group discussion was encouraged throughout the presentation. Though students often reached the same response to a dilemma, their rationale and the attending value differed.

During the course of the small group discussions six students each presented an ethical dilemma that they did or could encounter in a clinical setting. The scenarios included:

- A patient who wanted to pay the student directly at a lower fee than the clinic would charge for the same treatment,

- Deciding whether to treat friends and family as patients,

- Accepting gifts from patients,

- Changing the date of treatment on insurance forms to accommodate the patient's request,

- Patient confidentiality conflicts, such as, having your patient tell you that he is HIV positive and that he does not intend to tell his wife who is also your patient, and

- Having to choose between two treatments, of which one option will help the student obtain their requirements and the other option being the ideal treatment protocol for the patient.

The students were given a decision-making protocol based on the Code of Ethics of Canadian Dental Association (2001) included in the Dental Act Professional Code. As discussed before this process distinguishes between elements of decision-making and the actual decision-making model. The first step is to have an understanding of all the information involved before making a decision. These elements include:

- Assessment of the facts,

- Clarification of the ethical problem,

- Determination of the stakeholders,

- Identification of options and alternatives,

- Partnership and collaboration, and

- Balancing conflicting principles and obligations.

Once having discerned the above elements the students then used the following four step decision-making model:

A. Determine the alternatives,

B. Determine the Ethical Considerations,

C. Determine the considered judgement of others (with consideration of the values steeped in community) and

D. Rank the alternatives.

I would like to compare this process with a model that I have developed that includes all of the above elements. I call it the **Eight R's** for resolving ethical dilemmas. My proposed model has two additional components to the above format. It recognizes personal as well as professional values and adds a re-evaluation step at the end. For pedagogical purposes I believe that it is important to work with a two response decision-making model in order to help students be aware of the difference between a gut feeling and a well thought out response. A gut feeling is synonymous with the personal values that one acquired through socialization over a long period of time. The gut feeling is the immediate response about what is right or wrong in a situation.

The **Eight R's** is a synthesis of both current literature and personal experience as a clinical instructor. The following is a step by step delineation of the process.

(1) Recognition-	awareness of the ethical conflicts and people involved,
(2) Response-	recognition of an initial "gut" response to the conflict,
(3) Reflection-	assessment of the facts and consideration of all possible options,
(4) Reason-	identification of a personal value system based on different theories of ethics,
(5) Rationalize-	reference to the governing Code of Ethics for professional responsibility,
(6) Rank-	balancing conflicting principles and obligations and then selecting the most morally responsible reaction,
(7) React-	taking action on the final decision, and
(8) Re-evaluate-	revisiting the conflict, consequences and conscience.

The first step, recognition, correlates well Rwith est's (1982) step #1, to interpret the situation and Purtillo's (1999) step #2, to identify the ethical dilemma, and the CDA (2001) element #1, assessment of the facts.

The second step, response, does not have an equivalent in any of the other models. I believe that each of us experiences a gut feeling at first encounter in a situation. This response is based on our general social values and reveals itself immediately before the reasoning process has a chance to justify or modify a final response. Whether a feeling is acknowledged consciously or sub-consciously it has the power to affect the way we ultimately handle a problem. The initial feeling or value response can be the same or different from the one that will ultimately determines one's decision.

The third step, reflection, does not have an equivalent in Rest's model (1982), but incorporates the first five parts of the CDA elements (2001) and the first step in its decision-making model. Reflection incorporates the ideas from Purtillo (19991) in step #1, to gather relevant data, and step #4, to explore practical alternatives.

The fourth step, reason, or identification of a personal value system based on different theories of ethics. As discussed earlier, it is important to keep clear that values and principles identify two different processes. Step #3 of Rest's model (1982) focuses on determining the most important values. Purtillo (1999) includes this part in step #3, to use ethical theories as a means to analyzing the problem. Step #2 in the CDA (2001) decision-making model, to determine the ethical considerations, incorporates only half of the reasoning step. It does not require that the student be familiar with the different theories of ethics.

The fifth step, rationalization, or reference to the governing Code of Ethics for professional responsibility, is not clearly specified in the CDA model but could be

interpreted by step #3, determine the considered judgement of others. Rest (1982) and Purtillo (1999) have no equivalent.

The sixth step, ranking, requires one to balance the conflicting principles and obligations and to select the most morally responsible action. This step is at the core of a dilemma and is the most difficult. Rest's (1982) has step #2, to interpret the morally ideal course. The CDA (2001) has element #6, balance the conflicting principles and obligations and step #4, to rank the alternatives. Purtillo (1999) does not have an equivalent.

The seventh step is reaction. Rest (1982) has step #4, execute and implement the action that one intends to do. Purtillo (1999) has step #5, to commit decision to action. The CDA (2001) does not specify this step.

The final step, re-evaluation, comes after the reaction. The ability to step back and evaluate the conflict from start to finish encourages insight, and eventually, wisdom in decision-making. Only Purtillo (1999) recognizes the benefit from this part of the process in her step #6, evaluate the situation and outcome. A review of the various models of decision-making strategies can be found on page 107, Table 24, entitled Strategies for Decision Making. The guiding factors in decision-making are dependent upon professional values and personal principles. Whether one operates on the basis of the ends justify the means, duty, or moral responsibility and knowledge the process of arriving at a decision requires a comprehensive assessment of the dilemma. By following a prescribed decision-making process, one is able to go through all the necessary steps in order to arrive at a well-considered judgement. The process will reveal the same facts surrounding the dilemma, the same professional code, and the same values. The difference in reasoning, rating, and reacting will be the result of the underlying principle by which the clinician operates.

A professional may decide based on strict adherence to professional responsibility, or might also consider what might be best for the patient, or to act based upon the ends justifying the means.

Experience and maturity help to accelerate the decision-making process. The decision-maker might not be totally aware of going through all these steps. However, novices need to have a simple and comprehensive format to follow in order to help them structure their thinking and process all the variables.

The next two situations are examples of a generic type of ethical conflict that often confront student clinicians. The first situation was described by many of the fourth year students in their essays. I used the **Eight R's** model to demonstrate how a student might think through a conflict situation, ascertain all the facts and arrive at a decision.

Problem 1

A patient is in the middle of treatment and has now used up all the insurance benefits to which he is entitled for the year. The insurance coverage year begins again in 1 month. The patient would like you to continue the work and is willing to pay you immediately. But you are asked to wait one month before filling in the insurance form and change the date of the work by one month so that the patient might submit the claim and be reimbursed from the insurance company. What do you do?

Recognition– Awareness of the ethical conflicts and people involved

       Ethical Dilemma- falsify insurance form and thus commit fraud

       People Involved- patient, dentist, insurance company, possibly support staff

Response- Recognition of an initial "gut" response to the conflict,

"Gut" response- it's illegal to falsify forms

Reflection- Assess the facts and consider all possible options,

Facts- The patient needs work done and wants the insurance to pay for as

much as he is entitled.

Options-1. Do as the patient requests.

2. Refuse the request and continue treatment in one month when the

insurance coverage starts again.

3. Refuse the request and dialogue with the patient.

Reason- Identify ethical theory and personal values

Deontological	**Virtue**
1. Principle-based	1. Principle and context-based
2. The decision is based upon the clinician's moral responsibility.	2. The decision is based upon the clinician's moral responsibility and patient need.
3. The values are honesty and justice.	3. The values are beneficence, confidentiality, honesty and justice.

Rationalize- Apply guidelines indicated in the governing Code of Ethics regarding professional responsibility. Under the Derogatory Acts of the Canadian Dental of Ethics it states:

claiming fees for professional   in the event of conflict of interest,

| Acts falsely described (4.02.01e) | the dentist shall sub-ordinate his personal interest to that of his patient(3.05.02) |
| It is wrong to falsify form. | Will the patient suffer from delaying treatment? |

Rank- Balance principles and obligations and select the most morally responsible

| action. | Honesty is prime. | Honesty vs patient care |

React- Act on your decision.

| Tell the patient that you cannot falsify the insurance claim. Does he want to continue or wait? | Tell the patient that treatment can be interrupted for 1 months. The best action is to file an honest claim with the company. |

Re-evaluate- Revisit the conflict, and consequences of the decision.

How do you feel about your decision?

How did your patient react?

What would you do differently next time?

What if it wasn't one month but 2 months or 2 weeks?

Would that change the final response?

The second situation is based on a dilemma that a student brought to the tutorial session for discussion. As with the first problem, this situation is also a common occurrence. The students were given the CDA (2001) model to refer to and the following interpretation adheres to the handout that she gave to everyone in the

session. Using the same notes I then show how she might have been able to more simply use the **Eight R's** model to arrive at the same conclusion.

Problem 2

" A number of patients have asked if I could treat them in the clinic and pay me directly but not report the work done and pay me less than the clinic would charge." The student explained that one patient had asked if instead of paying the full fee to the clinic if the work could be done for less money and the student would be paid directly. The student was very annoyed because time had been spent explaining the treatment plan and together they had agreed upon a particular treatment plan. In addition, the patient had signed a consent form agreeing to all that they had discussed. Now the patient wanted to change the agreement and asked the student to do something illegal (that is, do the work and not pay the clinic).

Table 1 on page 56 illustrates the elements of the problem that a student must consider using the CDA (2001) model before starting the decision-making process. The second and third elements required reflection but did not question how the student felt about the request, the immediate response and personal values. Reasoning was somewhat evident in the fourth and fifth elements but did not ask for which underlying principle the student was relying upon. The first element demanded a rationale. The student offered possible solutions but did not have to rank the order of choices.

Note that the format lacks the action response and a re-evaluation of the process. Although the student verbalized during discussion that no work would be done "under the table" the model does not have a step specifically noting the action taken. During discussion the student was asked to re-evaluate the process and decision to see if there was anything that might be said or done differently next time.

Table 1.

Professional Code: Elements of Decision-Making

PROFESSIONAL CODE	STUDENT'S INTERPRETATION
Assessment of the facts.	The student cited 3 articles from the code that relate to this issue: • Cannot make a false declaration of facts, • Patient can ask to have the fees adjusted if they felt that the Fees were too high, • Did not relate in value to the services, and • The dentist should act with integrity.
Clarification of the ethical problem.	The student clarified the problem by asking what kind of ethical problem it presented: moral weakness, moral uncertainty, or moral dilemma. The student looked at the possible choices available: • It helps the patient financially, • The student gets no credit for work done, • It sets a bad precedent, • What gets written in the chart?
Determination of the stakeholders.	• The student is concerned with his integrity, wanting to get credit for the work done and setting a moral precedent. • The patient wants to pay less. • The clinic does not get paid and is legally libel for inaccurate information written into a chart.
Identification of options and alternatives.	• Is there a compromise possible? • Patient should have signed the consent form prior to treatment agreeing to cost and payment. • Should the clinical director be consulted?
Partnership and collaboration	• The patient is part of the process. • Informed consent should be obtained before treatment.
Balancing conflicting principles and obligations	• The student reiterated much of the above.

Table 2 illustrates the actual four decision-making steps in the CDA model

(2001). There is a lot of overlap between the elements and the process. The student

did not discuss the preferred principle that could be applied to resolve the dilemma.

The format did not acknowledge personal values that can influence final outcomes.

Table 2.

Professional Code: Decision-Making Model

STEP	STUDENT'S INTERPRETATION
A. Determine the alternatives.	■ Take the money ■ Don't charge the patient ■ Ask for an exception to be made at the registration desk. ■ Explain to the patient that his request cannot be granted.
B. Ethical considerations	■ The student repeated what had been discussed up above.
C. Determine the considered judgement of others.	«nnnnnnnnnnnnn
D. Rank the alternatives.	«nnnnnnnnnnnnn

The most interesting item to come out of the discussion of this example was the different values that each participant cited. Though all the students agreed on the outcome how they thought it through was different. This is a crucial point because this revelation supports the idea that values do not determine outcomes. Outcomes are more related to the underlying guiding principle by which one chooses to live, that is, duty, ends justify the means, or duty mixed with wisdom. The rationale one uses to think through a problem reveals one's guiding principle of behavior.

Students were asked what their initial response was when the scenario was described. Each student verbalized a different immediate response or "gut" feeling. One student said that she wouldn't agree because the patient was breaking a

contract and that the patient was obliged to honor the contract. Her initial response was based on the value integrity and the underlying operational ethical theory was deontology. Another student said that she wouldn't agree to the request because the patient was being disrespectful of her and the teaching institution. Her immediate response was based on the value respect and this too is based on a deontological theory of ethics. Another student thought that it was very unfair of the patient to make this request because she wouldn't get credits for her work. Her initial response was based on the value fairness and her rationale illustrates a teleological philosophy. The last student said she wouldn't do it because it just wasn't honest. Her initial response was based on the value honesty and reflects a deontological perspective.

The immediate gut responses are not elicited in the model suggested by the Professional Code. And yet, the immediate feeling accompanying the value may reveal the guiding principle by which one wants to live. Using the **Eight R's** model, the students have the ability to consider how their personal principles and professional values might intersect.

The **Eight R's** model captures elements from Rest (1982), Purtillo (1999) and the CDA (2001) models. Recognition of the facts includes the acquisition of all pertinent information and the identification of ethical dilemmas. Initial response recognizes "gut" feeling or reaction when there is conflict. Reflection of the data allows time for thoughtful evaluation of the input and possible reactions. Reasoning tries to justify and bring logic to personal and professional feelings and values relevant to the problem. The rationalization step attempts to explain the underlying principles behind the response options by referring to the governing Code of Ethics. The ranking step allows the decision-maker to consider the balance between conflicting values, principles and obligations in order to select the most morally responsible action. Students can rate the possible solutions based on what they consider to be the most

compelling morally responsible response. Reaction refers to the actual decision

taken. Table 3 uses the **Eight R's** model to resolve the same dilemma.

Table 3.

The **Eight R's** for Resolving Ethical Dilemmas

STEP	PROCESS
Recognize	• The student is asked to commit fraud by not informing the clinic and to alter clinic forms by not recording what has actually been done.
Response "gut"	• It is not honest, fair, respectful, or legal. I want to do what is right.
Reflect	• Take the money, ask for an exception, or is there a compromise? • What would be written in the patient's chart? • Should the clinic director be informed? • Who are the parties involved? • The patient signed the informed consent form already. • The student is concerned with personal integrity, wanting to get clinical credits, and setting a moral precedent. • Is this problem a moral weakness, uncertainty or dilemma?
Reason	• Do the ends justify the means or If I do what the patient wants will I get what I want as well? • Do I follow my professional responsibility? • In this case is there sufficient moral cause to put the patient ahead of my professional obligations?
Rationalize	The Professional Code cites: • "....cannot make a false declaration of facts", • "....patient can ask to have the fees adjusted if they felt that the fees did not relate in value to the services", • "....the dentist should act with integrity".
Rank	• Explain to the patient that you cannot morally agree to his request. • Speak with the clinic director and registration desk to see if alternative financial charges are possible. • Commit fraud by agreeing and take the money.
React	• Explain to the patient that you cannot agree to his request.
Re-evaluate	• Student was satisfied with the way in which the conflict was handled.

Sometimes the most responsible action is not necessarily the final choice. Because of the power hierarchy that is inherent in a teaching institution students will describe an incident and say that what they would do as a licensed practitioner, but as a student they take a different action. The final step of re-evaluation encourages the professional to rethink and determine for themselves the wisdom of their decision.

The Professional Code and the **Eight R's** model are similar in their intent but are expressed differently. For teaching purposes the **Eight R's** is straightforward and easier to remember. It covers all the elements in a sequential manner and has two additional steps that I believe are essential. I think that the Professional Code is more useful for legal proceedings.

Observations

It is obvious that the research done for this paper is exploratory but suggests that further study can be done to reveal more common ethical dilemmas encountered by dental students. Data collection from a variety of dental schools would provide a more accurate assessment of dilemmas that students face. Depending upon the results, ethics curricula might need to be altered to accommodate to students' needs and the reality of their position in the educational institution. Educators and clinical staff also need to attend in-house professional development courses to increase their awareness and be sensitized to their position as role models and educators.

My observations as a participant in the tutorial group reflected a female perspective. The group was representative of a fourth year dental class in all ways except one in that it was composed of only females. The composition of the groups was composed of every sixth student. In this case every sixth student was female. While the elements off decision-making are the same, regardless of gender, studies

by Gilligan (1982) and Gilligan and Attanucci (1988) indicate that there would be a variation of interpretation or perspective within a mixed gender group.

Results of any survey tool in ethics can provide helpful feedback as to the student's moral maturation. The questionnaire developed for this paper focused on disclosing the underlying principles used by an experienced and in-experienced group in ethical decision-making. The results of this questionnaire suggest that students and clinicians would benefit from clarification of the principles that one lives by personally and as a professional. Educators of ethics curricula need to recognize and integrate personal values and professional values. Using a comprehensive, yet user-friendly decision-making protocol is most important for students. The proposed **Eight R's** model is based on existing paradigms.

Chapter IV – Results of the Study

Ethical Dilemmas

Eighty-five essays submitted by three senior classes over a four-year period composed the data that investigated common ethical dilemmas encountered by fourth year dental students. Of those submitted, eighteen essays reported dilemmas outside of the clinical setting. Of the remaining sixty-seven essays the content centered on the following five areas: (a) treatment options, (b) financial, (d) deleterious behavior, (e) insurance fraud, and (f) appointments. Table 4 on page 63 shows the types of ethical dilemmas and their occurrence in the student essays.

The greatest number of dilemmas related to issues involving treatment, 33 out of 67 or 49.2 % of the essays. Conflicts arose between the student and the patient, or between the student and clinical instructor, or between two instructors. There were a number of situations where treatment needed to be redone a year later because of poor done work by a student. These situations involved several people: the patient who was unaware or made the complaint, the supervising dentist who originally okayed the work, the new student and supervising instructor and the clinical director.

Professional conflicts experienced in the financial domain occurred for the most part because of patients who could not afford to pay for the dentistry that was needed to restore them to oral health. Most of the patients who come to the clinic do so because of financial restraints. Students expressed the following dilemmas, (a) a feeling of moral responsibility to provide the necessary care to meet the patients' needs but not being able to, and/or (b) regret over a missed opportunity to meet requirements and gain experience but unable to start treatment on the patient. To relieve their frustration and sense of powerlessness, students made the following suggestions: (1) the school should change its policy and absorb the cost of

treatment, (2) the student pay for the treatment themselves, or (3) the patient be

dismissed from the clinic.

Table 4.

Breakdown of Ethical Dilemmas and Their Occurrence

DILEMMA	OCCURRENCE
Treatment (N = 33 or **49 %**)	
• Telling the patient about poor dental treatment previously done by another student in the clinic or not.	N = 19 or 28.3 %
• Providing treatment that the student needs credit for or what would be the optimum treatment for the patient.	N = 5 or 7.5 %
• Difference in opinion about treatment plan between the student and the instructor.	N =5 or 7.5 %
• Respecting the patient's autonomy in choosing treatment.	N = 2 or 3.0 %
• Patient request for a prescription not related to dentistry.	N = 2 or 3.0 %
Insurance Fraud (N = 11 or **16.4 %**)	
• Patient wants student to change the date of treatment on the form.	N = 11 or 16.4 %
Deleterious Behavior (N =10 or **14.9 %**)	
• Witnessing unprofessional behavior by a another student or staff.	N =5 or 7.5 %
• Feeling obligated to a patient after receiving a gift.	N = 3 or 4.5 %
• Being treated disrespectfully by staff.	N =2 or 3.0 %
Financial (N = 10 or **14.9 %**)	
• Patient cannot afford treatment.	N = 7 or 10.4 %
• Patient who wants to pay the student directly for less money than the clinic charges.	N = 3 or 4.5 %
Appointments (N = 3 or **4.5 %**)	
• Patients who need treatment but cancel appointments at the last minute or no shows.	N = 3 or 4.5 %

The next area of conflict involved insurance fraud. Patients with insurance would sometimes have treatments too close together and therefore one of the appointments would not be covered. Some insurance companies demand six or nine months between coverage for cleanings and will not pay if the time period is shorter. Sometimes a specific procedure would not be covered by the plan and the patient would ask the student to write a code for a treatment that the insurance company would accept. Eleven incidents out of 67 or 16.4 % were in this domain.

Deleterious behavior means any kind of unprofessional conduct, either between people or in the delivery of treatment. Examples include observing inadequate infection control procedures amongst students and staff, disrespectful treatment by clinicians, or knowledge of colleagues who cheat or compromise their clinical skills. It accounted for 10 or 14.9 % of conflict situations reported.

The most typical financial conflict involved patients who could not proceed with treatment because they could not afford it. This situation was described 10 times or in 14.9 % of all the essays. Students expressed two main preoccupations that sometimes were in conflict with each other. First of wanting to provide treatment that the patient required and second to do sufficient treatment procedures necessary for them to meet their competency requirements.

The last area of difficulty involved patients who needed treatment but would not show up for an appointment, cancel at the very last minute, or arrive late. Three out of sixty-seven students or 4.5 % wrote about this dilemma. The students had a choice of dismissing the patient from their patient list or keeping them. If a particular patient had a variety of treatment needs it was a difficult decision to make.

The Questionnaire

Characteristics of the Group

Sixty-seven questionnaires were distributed and fifty-two responses or 79.1% were returned. Table 5 lists the number of questionnaires distributed and the percentage of return.

Table 5.

Percentage of Surveys Returned

	3rd Year Students
Questionnaires Distributed	25
Questionnaires Returned	19 or 76.0 %
	4th Year Students
Questionnaires Distributed	21
Questionnaires Returned	16 or 76.2%
	Dentists with Experience Greater than Five Years
Questionnaires Distributed	21
Questionnaires Returned	17 or 81.0 %

There were 52 respondents who participated. This represented 19 third year students, 16 fourth year students and 17 dentists. The third and fourth year students together totaled 35. Amongst the students the group was divided between 18 men and 17 women. Of the 17 dentists who responded there were 13 men and 4 women. Overall, more men participated than women. Table 6 on page 66 gives the number and percentage of the total of those who participated in the survey.

Table 6.

Composition of Participants

GROUP	PARTICIPATION
3rd year students	N = 19 or 36.5 %
4th year students	N = 16 or 30.8 %
Dentists	N = 17 or 32.7 %
Men	N= 32 or 60.4 %
Women	N = 21 or 39.6 %

The survey was conducted at a dental school in a major North American city. While the participants represented the multi-cultural nature of a big city, they were all familiar with the North American way of life. The language of instruction in the dental school is English, but English is not necessarily the mother tongue of all those who participated in the survey.

Principles of Ethical Theory

It was earlier stated that the principle of teleology includes two concepts: the ends justify the means, and providing the best possible care to the greatest number of people. The later concept is contrary to the philosophy of most dental clinics as work is provided on an individual basis. Therefore it was very difficult to develop action statements that would be applicable in the questionnaire. A dental clinic is more likely to use the principles associated with the deontological or virtue-driven models of ethical theory.

The questionnaire presented four ethical dilemmas and asked the respondent to select their preferred choice from the following four selections. One choice reflected

a teleological principle, another a deontological principle, another a virtue-driven principle and the last choice was identified as "Other". Some participants explained that their reason for selecting "Other" was that there had been insufficient information given in the scenario for them to make a decision. This kind of thinking usually relates to a virtue-driven mode of decision-making where context is considered along with the core values. A deontological response only considers the obligation or moral responsibility of the dentist.

The results of the four dilemmas indicate that third year students resolve ethical dilemmas based on moral duty more often than fourth year students. The fourth year students tended to rely on moral duty more often than the dentists and less often than the third year students. The women overall tended to respond using principle-based reasoning more often than the men.

The three principles of teleology, deontology, and virtue, are embedded within the first three response statements. The number of responses from each subgroup: third year students, fourth year students and dentists were counted. The frequency was calculated and transformed into a percentage. Participants were asked to mark 1st, 2nd, and 3rd choice on the line adjacent to each statement. This request was made to satisfy those who might have chosen more than one reaction had they had more information about the situation and the client. The results were calculated using only the first choice of each person. There were no right or wrong answers as the statements elicited personal value choices.

The questions that follow compose part of the survey that was distributed to students and staff and can be found in the Appendices on page 109. The responses were analyzed to determine if the students and experienced dentists respond differently to conflict. The responses of the men and women were also compared to see if gender made a difference in the responses.

Question 1.

An instructor repeatedly gives clinical advice that you consider inferior to your own standard of care. You report the most recent incident to the clinical director because:

_____A. All staff must demonstrate basic skills so that all patients can be assured of receiving a predetermined standard of care.

_____B. Every dentist has an obligation to promote the well-being of the patient.

_____C. You believe that this is an opportunity for the clinician to be made aware of his need to refresh his knowledge base.

_____D. Other

(A is Teleology, B is Deontology, and C is Virtue.)

Table 7 on page 69 shows how the participants responded based on numbers and their percentage equivalent amongst their group. The results indicate that overall the 3rd year students reacted to the dilemma by relying on core values to resolve the situation more often than 4th year students and the dentists. The corresponding statement, "Every dentist has an obligation to promote the well-being of the patient", focuses on the duty that a professional has to provide the best care. However, this data has more meaning when it is shown as a percentage because the number of participants differs in each subgroup. Half the fourth year students selected the first option or the teleological response. This response could stem from their concern to be able to render quality clinical care to the patients and that the instructors supervising them be well skilled. The virtue option was the least selected option for dentists in this situation. This choice may reveal a professional expectation that colleagues have an obligation to themselves, their profession and society to be proficient and to know their own limitations.

Table 7.

Response to Question # 1 Based on Participation

	3rd Year Students	
Teleology responses	5	26.3%
Deontology responses	9	47.4%
Virtue responses	2	10.5%
Other	3	15.7%
	4th Year Students	
Teleology responses	8	50.0%
Deontology responses	6	37.5%
Virtue responses	2	12.5%
Other	0	0
	Dentists	
Teleology responses	5	29.4%
Deontology responses	6	33.3%
Virtue responses	2	11.1%
Other	3	21.2%

Figure 2 on page 70 shows the response to Question # 1 dividing the participants into two groups: students and dentists. This calculation is done to show the difference between students with a year or less of experience compared with dentists having more than five years.

Figure 2.

Percentage Responses to Question # 1 Comparing Students and Dentists
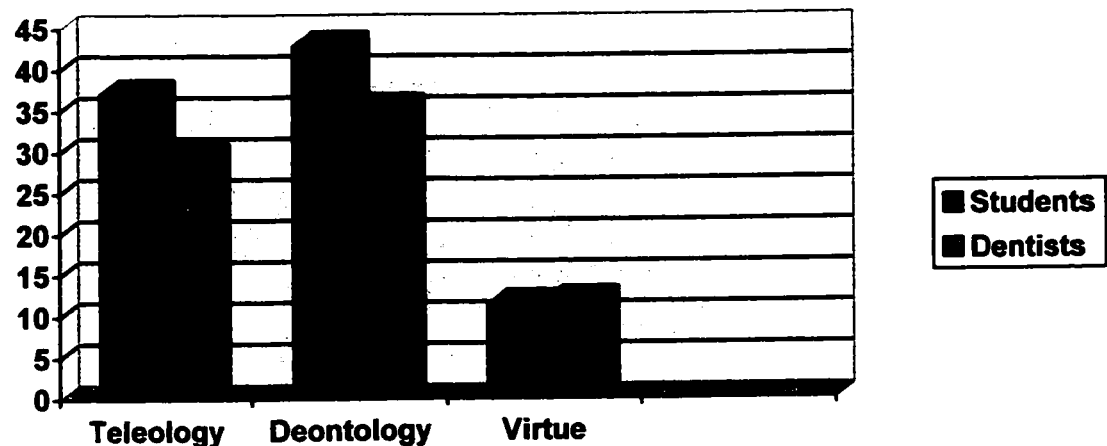
The responses were based on 35 students and 17 dentists. The results indicate that 42.9% of student population makes decisions based on the principle of moral obligation compared to 33.3% of the dentists. Thirty-seven per cent of the student population chose a solution using a teleological response compared to 29 % of the dentists. Both groups were closely matched with the virtue-based option. This response suggests that students use academic theory to help resolve conflicts. The experience of the tutorial sessions may help students to acquire a professional decision-making plan that includes adherence to profession standards and a Code of Ethics.

The data were also analyzed according to gender. Table 8 on page 71 shows the numeric distribution of responses from men and women and the percentage based on the subgroup. The results indicate that women tend to resolve ethical dilemmas based on duty and moral obligation more than men do. Overall women chose the response

based solely on moral responsibility the most, followed by students and last by the men.

Table 8.

Response to Question # 1 Based on Gender

	Men (N =30)	Women (N = 22)
Teleology	10 or 33.3 %	8 or 36.3 %
Deontology	11 or 36.7 %	10 or 45. %
Virtue	5 or 16.7 %	1 or 4.5 %
Other	3 or 10 %	3 or 13.6 %

Question 2.

A patient requests that you alter the date and treatment rendered on their dental insurance claim so that they may be reimbursed for their dental treatment. You explain to the patient that you cannot do that because:

_____A. You have a professional responsibility to be truthful.

_____B. You cannot make exceptions for only certain patients and not oblige all.

_____C. You want to ensure an honest long-term relationship with all your patients.

_____D. Other

(A is Deontology, B is Teleology, and C is Virtue.)

Table 9 on page 72 shows how the participants responded based on numbers and their percentage equivalent amongst their subgroup. The results indicate that all three subgroups reacted to the dilemma by relying on core values to resolve the situation. The corresponding statement, "You have a professional responsibility to be truthful ", focuses on the moral obligation of honesty for every professional.

However, this data has more meaning when it is shown as a percentage because the number of participants in each subgroup differs.

Table 9.

Response to Question # 2 Based on Participation

|	3rd Year Students	
Teleology responses	1	5.3%
Deontology responses	15	79.0%
Virtue responses	1	5.3%
Other	2	10.5%
	4th Year Students	
Teleology responses	0	0
Deontology responses	14	87.5%
Virtue responses	1	6.3%
Other	1	6.3%
	Dentists	
Teleology responses	2	11.8%
Deontology responses	13	76.5%
Virtue responses	1	5.9%
Other	1	5.9%

The data show that the 4th year students responded more than 3rd year students and the dentists to the situation based on moral responsibility. It is possible that the 4th year students had a year more of training than 3rd year students in which they gained more confidence to be more truthful with their patient. The overwhelming

deontological response acknowledges the awareness that dentists have to be truthful when completing insurance claims and no one would voluntarily admit to fraud. Had this situation included a time frame by one week, perhaps the response would have been different.

Figure #3 shows the response to Question # 2 dividing the participants into two groups: students and dentists.

Figure 3.

Percentage Response to Question # 2 Comparing Students and Dentists
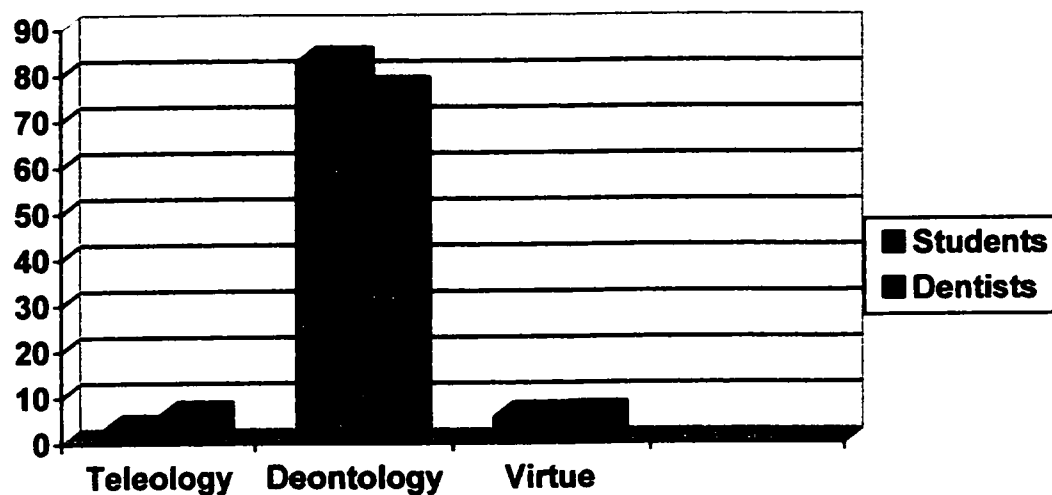
Although few chose the teleological and virtue-based responses, the results still indicate that students have a greater preference for deontological responses. Eighty-two point nine per cent of the student population make decisions based on the principle of moral obligation compared to 76.5% of the dentists. Once again the student population relied more on moral responsibility for decision-making than the dentists. The pressure from oneself and the insurance companies is very strong in

encouraging honest claims so it is not surprising to see a high percentage response from both of these groups.

The data were also analyzed according to gender. Table 10 below shows the numeric distribution of responses from men and women and the percentage equivalent for each group. The results indicate that women tend to resolve ethical dilemmas based on duty and moral obligation more than men do. Overall women responded with the highest percentage to decisions based on moral duty followed by students and then dentists.

Table 10.

Response to Question #2 Based on Gender

	Men (N =30)	Women (N = 22)
Teleology	1 or 3.3 %	1 or 4.5 %
Deontology	23 or 76.7 %	20 or 91.0 %
Virtue	2 or 6.7 %	1 or 4.5 %
Other	4 or 13.2 %	0

Question 3.

Your patient wants you to extract teeth that are hurting her instead of paying to restore them. You do not agree with this treatment option but do the extractions because:

_____A. You are concerned that your patient may go to someone else less qualified to do the extractions.

_____B. You respect your patient's right to making their own decisions.

_____C. You think that given the patient's socio-economic profile this treatment option will be the best long-term decision for the patient.

_____D. Other

(A is Virtue, B is Deontology and C is Teleology.)

Table 11 on page 76 shows how the participants responded based on numbers and the percentage equivalent of each subgroup. The results indicate that the 3rd year students relied on the moral obligation to respect a patient's autonomy in resolving the conflict more than the 4th year students and the dentists. The corresponding statement, "You respect your patient's right to making their own decisions", focuses on the moral obligation to respect a patient's autonomy in decision-making. The problem occurs when it conflicts with the recommendations of the dentist.

Table 11.

Response to Question # 3 Based on Participation

|	3rd Year Students	
Teleology responses	1	5.3%
Deontology responses	13	68.4%
Virtue responses	3	15.8%
Other	2	10.5%
	4th Year Students	
Teleology responses	0	0
Deontology responses	8	50.0%
Virtue responses	8	50.0%
Other	0	0
	Dentists	
Teleology responses	5	29.4%
Deontology responses	4	23.5%
Virtue responses	1	5.9%
Other	6	35.3%

As indicted in the above, table the 4th year students were evenly divided between a sense of moral obligation and a combination of duty and knowledge. Their increased experience gave them a broadened perspective of what they believed would be the best outcome for the patient. This situation was the most awkward for

dentists to answer indicting that more information was needed or that the choice that they would have made was not an option.

The student group responded to Question # 3 with an overall 60% relying on the obligation to respect a patient's autonomy while dentists had a 23.5% response. The following figure illustrates the percentage response of the two groups.

Figure 4.

Percentage Response to Question # 3 Comparing Students and Dentist
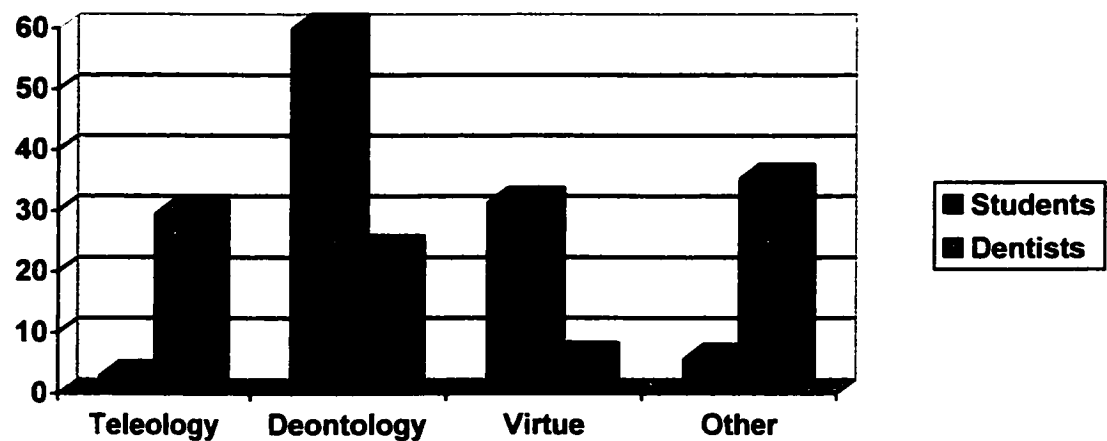
The combined student group demonstrated a strong preference for relying on the deontological choice to resolve the dilemma, 60.0 % compared to 23.5 % of the dentists. The combined value of the virtue and other option for the dentists was 41.2%. This suggests that overall the dentists preferred a context driven solution to the

problem. The group of dentists were more split on this issue suggesting that experience and context effect choices.

The data was also analyzed according to gender. Table 12 on page 78 shows the numeric distribution of responses from men and women and the percentage responses of the two groups The results indicate that women (59.1%) relied on the moral duty to respect their patient's autonomy more than men (43.3%). The student group and women selected the response based on moral responsibility to resolve the dilemma and responded within one percentage point of each other followed by the men.

Table 12.

Response to Question # 3 Based on Gender

	Men (N =30)	Women (N = 22)
Teleology	1 or 3.3 %	1 or 4.5 %
Deontology	13 or 43.3 %	13 or 59.1 %
Virtue	10 or 33.3 %	6 or 27.3 %
Other	6 or 19.8 %	2 or 9.0 %

Question 4.

Your patient wants to extract her remaining teeth so that she can have dentures. You do not agree with this treatment option and do not do the extractions because:

_____A. You believe that the consequences of this treatment will cause more discomfort to the patient in the future.

_____B. As a professional you will only provide treatment that you believe in.

_____C. You believe that increased dental awareness for all patients would result in better patient health.

_____D. Other

(A is Teleology, B is Deontology, and C is Virtue.)

Table 13 shows how the participants responded based on numbers and the percentages of each subgroup.

Table 13.

Response to Question # 4 Based on Participation

	3rd Year Students	
Teleology responses	4	21.1%
Deontology responses	4	21.1%
Virtue responses	10	52.6%
Other	1	5.2%
	4th Year Students	
Teleology responses	5	31.3%
Deontology responses	3	18.8%
Virtue responses	7	43.8%
Other	1	6.2%
	Dentists	
Teleology responses	1	5.9%
Deontology responses	3	17.6%
Virtue responses	12	71.0%
Other	1	5.9%

The results indicate that all three groups selected responses that considered context as well as duty more than any other choice. The corresponding statement, "You believe that the consequences of this treatment will cause more discomfort to the patient in the future", pits the patient autonomy against moral responsible for the well being of the patient. Unlike Question # 3 this patient is not experiencing any pain so it is more difficult to assess the problem. Therefore most of the respondents selected the choice that considers context. This example suggests that professionals do not always rely on the same principle for making decisions.

The results indicate that once again the 3rd year students responded to the situation based on moral responsibility more than 4th year students, followed by dentists. The great percentage difference between the students and the dentists reinforces the idea that dentists with experience have more confidence to rely on their own judgement and stand by their principles and refuse treatment to a patient if they feel that it is contraindicated.

Figure 5.

Percentage Response to Question # 4 Comparing Students and Dentists
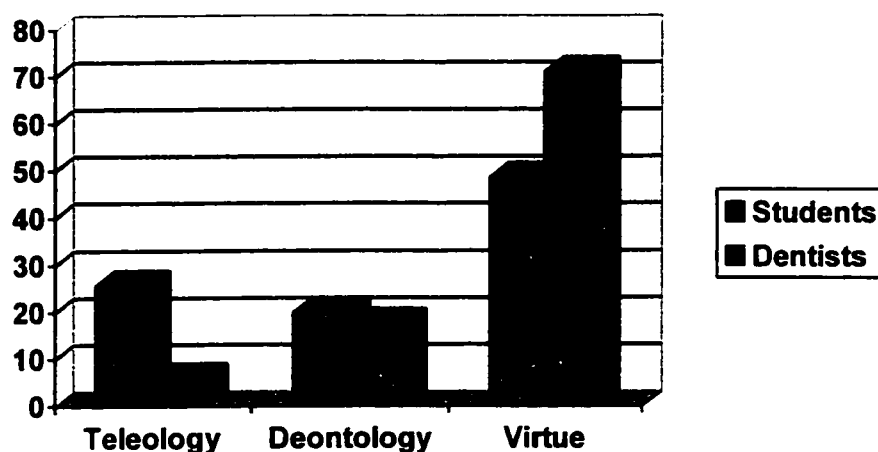
Seventy-one percent of the dentists chose the virtue-based option and 48.6 % of the combined student group made the same selection. Even though most of the participants opted for the virtue-based option it is still apparent that experienced clinicians more often opt for a decision based on consideration of moral responsibility and moral context.

The data were also analyzed according to gender. Table 14 shows the numeric distribution of responses from men and women and the percentage equivalent of the two groups. The data show that while most preferred the virtue option, almost a third (32.0%) of the women chose a more universal approach by selecting the action statement, "You believe that increased dental awareness for all patients would result in better patient health". This choice still leaves open what response they would have given for that particular request.

Table 14.

Response to Question # 4 Based on Gender

	Men (N =30)	Women (N = 22)
Teleology	3 or 10.0 %	7 or 32.0 %
Deontology	7 or 23.3 %	3 or 13.6 %
Virtue	19 or 63.3 %	10 or 45.5 %
Other	1 or 3.3 %	1 or 4.5 %

Assessment

The results of the data suggest that the less experienced make decisions based solely on moral responsibility while the more experienced consider context and obligation when coming to a conclusion. The data also shows that women tend to base their decisions more often than men on the principle of duty or obligation. Table 15 on page 83 gives the deontological responses in percentage form to questions #1, #2, and #3. The highlighted numbers in the deontological column indicate the three groups that most often chose this option. The highlighted percentage in the virtue-based column indicated the group that chose this option the most.

Men (includes both students and dentists) and dentists chose the deontological option least often as a means to resolving the situation. Overall, the 3rd and 4th year students as a group and women choose the deontological statement more than the dentists and men. For Question # 3, half the 4th year students chose a virtue-based option as opposed to only a third of the male clinicians. However, 35.3 % of the dentists chose "Other" as their option indicting that they needed more information before deciding or another more appropriate option. Thus this question may not be yielding good enough data to draw any conclusions. Most participants favored a virtue-based response for the last question. The two groups that chose the virtue-based option most often were the dentists and men (includes students and dentists).

Table 15.

Overall Percentage Response to Questions # 1, # 2, and # 3

Question # 1			
Group	Teleological	Deontological	Virtue
3rd Year	26.3	**47.4**	10.5
Women	36.3	**45.4**	4.5
Students	37.1	**42.9**	11.4
4th Year	50.0	37.5	12.5
Men	33.3	36.7	**16.7**
Dentists	29.4	33.3	11.1
Question # 2			
Women	4.5	**91.0**	4.5
4th Year	0	**87.5**	6.3
Students	29.0	**82.9**	5.7
3rd Year	5.3	79.0	5.3
Men	3.3	76.7	**6.7**
Dentists	5.9	76.5	5.9
Question # 3			
3rd Year	5.3	**68.4**	15.8
Students	2.9	**60.0**	31.4
Women	4.5	**59.0**	27.3
4th Year	0	50.0	**50.0**
Men	3.3	43.3	33.3
Dentists	29.4	23.5	5.9

Table 16 below shows the responses of every subgroup by percentage. The highlighted numbers indicate the groups that had the most respondents choosing the virtue-based option.

Table 16.

Percentage Response to Question # 4

	Question # 4		
Group	Teleological	Deontological	Virtue
Dentists	5.9	17.6	**70.1**
Men	10.0	23.3	**63.3**
3rd Year	21.0	21.0	**52.6**
4th Year	31.3	18.8	43.8
Students	25.7	20.0	48.6
Women	32.0	13.6	45.5

Men and dentists chose the virtue-based option more than any other subgroup supporting the findings in the first three questions that these two subgroups make their decisions more often combining moral responsibility and practical knowledge.

Table 17 considers only the responses in the "Other" category. The 4th year students were the most decided in their answers and used this category the least. The dentists opted for this option significantly for Question #1 and #3. The 3rd year students had the highest response for the "Other" option with Question #1 followed by #2 and #3. Option "Other" was used if there was not enough information available or if they would have chosen another form of treatment. The relatively high percentages limit the worth of the interpretation discussed above. While the

tendencies stated above need to be verified using a more refined survey tool, I believe that there would probably be similar results.

Table 17.

Overall Percentage Response to the Option "Other"

3rd Year			
Question #1	Question #2	Question #3	Question #4
15.7%	10.5%	10.5%	5.2%
4th Year			
Question #1	Question #2	Question #3	Question #4
0	6.2%	0	6.2%
Dentists			
Question #1	Question #2	Question #3	Question #4
21.2%	5.9%	35.3%	5.8%

Reflection

The research undertaken for this paper was exploratory and will help to determine if further research would be warranted in examining the ethical principle that professionals use to make decisions. The literature review did not disclose any study that investigated this aspect of decision-making. Intuitively, one would think that experience and context can alter how one makes decisions and this study tends to substantiate this line of thinking.

As well, the current culture of accountability may be driving ethics into a new arena where strict adherence to the ethical code will outweigh personal judgement.

The adversarial atmosphere surrounding the delivery of health care makes dentists cautious of treatment procedures offered.

The data indicates men more than women combine moral responsibility and practical knowledge when making a decision. This finding suggests that more study needs to be done in this area. Perhaps women are newer to the profession than men and therefore do not have as much experience. As more women move into the health professions there will possibly be a shift in decision-making outcomes.

This study demonstrates that professionals use all three principles in decision-making depending upon the circumstances. While clinicians may not be aware of the three different underlying principles influencing decision-making, clinical experience and familiarity with a Code of Ethics are necessary components in the resolution of professional dilemmas. Based upon my research I believe that professional development courses in ethical decision-making strategies can serve to develop confidence and greater clarity when having to choose between conflicting values.

Students had to write about only one incident in which they thought an ethical dilemma was present. Therefore it is possible that not every common dilemma was reported. Because the essay was being submitted as part of the course criteria, the incident chosen might not be a common occurrence but an exceptional situation that stood out in the student's mind. Also, the description of events might have been altered in order to justify a more favorable response by the professor. The status of the students in relation to the staff was hardly mentioned in the essays but is probably an endemic source of conflict. Students rarely wrote about incidents involving the power hierarchy that exists in a teaching situation. One wonders what the clinical staff would have reported as frequent ethical dilemmas. Some students wrote about the dilemma that they faced with regard to patient treatment. This

dilemma raises the academic question of educational priority: care for the patients versus educational opportunities for the students.

The questionnaire was used to determine which underlying principle motivated most decisions; the ends justify the means, principle-based or a combination of core values and practical knowledge. Lack of funding hindered the development of a research tool that was tested for both validity and reliability. To create a more accurate tool, the questions should have been submitted to a team of dentists to check for agreement on the principles behind each action statement and that the options fit the situations. Also, having only four questions limit the conclusions that can be drawn from the data collected, but was easier for the people to fill it out. Thus the overall rate of return was fifty-two out of sixty-seven or 77.6%.

The proposed decision-making tool has not been used as a pedagogical tool as yet. The impetus for this model is based on theoretical study, empirical use and observation of other models used by students. However, the differences found in decision-making suggest that a clearer model might help students better understand all the elements of decision-making.

Chapter V. Discussion

Summary

This paper explains the role of ethics in the health professions. The literature reviews illuminated the pedagogical tools employed in teaching ethics in dental curriculum; they explained the acquisition of ethical sensitivity and reviewed the underlying principles of the various ethical theories and how they influence the decisions we take when resolving conflicts.

The educational process has an inherent conflict for students and clients. Educators must maintain a balance of priority between teaching students and treating patients. Students struggle to meet their requirements while at the same time trying to maintain their own personal code of ethics. This scenario is replayed every year throughout all dental learning facilities. Patients often ask the student clinicians which treatment they would recommend. Students requirement needs may be at odds with the treatment needs of their assigned patient list. Students most often provide the treatment required but may be tempted at times to concentrate on those treatment procedures that will complete their missing credits. Sometimes the choice meets the needs of both the student and the patient. Sometimes clinical instructors collude with the dental students to ensure that students have the opportunity to practice a variety of procedures. Treatment is never needlessly done, but the teaching bias is inherent in an educational setting. In some cases there are different treatment options available depending upon expense and esthetics. From these experiences students learn communication skills and can meet the needs of their patients by developing an ethical sensitivity.

Different tools used to assess various steps in the decision-making procession were discussed and a new model was suggested based on Rest (1982), Purtillo (1999) and the CDA guidelines (2001). The Eight R's can be a useful pedagogical

tool that would provide a comprehensive, helpful format for novice dental students who are developing ethical sensitivity and learning how to understand, dissect and resolve ethical dilemmas.

A survey of third year students, fourth year students and clinical staff was done to determine the preferred underlying principles that guided the action response. The format of the questionnaire was modeled after the PDV and the MEI tests. The conflict situations were suggested from essays written by fourth year dental students. The survey consisted of five questions relating to demographic information and four scenarios representing an ethical dilemma. Three statements followed each dilemma, each describing a possible resolution to the problem. Participants were asked to respond to their preferred choice of action.

To a large extent the interpretation of the research carried out for this study is subjective. The data obtained from the student essays and the handouts from the tutorial group was presented as objectively as possible.

Conclusion

The public relies upon the knowledge, clinical skill, and professional ethics of health care specialists in order to receive treatment that is competent and just. To do so, dental health professionals follow a prescribed Code of Ethics. They need to be familiar with their moral responsibility as dental health professionals and have confidence in their ability to resolve ethical dilemmas. Dental educators need to fulfill their obligation by teaching ethics using a variety of pedagogical tools that are appropriate to the progress and professional maturation of the students.

This paper was limited to a study of ethics curriculum in dental schools and the decision-making process for resolving ethical dilemmas. The subjects involved in the

study were from one dental school in a major North American city. Any attempt to broaden the study would have made it too cumbersome for the present purposes.

Recommendations

This thesis suggests that teaching and role-modeling professional ethics is integral to graduating morally responsible dental health care physicians. Based on the conclusions of this study, closer attention is needed to ensure that dental curriculum incorporates a broad spectrum of pedagogical tools in order to imbue a sense of ethical sensitivity to its students. The following are specific recommendations that have emerged from the present research of this topic.

1. That an ethics course be included in every year of the dental curriculum.

Rationale: Research reveals that ethical sensitivity is related to the stage of training and can be altered by experience. The conflict that students will be exposed to each year is different. Since the most effective learning occurs when the material taught is relevant, it makes sense to design ethics curriculum to coincide with the level of student experience.

2. That the DEST be given at the start of the second and fourth year.

Rationale: In order to determine the effectiveness of an ethics curriculum it is necessary to have a means of feedback. The DEST is the only dental-oriented test that evaluates a student's ability to recognize ethical dilemmas. Another possible tool to use would be the Professional Decisions and Values Test (PDV) that tests for both reaction tendencies and underlying values in ethical dilemmas. Either test would enable the student to personally assess their confidence level

in responding to professional conflicts. The objective feedback would enable the staff to evaluate the success of the ethics curriculum.

3. That in-house ethical professional development tutorials be mandatory for support staff, clinical instructors and teaching staff.

Rationale: The literature review reveals the impact of role modeling on the part of staff, upper classmen and peers. It is important that the people working with the students be in harmony with the theory and working principles taught to the students. There is always the benefit of relearning forgotten material and gaining increased confidence and facility in the academics of ethics.

4. That every first year class is encouraged to develop a set of moral guidelines by which they commit to follow and to update each year.

Rationale: The students would understand and commit to a code of behavior if they were part of the process developing it. The more the students participate in the process the more likely they are to identify with the principles and values inherent in the document. Less of a burden would be placed on educators having to act as policemen.

5. That a Code of Ethics specific to the students and staff in the Faculty of Dentistry is written and observed.

Rationale: Both students and staff should have a very clear understanding of what is expected of themselves and of each other. A greater understanding and respect will come about if both groups are accountable for maintaining professional behavior.

Future Research

In the process of reviewing the pertinent literature peripheral issues were raised which could not be covered in this paper. The following questions evolved as a result of my study and are noted for possible future exploration.

Demographics

More studies sensitive to demographic data could be explored to determine what impact location, cultural milieu, experience, gender, and age has on the source and types of conflict that can arise.

Values

Values were not addressed in any depth in this study. However, it would be of interest to determine if values are context-driven or character-driven. Using the **Eight R's** model further study needs to be done to determine if values change between the two steps initial response and the final reaction.Further study could look at the impact experience has on values and the personal interpretations of values.

Candidacy

A review of the candidacy process for dental school selection could be re-evaluated in consideration of the importance of ethical analysis and decision-making. Perhaps part of the application process should include a personal paper written by the applicant about an ethical dilemma that they encountered and how it was resolved. This procedure is already used by at least one dental faculty but the effectiveness needs to be studied.

Professional Development

In light of the influence of role modeling a survey of the level of ethical sensitivity of dental faculty and teaching dentists could be done pre and post continuing education course in professional ethics to determine if increased awareness is

needed by staff. Students should also be surveyed as to their opinion as to the ethical sensitivity of staff and compared with staff self appraisal. More study could be done regarding the impact of role modeling on the development of ethical sensitivity.

Every program has some hidden curriculum. Faculties could conduct their own searches to determine what is specific to their program and how it competes with the teaching goals.

An evaluation of the types of ethical dilemmas that students' experience could be studied to determine if curriculum should focus on ethical problems experienced as student clinicians or as future practitioners. The value of a Code of Ethics, written specifically for and by dental students and staff could be done within each faculty. Ultimately this exercise should be studied to see of what value it is to an ethics curriculum within a dental faculty and if this process has value for other health professional faculties.

Glossary

The following words and abbreviations are found within this text. The definitions accorded to each term are not from a dictionary. These meanings are my working interpretation and express the nuance that is particular to this paper.

Autonomy – the patient's right to decide independently what they want.

Beneficence – to provide positive health care to a patient.

Bio-ethics – a subdivision of ethics that concerns itself with behavior and decisions related to medicine and biological health care.

Ethics – synonymous with moral behavior, doing what is right.

Ethical sensitivity - relating to the affective cognition of another.

Evidence-based dentistry – treatment protocol determined by a systematic examination of scientific literature.

Hidden Curriculum- underlying attitudes that are informally conveyed very subtly by role modeling or socialization.

Justice – behavior that is deemed as fair and honest to every individual.

Metathics – a subdivision of ethics that attempts to explain the reasoning behind moral behavior.

Moral development – the affective and cognitive growth of an individual that leads to a value system of good and right behavior.

Non-maleficence or - the avoidance of doing harm by not providing good treatment
Mal-beneficence that may actually be counter-indicated for a patient.

Professionalism - a responsible set of moral behavior defined as good by a group of individuals sharing a specialized area of knowledge.

Rationalize – part of a decision-making process that justifies a particular action or decision based upon a recognized code of profession behavior.

Reasoning -   part of a decision-making process that identifies personal

values and explains these values in terms of ethical principles

used in theories of ethics.

Role models –   individuals who present an example of acceptable professional

behavior.

The following abbreviations refer to tests for ethical sensitivity and are found within

the text.

DEST-   Dental Ethical Sensitivity Test

DIT-   Defining Issues Test

MEI-   Medical Ethics Inventory

MEQ-   Modified Essay Question

MJI-   Moral Judgement Interview

OSCE-   Objective Structured Clinical Exam

PDV-   Professional Decisions and Values Test

SRM-   Socio-Moral Reflection Measure

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professionalism in dentistry. *Journal of Dental Education, 53*, 144-148.

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Tables

Table 18.

Models of Ethical Theories

DEONTOLOGY	TELEOLOGY	VIRTUE
Duty-driven	Goal-driven	Character-driven
Principle-based	Context-based	Individual and consequence-based
Means count Follows laws and rules	End result counts Follows consensus	Individuals count Uses practical wisdom and ethical sensitivity
Kant	Bentham, Mill (utilitarians)	Hippocrates, Maimonides

Scott, (1990), p. 49.

Table 19.

Ethics in Health Education

AUTHOR	CONCLUSION
Rest (1988)	Education can modify personal ethics.
Self et al (1992)	Noted the difference between what can be taught and what can be evaluated and encouraged recognition of inherent values of students.
Bebeau et al (1993)	Knowledge does not necessarily translate into the adoption of a practice or good decision making.
Hafferty & Franks, (1994)	Noted that the development of ethical sensitivity is derived from a mix of formal education, individual personalities, existing cultural context and moral environment and the benefit derived from having congruent personal and professional values.
Myser et al (1995)	Knowledge learned does not necessarily ensure ethical competence in clinical decision-making.

Table 20.

Pedagogical Considerations in Ethics Curricula

AUTHOR	CONCLUSION
Hebert et al (1990)	The use of manufactured case studies is helpful.
Self et al (1992)	A formal course in Ethics is important.
Christakis et al (1993)	Participant-driven small value-neutral group tutorials be developmentally stage specific to include discussion of relevant ethical issues pertinent to students.
Malek et al (2000)	Continuing education for health professionals helps them articulate better and gain a more subtle understanding of ethics.
Berk (2001)	Ethics education today includes core-based curriculum using inter-actional workshops, small groups, and problem-based learning to promote introspection and self-knowledge.
ACFD (2001)	The integration of theoretical and practical knowledge and evidence-based learning promotes ethical understanding.

Table 21.

Identification of Educational Constraints

AUTHOR	CONCLUSION
Hicks et al (1985)	Studied senior requirements and authority figures and found that clinical requirements compromise learning.
Lange & Friedman (1985)	Studied student perception of faculty role models and found that views of practicing dentists were preferred over that of faculty members.
Hafferty & Franks (1994)	Found that hidden curriculum includes the moral orientation of the educational institution and its instructors, role modeling, peer interactions and general clinical experience.
Satterwhite & Satterwhite (2000)	Found that students can unconsciously change their concept of what constitutes un/ethical behavior by peer influence.

Table 22.

Theories on the Acquisition of Ethical Sensitivity

RESEARCHER	CONCLUSIONS
Piaget (1932)	Cognitive abilities develop in a sequential manner.
Kohlberg (1958)	Moral reasoning is part of cognitive development and is age-related.
Rest (1969)	Ethical sensitivity goes through developmental stages of moral maturing and is context-dependent.
Gilligan (1982)	Ethical sensitivity is tied to social relationships and community responsibility.
Scott (1990) Holmes (1993)	Moral maturity is a result of caring, compassion and cognitive development.

Table 23.

Tests for Assessing Ethical Sensitivity

STEP	AUTHOR	TEST
Recognition	Siegler et al (1982)	Modified Essay Question (MEQ)
	Bebeau et al (1985)	Dental Ethical Sensitivity Test (DEST)
	Gibbs et al (1992)	Socio-Moral Reflection Measure (SRM)
	Mitchell et al (1993	Objective Structured Clinical Exam (OSCE)
Reflection	Gibbs et al (1982)	Socio-Moral Reflection Measure (SRM)
Reasoning	Rest (1979)	Defining Issues Test (DIT)
	Mitchell et al (1995)	Objective Structured Clinical Exam (OSCE)
Rating	Stolman et al (1982)	Medical Ethics Inventory (MEI)
Reaction	Rezler et al (1992)	Professional Decisions and Values Test (PDV)

Table 24.

Strategies for Decision-Making

AUTHOR	STRATEGY
Rest (1979)	Interpret the situation, Interpret of the morally ideal course, Decide the most important values, and Execute and implement the action that one intends to do.
Purtillo (1999)	Gather the relevant information – clinical data, patient input, logistical factors, Identify ethical dilemmas, Use ethical theories as a means to analyzing the problem – deontological or teleological, Explore practical alternatives, Commit decision to action, Evaluate the situation and outcome.
Code of Ethics (2001)	Determine the alternatives, Determine the ethical considerations, Determine the considered judgement of others, and Rank the alternatives.
Eight R's Model (2002)	Recognition- awareness of the ethical conflicts and people, Response- recognition of a "gut" response to the conflict, Reflection- assessment and consideration of facts and Options, Reason- relate personal values to theories of ethics, Rationalize- refer to Code of Ethics for professional behavior, Rate- balance conflicting principles and obligations and Then select the most morally responsible decision, React- take action, and Re-evaluate- revisit the conflict, consequences and conscience.

Appendices

Appendix 1. Survey Instrument for Undergraduate Dentists

     and Clinical Instructors

Appendix 2. Ethics Curriculum:

     University of Minnesota, School of Dentistry

Appendix 3. Ethics Curriculum:

     University of Detroit, Mercy School of Dentistry

Appendix 4. Ethics Curriculum:

     McGill University, Faculty of Dentistry

Appendix 1. Survey Instrument for Students and Clinical Instructors

DEMOGRAPHICS:

1. Gender   M   F

2. Age   _____

3. Student 3rd yr 4th yr

4. Licensed dentist   Y   N

5. # yrs experience   _____

ETHICAL DILEMMAS:

6. An instructor repeatedly gives clinical advice that you consider inferior to your own standard of care. You report the most recent incident to the clinical director because:

_____A. All staff must demonstrate basic skills so that all patients can be assured of receiving a predetermined standard of care.
_____B. Every dentist has an obligation to promote the well-being of the patient.
_____C. You believe that this is an opportunity for the clinician to be made aware of his need to refresh his knowledge base.
_____D. Other

7. A patient requests that you alter the date and treatment rendered on their dental insurance claim so that they may be reimbursed for their dental treatment. You explain to the patient that you cannot do that because:

_____A. You have a professional responsibility to be truthful.
_____B. You cannot make exceptions for only certain patients and not oblige all.
_____C. You want to ensure an honest long-term relationship with all your patients.
_____D. Other

8. Your patient wants you to extract teeth that are hurting her instead of paying to restore them. You do not agree with this treatment option but do the extractions because:

_____A. You are concerned that your patient may go to someone else less qualified to do the extractions.
_____B. You respect your patient's right to making their own decisions.
_____C. You think that given the patient's socio-economic profile this treatment option will be the best decision for him long-term.
_____D. Other

9. Your patient wants to extract her remaining teeth so that she can have dentures. You do not agree with this treatment option and do not do the extractions because:

_____A. You believe that the consequences of this treatment will cause more discomfort to the patient in the future.
_____B. As a professional you will only provide treatment that you believe in.
_____C. You believe that increased dental awareness for all patients would result in better patient health.
_____D. Other

Appendix 2.

Ethics Curriculum: University of Minnesota, School of Dentistry, 1985.

COURSE: Professional Responsibility Curriculum

OBJECTIVE: To help students identify, reason, and adequately resolve ethical

problems in dentistry.

FORMAT: Year 1 has 14 hours and consists of:

(1) DIT and DEST pretest and feedback (2 hours),

(2) lecture about the characteristics of a profession (2 hours)

(3) discussion (10 hours) about pre-clinical ethical problems.

Year 2 has 10 hours and consists of:

(1) discussion (10 hours) about pre-clinical ethical problems.

Year 3 has 12 hours and consists of:

(1) DEST (2 hours),

(2) discussion (10 hours) relating to clinical ethical problems

(3) peer review cases.

Year 4 has 13 hours and consists of:

(1) individual sessions with practicing dentist (1 hour),

(2) lecture (2 hours) about characteristics of professions,

(3) discussion (10 hours) about clinical ethical problems,

(4) DIT and DEST.

Appendix 3.

Ethics Curriculum: University of Detroit, Mercy School of Dentistry, 2000

COURSE: Professional Ethics and Law

OBJECTIVE: To provide students with the knowledge and understanding of the professional responsibility "from legality to morality" (Zarkowski,2001).

FORMAT: There is a total of 74 contact hours with students over the four years. Every year the course pedagogy includes: lectures, large group discussion, written case analysis, and small group dialogue.

Year 1 consists of:

(a) White coat ceremony,

(b) Discussion of ethical, legal and moral obligation, professional behavior, misconduct consequences,

(c) Introduction to ethical principles, and

(d) Developing a Class Code of Ethics.

Year 2 consists of:

(a) Introduction to the law as it pertains to dental practice,

(b) Discussion of an ethical decision making model, and

(c) Discussion of values and principles of dental ethics and social justice.

Year 3 consists of:

(a) Review of Class Code of Ethics

(b) Review of the Professional Code of Ethics

(c) Discussion of an ethical decision making model, and

(d) Discussion of multicultural issues in dental practice.

Year 4 consists of:

(a) Review of ethical and legal concepts relating to practice management,

(b) Risk management principles,

(c) Peer review,

(d) Mock state board of dentistry hearing, and

(e) Review of ethical decision making models.

Appendix 4.

Ethics Curriculum: McGill University, Faculty of Dentistry, 2002

COURSE: Dental Public Health

OBJECTIVE: To provide students with a broad understanding of ethical and legal

issues relevant to clinical practice.

FORMAT: Year 2 has 3 two-hour classes and consists of:

(1) lectures about broad ethical and legal issues.

(2) classroom exercises.

Year 3 has 7 one-hour small group tutorial sessions that consists of:

(1) individual presentation,

(2) group discussion

(3) development of a school Code of Ethics.

Year 4 has 19 hours and consists of:

(1) 7 one-hour individual presentations,

(2) lectures on dental law and ethics,

(3) classroom exercises.