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I remember the day we had to take the Hippocratic oath on qualifying as a dentist. At that time, it did not really dawn on me how important that oath is or should be as a practicing dentist. It is an oath which we took to act ethically at all times when treating our patients.

It took many years before I realized that not everyone regarded it as binding on their consciences.

In order to adhere to the most important aspect - "I will abstain from all intentional wrong-doing and harm" we need to step back and think very carefully on what that truly means. In order not to harm or do wrong, it implies that we will know what is right, and will strive to heal rather than harm. Life-long learning is central in that concept, not the forced continued professional development of the past few years, but a desire and passion to improve our knowledge and skills throughout our careers. To be the very best that we possibly can be.

To treat a patient for gum disease when it is in fact a squamous cell carcinoma - is doing harm and one could debate that it is intentional if we ignored the idea of being life-long learners. We seem to have become obsessed with cosmetics and implant dentistry, yet no-one else can take over our roles as doctors of the oral cavity. Dentists can save lives as the only doctors who routinely examine the oral cavity.

This is just one aspect of being a dentist, but it can be the most fulfilling if done ethically. We need to re-assess the ethics in our profession and be passionate about oral health in a holistic manner - not just on what interests us personally. We owe it to our patients and the future of our profession may depend on it.

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Ethics originates from the Greek word 'Ethos' which means 'character' or 'conduct'. It is a branch of philosophy and theology studying systematically what is right or wrong, or what is good or bad with respect to character and conduct.

Dentistry, being one of the healing professions, has an obligation to society that dental professionals will adhere to high ethical standards of conduct and at all times place the patients' best interest first.

In today's society, the ethical issues faced by dentists are increasing and more complicated due to changing patient demands and expectations, changing technological environment and needs of a dental practice, and changing regulatory system and legal obligations related to access to dental care, advertising, consent, disclosure and misrepresentation and financial arrangements.

Ethics is inseparably linked every decision, judgement or choice made by a dentist. In addition, ethics also influence the relationship the dentist has with his patient, public, staff and other professionals. Sometimes decisions on what is right or wrong are very simple and straight forward, and at other times they can be very complicated.

Ethics describes the dentists' duty and moral obligations by asking them to consider their actions, judgements and justifications. A Code of Ethical Conduct defines the moral boundaries and obligations within which professional dental services may be ethically provided. These are based on four fundamental ethical principles of (i) autonomy (right to self-determination and confidentiality, (ii) non-maleficence (do no harm), (iii) beneficence (promoting or doing well), and (iv) justice and veracity (being fair in their dealing with patients).

Ignoring ethics and its fundamental principles, compromises the dentists service, undermines professionalism and the trust that society has placed on the dentist.

Johan Hartshorne

Contents

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Dental malpractice and its liabilities: Ethical and legal considerations every dentist should know

Johan Hartshorne[1] and Andre van Zyl[2]

Executive Summary

Rationale

Dental malpractice claims are extremely expensive, emotionally stressful and time-consuming. Understanding the ethical and legal concepts related to dental malpractice and negligence, common causes of malpractice, application of ethical decision-making and risk management principles is important. It will better equip dental practitioners to avoid ethical minefields, malpractice claims and dental litigation.

Key points

- Patients rely on trust, their dentist's expertise and a professional diagnosis, to assess their treatment needs.
- Maintain caution, skill, and prudence at all time.
- Clinical decision-making should be based on the fundamental ethical questions: (i) what is in the patients best interest; (ii) will it do harm; (iii) have I informed the patient appropriately; and (iv) is it fair to the patient?
- The over-riding criteria for standard of care – is it in the best interest of the patient?
- The treatment recommended should be safe, predictable, cost-effective, respectful of patient preferences, aimed at preserving normal tissue and function and based upon current scientific evidence.
- Treatment should always address the patient's main complaint.
- Applying ethical decision-making and good risk management protocols will not only reduce risk exposure, patient dissatisfaction, avoid malpractice claims and litigation, but will also improve the standard of patient care.
- Communicate with passion and compassion.

Essential practice implications

- The standard of care applies to all dental practitioners and specialists.
- Never ignore patient expectations and never raise unrealistic expectations.
- Note the patients' main complaint in the file.
- Always be on the alert for risk factors.
- Provide the patient with a written treatment plan and cost assessment.
- Obtain the patients' written informed consent before starting treatment.
- Recall and maintenance care is of critical importance, especially with periodontitis patients, implant dentistry and restorative rehabilitations.
- Deal immediately and appropriately with dissatisfied patients.

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Introduction

The dental profession holds a special trust relationship with its patients. To uphold this mutual trust the dental profession makes a commitment to the patient that they will adhere to a high ethical standard of care and conduct.[1] The relationship between dentists and patients has changed in recent times and some of the major causes are: [2]

1. An increase in patient awareness of their rights.
2. High expectations and demands where aesthetic procedures are involved.
3. Competition between practitioners in a highly competitive market.
4. A change in the patient-dentist relationship from a personal/professional relationship to a more business/ commercial relationship.
5. Increase in scientific and technological development creating a society founded on capitalism and consumption.

The dental profession has in recent times come under increasing attack by disgruntled patients dissatisfied with their treatment.[3] Dissatisfaction between patient and dentist can often be resolved or managed properly and early, but sometimes patients turn to courts to get matters resolved. Such litigation cases against a dentist can result in severe consequences frequently causing loss of income, loss of reputation, harassment, mental agony, stress, sleeplessness, and embarrassment in society.[3] Furthermore, dental malpractice claims are expensive, emotionally stressful and time-consuming. It is therefore in the patient's as well as the clinicians' best interest to prevent dental malpractice claims. To avoid malpractice claims, dentists should know the rules/ regulations guiding the profession, the law and litigation pertaining to their practice and standard of care practice protocols.

Prevalence/ incidence of dental malpractice

Not many descriptive studies are available describing the prevalence, causes, impact and outcomes of dental malpractice claims. A recent study analysing malpractice cases finalized between 2007 and 2016 in South Africa, showed that most cases constituted fraud (66.7%), clinical malpractice (23.2%) and professional misconduct (10.1%).[4] Clinical malpractice complaints mainly involved oral surgery (27.3%), endodontic therapy (22.7%), prosthodontic therapy ((22.7%), operative dentistry (9.1%), periodontics (6.8%) and orthodontics (4.5%).[4]

A survey of dental malpractice claims in Rome, Italy showed that most litigious activities were related to prosthetic, dental implant and endodontic procedures.[5] Most insured convicted dentists (52.3%) were not fully covered by their insurance due to the presence of unmet contract clauses. An analysis of malpractice claims in implant dentistry in Italy from Insurance Company Technical Reports between 2006 to 2010 revealed that most of the surgical errors were committed during implant insertion (82.6%). Halve of these cases involved surgical errors due to inadequate treatment planning and execution, resulting in damage of the inferior alveolar nerve (32.2%), lingual nerve (2.5%), invasion of the maxillary sinus (9.1%), and damage to adjacent teeth (6.6%).[6]

A retrospective study conducted in Tehran, Iran between 2002 and 2008 showed that the majority of complaints were in fixed prosthodontics and oral surgery. Most of the cases were against general dentists. In 56.7% of clinical and 40% of misconduct (non-clinical) dental malpractice claims, dentists were found at fault.[7] A survey of dental malpractice claims in Brazil reported that endodontics was the most involved dental speciality with the highest prevalence of litigation.[2] Maxillofacial and oral surgery, endodontics and fixed prosthodontics are the dental specialities most often involved in litigation.[2,4,7,8,9]

What are dentists' ethical duties and obligations to a patient?

Dentists assume unique moral duties in presenting themselves to society as being uniquely qualified to care for oral health. Ethics is used as a generic term for various ways of understanding and examining moral behaviour.[10] The application of fundamental ethical principles provides various ways of understanding and examining moral behaviour,[11] inquiring why an individual action is right or wrong, or establishing the reasons why a person is good or bad.[12] Many ethical dilemmas don't have clear answers and sometimes it is truly a matter of choosing the most right or least wrong choice. Ethical decision-making is finding the middle ground on an ethics continuum where on the one extreme is 'right' or 'good' and the other extreme is 'wrong' or 'bad'.

Dentistry has historically been a caring profession with core ethical obligations that center on the duty to treat and prevent disease and ultimately to promote well-being.[13] Our clinical decision-making, behaviour or conduct, and

standard of care is guided by a professional or ethical code of conduct, which is based on four fundamental ethical principles (described in detail below): (1) autonomy (patients' right to make or participate in decision-making and make their own choices); (2) non-maleficence (preventing harm); (3) beneficence (promoting or doing good); and (4) justice (fairness in treating each other justly).[11] General guidelines on duties and obligations and conduct for expressing these fundamental ethical principles is provided in detail by the Health Professions Council of South Africa.[14] A duty is an obligation to do or refrain from doing something. Our duties to act in the best interest of the patient, doing good, preventing harm, truthfulness and fairness reflect the underlying nature of the dentist-patient relationship. Ethical guidelines help clarify the path of what's appropriate and what's not.

1. Autonomy (Right to self-determination)

Autonomy is defined as the patient's right to make or participate in decision-making and make their own choices. The principle of autonomy expresses the concept that dental clinicians have a duty to respect the patients' right to select or refuse treatment according to their desires, within the bounds of accepted treatment. Dental clinicians' primary obligations include involving patients in treatment decisions in a meaningful way with due consideration being given to their needs, desires and abilities, facilitated by the process of informed consent.[15]

Patients should be educated to fully comprehend the treatment plan, treatment sequencing and ultimate restoration possibilities, expected treatment outcomes, and the patient's responsibilities towards achieving and maintaining a successful outcome.[16] Signed informed consent is of little value if given by a patient who is unable to comprehend what was signed or the implications of treatment.

Complex treatment plans require more detailed descriptions and discussions. It is essential that the patient understands this and is given the opportunity to ask questions to clarify any matters. Dental clinicians should elaborate on different treatment options available, the advantages, risks, costs involved of each alternative, their prognosis and long-term consequences, and allow patients the opportunity to participate in treatment planning discussions rather than focusing on promoting the most profitable treatment option. It is the authors experience that often patients are given treatment options based on the particular skills of a clinician, rather than what is in the best interest of the patient. To refer a patient to another practitioner who is more capable to assist with a certain treatment option is certainly not an indication of incompetence by the referring clinician. Most patients will readily accept such a referral if it is explained that as being in their best interest. By listening to the desires and wants of patients and communicating relevant information openly and truthfully, dental practitioners assist patients in making informed choices about the treatment options available and also empowers the patient to participate in achieving and maintaining optimum oral health. Patients who are fully informed will better understand the treatment and implications thereof and how to maintain optimum oral health to ensure a predictable and successful outcome. In addition, a patient that demands and accepts a complex and costly treatment plan will then also accept more responsibility for their treatment. The final choice of treatment is largely dependent upon the patient's expectations, desires, financial budget and willingness to undergo treatment.[17]

• *Informed consent*

Before subjecting a patient to any proposed treatment, their tacit agreement, or informed consent is essential. This is both an ethical and a legal requirement. A competent patient will be able to make a choice based on an understanding of the information given to him/her, an appreciation of the diagnosis, the procedure proposed and its consequences, and will be able to reason and weigh up the various treatment options.

Informed consent is obtained by conducting a structured, formal consultation with a patient to explain the goals of treatment. It should include alternative options, the probable benefits (advantages) and actual or potential risks (disadvantages) of treatment, costs of each treatment, and the risks of non-treatment prior to performing procedures.[10,18,19]

• *Conditions of consent*

Consent must be voluntary – that is – the patient must not be manipulated or coerced into consenting. According to the National Health Act of No 61 of 2003, Chapter 2 Section 6 the following information must be given to the patient:

- Range of diagnostic procedures and treatment options available.
- Benefits, risks, costs and consequences associated with each option.
- User's right to refuse care and explain implications, risks and obligations of such refusal.
- Furthermore, this information must be provided in a

language that the patient understands and in a manner that takes into account the patient's literacy level.

The dentist's recommendation is important, but in advising patients, it is essential that the patient's best interests are paramount. The "best interest" of patients means that professional decisions of proposed treatments and any reasonable alternatives proposed by the dentist must consider the fundamental ethical principles, as well as the values and personal preferences of the patient. This must be done in a manner that allows the patient to become involved in the decision-making process. Consent forms cannot replace an informed treatment discussion and thorough documentation in the dental chart before any work begins.

- *Material risks*

Dentists are obligated to warn patients of "material risks" inherent in the proposed treatment or procedure. Risks are regarded as "material" if:

(i) a reasonable person in the position of the patient, if warned of the risk, would attach significance to it, and

(ii) the practitioner concerned should be reasonably aware that the patient, if warned of the risk, would attach significance to it.

- *Confidentiality*

Dental health care providers are obligated to tell the truth, protect confidentiality and respect privacy.[12]

2. Non-Maleficence (Do no harm)

The ethical principle of "first, do no harm," is a fundamental feature of the foundation of health practice since Hippocratic times and is considered to be a moral imperative of health practitioners' behaviour. This principle expresses the concept that dental clinicians have a duty to exercise care, and to refrain from harming the patient e.g. doing irreversible harm or placing teeth at risk by selecting inappropriate therapies and not informing patients of unavoidable risks.[20,21] Under this principle the dentists' primary obligations include keeping knowledge and skills current, knowing one's own limitations and limiting and managing risks with the ultimate aim of minimizing harms and maximizing benefits for the patient.

No treatment comes without risks or failures. There are actual and potential risks in each treatment that may result in varying consequences, complications, and harm either physically, emotionally or financially. Harm from overuse, misuse, errors, failures, technology and material flaws, accidents, complications, and known risks are all consequences of treatment that must be avoided wherever possible.[22]

Quality and safe dentistry can only be provided when both the clinician and the patient make treatment-planning decisions based on the patient's general health status, oral health, functional and aesthetic needs. The treatment recommended should be scientifically proven (evidence-based), safe, predictable, cost-effective, and respectful of patient preferences, and should be aimed at preserving normal tissue and function.[23]

3. Beneficence (To promote or to do good)

The principle of beneficence expresses the concept that professionals have a duty to care for and to act in the patient's best interest. Under this principle the dentist's primary obligation is service to the patient with the aim of benefiting or improving the patient's oral health. The most important aspect of this obligation is the competent and timely delivery of appropriate and safe dental care within the bounds of clinical circumstances presented by the patient.[20] Patients rely on trust, the dentist's expertise and a professional diagnosis to assess their treatment needs.

Dental care is only a small part of the whole system of healthcare and quality of life. Beneficence could be applied for medical reasons, preventive purposes, health promotion, or it could be structural, functional or aesthetic in nature. In addition to the patient's main complaint and/or requests, the overall treatment plan should include and manage the periodontal health, tooth structure and occlusal health to ensure a successful treatment outcome with long-term stability. The dentist is responsible to do what is best for the patient, on a physical and emotional level. Every patient should be presented with an ideal treatment plan that has been developed to take into consideration the patient's clinical, functional, and aesthetic needs, before a compromise or alternative plan is provided. Dentists are responsible to provide a high standard of professional care, are accountable for the intended benefit and outcome of any treatment and should not harm patients while delivering such comprehensive oral health treatment.

4. Justice (fairness)

The fourth fundamental ethical principle is justice. Justice expresses the concept of fairness in treatment, respect for patient's rights and demands consideration of fair distribution of scarce resources.[12] Justice requires that dental healthcare

providers ensure patients are given the same treatment options as anyone would receive in a similar position, regardless of financial status.

What is the difference between dental malpractice, negligence and misconduct?

• *Dental malpractice*

Dental malpractice is defined as the failure of a dental professional to follow the accepted standards of care of his/her profession resulting in harm, injury or loss.[24,25] Malpractice is a type of negligence, and is often referred to as professional negligence.

• *Negligence*

Negligence refers to a breach of duty of care where professional conduct falls below the standard of care,[25] failure of the clinician to use reasonable care and skills in rendering services to a patient,[24] or failure to protect a patient against unreasonable risk of harm, injury, loss or damage.[25] Harm through negligence caused by carelessness (not intentional harm), is known as tort law.

Proof of negligence is based on comparing the actions with those that a reasonable clinician, under the same circumstances would have performed.[25]

Disgruntled or dissatisfied patients often present to a different practitioner for a second opinion when they feel they have been mistreated. This puts the second clinician in a difficult position of trying to establish whether the actions were negligent or severe enough to constitute malpractice. Questions to ask include: was the aim to provide a therapeutic benefit, to protect the patient, to prevent harm, to remove conditions that could lead to future harm and was the treatment aimed at promoting the patients best interests.[25]

• *Misconduct*

Professional misconduct is defined as inappropriate, abusive, or illegal behaviour by a professional and implies an intentional compromise of ethical standards with the intent of benefitting the clinician.[24]

Examples of professional misconduct include: claiming for services not rendered, over-servicing, violating regulations governing the dental profession,[1] inappropriate relationship with a patient, issuing fraudulent medical certificates, breach of confidentiality and failure to obtain valid informed consent.

It is not within the scope of this review to cover the complex subject of misconduct.

What does 'Standard of Care' in dentistry mean?

Standard of care is what a reasonable, prudent dentist would do under the same or similar circumstances while applying scientific evidence-based care.[26] Standard of care is the same for all clinicians, whether general practitioners or specialists.[26] Whilst clinical training, educational and continuing education levels vary widely, the general practitioner is expected to perform dental services with the caution, skill and prudence of a specialist.[26,27] The over-riding criteria for standard of care is whether it is in the best interest of the patient.

Standard of care means practicing clinical and evidence-based dentistry as per relevant and current-based literature,[27] and should reflect changing and evolving new technologies, dental materials, and methodologies.[26] Every speciality and aspect of dentistry has optimal technology and methodologies that are indicated to uphold the current standard of care.[27]

In endodontics this would include the use of cone beam computed tomography (CBCT) for three dimensional radiographs to facilitate diagnostic interpretations, and a surgical microscope or loupes to allow for high power magnification and visualization. The above is not to say that practicing without these or similar technologies is below the standard of care, but it is suggested that the further the clinician is from such utilization, the closer to negligence they may be, especially in the event of a harm or injury.[27] Negative clinical outcomes and complications happen every day, but are not a proof of a deviation of the standard of care.[27]

Dental malpractice claims – legal considerations that dentists should keep in mind

• *Proving negligence or malpractice*

Standard of care exists within the definition of 'malpractice' or 'negligence' which has four elements, and all must be met if it is to be used as grounds in a malpractice suit. The four elements required for proving negligence or malpractice are: [25,26]

Duty: *The clinician (defendant) had a duty or an obligation to the patient (plaintiff).*

The patient will need to show that he or she had a professional relationship at the time of the incident. A person

cannot claim, for instance, if an off-duty dentist gave bad advice at a cocktail party.

Breach: *The clinician breached or did not follow this duty, or failed to conform to the required standard of care.*

Patient dissatisfaction is not a ground for a malpractice lawsuit. Dental malpractice suits can be brought against practitioners only when they fail to uphold the acceptable standard of care, or when a practitioner provides treatment that exceeds the patients informed consent. The patient will have to prove that the dentist either unintentionally failed to provide the acceptable standard of care, or the dentist intentionally committed an act that no other qualified and reasonable dentist would have committed when dealing with a similar situation.

The patient will need to show that the dentist breached his/her duties of care according to parameters of the professional relationship.

Causation: *The harm suffered by the patient was as a direct result of this breach of duty or sub-standard conduct.*

The patient must prove that the dental practitioners' incompetence or negligence caused the injury.

Damages: *Damages sought have a direct relation to the harm caused.*

The patient must prove that the actions or non-actions of the dentists caused real and compensable damages or harms, such as medical bills, personal injuries, lost wages, pain or suffering.

• *Reasonable person rule*

One of the most important arguments used in negligence law is that of the "reasonable person" which provides the standard by which conduct is measured.

By definition a dentist has acted in a negligent manner if they have departed from the conduct expected of a reasonable, prudent dentist acting under similar circumstances.

It considers many factors including the dentists' knowledge, experience, and perceptions, the activity they are engaging in and the circumstances surrounding their actions.[24]

• *Specials skills and reasonable care*

In the dental/medical context, when a clinician engages in a procedure requiring special skills, education, training, or experience, the standard by which their conduct is measured is the conduct of a reasonable, skilled, competent, and experienced person who is a qualified member of the group authorized to engage in that activity or procedure. A dentist cannot deny personal knowledge of basic aspects of a specific activity or procedure that are known and practiced by their peers. This is important for those dentists performing implant treatment, especially the surgical part thereof, where ignorance of anatomy and/or surgical skills may lead to harm.

The law does not a have a special allowance for beginners with regard to special skills, and holds everyone to the standard of conduct of persons who are reasonable, skilled and experienced in the activity or procedure.[24]

• *Impairment, mental capacity and intoxication*

A dentists' physical characteristics or other impairments, including mental capacity, does not excuse them from acting according to the reasonable person standard.

• *Emergencies*

In the case of emergencies, the law recognizes that "even a reasonable person can make errors of judgement in such situations, and their conduct will be evaluated in light of whether it was a reasonable response under the circumstances, even though, in hindsight, another course of action might have avoided the injury".[24] In other circumstances, failure to anticipate the emergency could constitute negligence, as a reasonable person would have anticipated, and taken precautions against, the foreseeable emergency.[24]

• *Patient conduct*

A clinician could also be held negligent by virtue of the patient's conduct. The law may consider that a trained professional should have taken into account the possible conduct of the patient, and regulated their own conduct accordingly.[25] For example, administering a double mandibular block to a child without anticipating that they would not understand the implications and damage they may inflict on themselves if they chewed while their mouth was still anaesthetized, is negligent.[25] Even adults given bilateral inferior alveolar nerve blocks experience loss of control of the tongue, collection of fluid in the oral cavity, weak bolus propulsion during swallowing and possible aspiration.[28]

• *Proof of negligence and expert witnesses*

Proof of negligence is based on comparing the actions with those that a reasonable clinician, under the same circumstances, would have performed.[25] Expert witnesses (colleagues) are often called upon to provide

information beyond the common knowledge of the legal representatives, such as scientific evidence, interpretation of special investigations and test results, diagnosis and clinical procedures performed. They will also be asked to report on the extent of the damage caused by the accused colleague, and ascertain whether the accepted standard of care was given and provide a report on their findings. A report from an expert witness should not include personal allegations, accusations or assumptions of guilt.[25] The expert witnesses' report could be presented in a court of law, and all observations, opinions and deductions should be defensible and justifiable. Also consider that one never knows the exact circumstances, or issues that may have been beyond the clinician's control which could account for their actions.[25]

• Patient negligence and dual responsibilities

There are times when the patient could have acted in a negligent manner, by not following the clinicians instructions and thus adding to their own injury or damage. This is called "contributory negligence", and often results in their being unable to claim for damages caused by the clinician.[25] To this end, clinicians can protect themselves by always giving written instructions to patients, preferably via email before the procedures. This may include all aspects regarding the post-operative home care, i.e. "As you will receive a double lower jaw block injection, you should not chew or eat anything until such time as the injection has worn off. This is to prevent you from damaging the tongue, cheek or lips"

What are the common causes/reasons for dental malpractice?

Several common scenarios are associated with dental malpractice.

• Limited or inadequate diagnostic testing

A dental record should include, but not be limited to: medical history (updated periodically), charting of restorations, tooth decay, missing teeth, occlusion, temporomandibular joint status, cancer screening, periodontal screening, presence of diseases and pathology in all forms, and radiographic records where indicated.[27]

• Inadequate treatment planning

Inadequate or no treatment planning is a frequent cause for dental malpractice.[7] Deviations of the initial treatment plan should be clearly indicated. Dental records should at all times be adequate and contain exact and comprehensive descriptions of every procedure, event or interaction.[27]

With inadequate records the dentist will be at risk for being asked the following valid question by an attorney: "How can you testify as to what happened if your dental record does not detail the event and/or refresh your memory?"[27] Written records should be in black ink if possible.

• Lack of informed consent and poor record keeping

When a patient initiates a relationship with a general practice, there should be a written general informed consent covering the common areas of the doctor patient relationship and practice policies.

When a patient is engaging in a specific activity or procedure, there should be much more specific written informed consent detailing the procedure, alternatives, risk of the procedure and show that all the patient's questions were answered in advance of the treatment.[27]

• Clinical / treatment errors

Clinical and technical errors during treatment are common causes in malpractice cases.[7,9,29]

• Unfavourable and unsuccessful clinical outcomes not normally expected from the procedure

Some procedures do end with unsuccessful or unfavourable results even if the patient signed a consent document. The patient may need money to enable emotional and physical recovery. If the harm was caused by a lack of or inadequate procedure done by the dentist, this is usually part of the damages owed to the patient.

Although negative clinical outcomes happen every day, they are not proof of a deviation of the standard of care. In the case of malpractice claims, plaintiff (patient) attorneys are looking for why a routine procedure caused the patient injury or harm and where the dentist went wrong or failed.[27] For example, if a tooth is abscessed, the patient is visibly swollen (has pus surrounding the tooth), the appropriate care is to open the tooth to gain access to the pulp chamber, perform drainage, place medication inside the canals and prescribe appropriate medication (e.g. antibiotics and anti-inflammatory medication) and bring the patient back for completion of the root canal treatment once the swelling and pain has resolved. To finish the root canal treatment in one visit under these clinical conditions, could easily exacerbate the infection and land the patient in hospital with a potential life-threatening condition. Such an action

taken by a clinician is below the standard of care for the given clinical circumstance.

• Lack of communication and adequate patient management

It is almost universal that the patient who has lost trust in his/her dentist, and where the dentist did not respond in a communicative, compassionate empathetic manner, is much more likely to bring some kind of action or claim against a dentist.[27] Lack of communication between the dentist and patient can help an attorney to establish the causal link between the injury and the deviation of the standard of care by showing the dentist was distracted, had poor organizational skills, or was not keeping up with the standards expected of a clinician doing specialist procedures.[27]

Patients who relocate to a different geographical area often change dentist. Practitioners then get to see their predecessors work. If a practitioner is faced with such a situation, make objective and observational statements. Think very careful about what you want to say and do not try to impress the patient by making negative comments about your colleague. Instead of saying: "Man, he really did a shoddy job in placing this implant", rather say " Your implant is showing because there is no bone to support the soft tissue".

Transgressions and common forms of dental malpractice

Analyses of malpractice claims in South Africa revealed the following common forms of dental malpractice:[4]

- Oral surgical malpractice claims mainly comprised of poor presurgical planning and implants being placed in the incorrect position, thereby compromising the final prosthodontic rehabilitation of the patient. Following these complications, dentists also failed to adequately manage and to appropriately refer these patients. Exodontia malpractice claims included broken or fractured roots, lingual nerve damage and oro-antral opening, and failure to diagnose surgical emphysema.
- Endodontic transgressions included failure to diagnose root perforations during the performance of a root canal, and omitting to inform the patient of a fractured endodontic file.
- Prosthodontic malpractice claims mainly comprised delivery of poorly fitting dentures and failure to achieve proper occlusion.
- Periodontics – failed surgical procedures.
- Orthodontics – refusal by the clinician to remove orthodontic appliance.

Other transgressions and common reasons for dental malpractice include the following:

• Inadequate diagnostic testing

Failure to:

- make a correct diagnosis or treatment without a diagnosis
- notice/diagnose oral health problems (e.g. periodontitis, oral cancer)
- take into account a patients relevant medical history (i.e. prosthetic joint replacement)

• Inadequate treatment and clinical errors due to improper treatment

- Unnecessary extraction of teeth or extraction of the wrong tooth
- Inserting poorly fitting fixed prostheses ultimately resulting in permanent damage to teeth or periodontium
- Improper usage of dental tools, equipment or technology (e.g. Laser resulting in permanent tissue damage, pain and suffering).
- Permanent or temporary structural injuries or damage to the tongue, jaw, chin, lips or teeth

• Unfavourable outcomes

- Fracture of jaw due to a dental procedure
- Improper or negligent administration of local anaesthesia resulting in broken needles, nerve injuries resulting in permanent or temporary numbness or loss of taste or sensation
- Adverse reactions to dental drugs
- Infections following treatment
- Temporomandibular joint disorders

Practical guidelines on how to prevent and avoid malpractice claims and litigation

1. Ethical decision-making

In our treatment discussions and planning we must attempt a systematic and reasoned approach to the question: "What is the right thing to do?" This will help dental professionals to conduct a safer and more ethically-based practice.

Dental clinicians who provide evidence- based services, based on beneficence, non-maleficence, truthfulness and

respect for patient autonomy and in keeping with professional standards of care, are fulfilling their professional and ethical obligations. The ethical principles are the moral rules, foundations and justification for our treatment decisions and behaviour.

Asking the following fundamental ethical questions can help to navigate ethical minefields and assist the clinician in avoiding malpractice claims and subsequent litigation:

- Beneficence – what is in the patient's best interest?
- Non-maleficence – Will it do harm?
- Autonomy - Informed consent – Have I informed the patient appropriately
- Justice – Is it fair to the patient?

2. Balancing benefits versus risks

Balancing the benefits and risks of treatment plays a role in nearly every medical and dental decision. For every treatment option the dental clinician has to weigh and balance competing values of the patient and the service provider; searching for consistency, longevity, predictability and success in treatment outcome as well as considering the impact of our actions on patients. All treatments have potential risks. Dental clinicians have an obligation to minimize potential harms and maximize benefits of therapy. It is therefore always important to ensure that the benefits of treatment are greater than the potential harms. This fundamental ethical principle of balancing benefits against risk is critical to ensure the treatment that the patient will receive is in his/her best interest. Beneficence and non-maleficence are complementary principles because both rest on the fundamental ground rule of treatment outcome that is in the patient's best interest.

By providing informed consent, dental clinicians give patients the information necessary to understand the scope and nature of various treatment modalities and their potential risks and benefits. This empowers patients to make informed choices about the treatment they need or desire. Ultimately, the potential benefits of any therapy must always outweigh the potential risks in order for it to meet the requirement of "being in the best interest of the patient".

3. Risk management – minimizing risk exposure

Appropriate risk management protocols will not only reduce risk exposure but also improve patient care.[30]

Following are some important considerations and practical guidelines for the clinician to minimize risk exposure and to avoid malpractice claims:

- *Patient assessment*

Do a proper evaluation of the patient's medical, dental and personal history. Assess and understand the patient's needs, desires, expectations and suitability for dental treatment. Never ignore the patient's expectations otherwise the case is destined to fail. Always note the main complaint in the file.

- *Treatment planning and record-keeping*

Ensure that study models, radiographs, photographs and a diagnostic wax-up are available for the treatment work-up. Document everything - it is still your best defence in case of a complaint.

- *Treatment discussion and patient education*

Educate patients so that they fully comprehend all treatment possibilities, sequencing of treatment, limitations and risks. A diagnostic wax-up communicates the treatment plan to be used throughout the entire restorative process. Use photographs to illustrate the proposed treatment(s) and to document progress of treatment. Limit the act of creating false expectations and guarantees and inform patients in advance about potential risks and complications.

- *Always be on the alert for medical risk factors*

Be alert for risk factors such as diabetes, immunosuppressed patients, smoking, medications that may influence the outcome of treatment or have the potential to cause complications.

- *Explain benefits, risks and alternatives (including no treatment)*

Explain the benefits, risks and alternatives to patients as part of the consent process and record the discussion on the patient's record and in the final treatment plan. Never raise unrealistic expectations of what can be achieved.

- *Obtain informed consent*

Identify and disclose all positive (benefits) and negative (risks) aspects of treatment options to the patient. Obtain informed consent from the patient prior to commencing treatment and ensure that it is part of the treatment record. Never provide additional services that are beyond the patients informed consent, unless the patient signs written acceptance to such changes.

- *Cost implications*

Provide the patient with an estimate cost of the various treatment options before the final decision is made in terms of

a treatment plan. Let the patient know beforehand what the potential additional cost is for of treating complications (e.g. root canal treatment), re-treatments, and managing failures. This is important when a patient is to receive conscious sedation as the patient cannot consent to changes under those conditions. In the event that changes are necessary, the patient is neither surprised nor angered by incurring the additional expense.

• Recognise the limitations of your skills

Offer referral to specialists in complex cases if you lack necessary training, experience or technical competence.

• Utilizing evidence-based technologies and methodologies

Utilizing current evidence-based technology (e.g. CBCT) and methodologies in a clinical acceptable manner or prescribed protocol will vastly increase the chances for clinical success and reduce morbidity or complications.

• Continuing professional development

Ensure that you are knowledgeable in the latest dental procedures and products.

Acquire the necessary knowledge and develop the prerequisite clinical skills before attempting advanced aesthetic treatment modalities.

• Never deviate from the acceptable standard of care

Perform your duty to perfection, always provide the best possible and conservative care, always act in the patients best interest, and never place the patient's health at risk for personal gain. Allow adequate time in your schedule for excellence, quality care and artistry.

• Dental materials

Use the best evidence-based materials available that are effective, safe, predictable and affordable.

• Team effort

Work in a team if at all possible. An ideal treatment plan can often be achieved only by a team effort involving various specialists, oral hygienists and laboratory technicians.

Ensure good communication with all colleagues (inclusive of the dental technician) involved in the patient's care to ensure they understand what is expected of them.

• Dental laboratory

Choose your laboratory technician with care. Find an "artist" who understands your work, shares your work ethic and aesthetic goals and who does not mind reworking a prosthesis until it is perfect. Take advantage of the dental laboratory technician's knowledge regarding diverse restorative options offered by modern dental products. Establishing a team relationship with your laboratory technician helps build confidence and ensures consistent and successful treatment outcomes, especially in complex cases. Involve your dental technician from the start of the planning process, it will prevent disappointments later on. The dental technician is an essential member of the team.

• Treatment selection and staging

Proceed with prosthodontic, orthodontic or implant treatment only when periodontal disease and caries is under control. Always select the most conservative treatment option, especially in younger patients with un-restored healthy teeth. Less invasive or more conservative options such as bleaching, orthodontics, and resin-bonded composites should be offered to the patient as alternative options to ceramic veneers/crowns. Always give the patient an opportunity to observe the appearance and shade of veneers, crowns or bridges prior to final cementation.

• Maintenance care

Explain to patients how to care for any new implant/conventional prosthesis and stress the importance of rigorous oral hygiene and regular dental check-ups. Secure patient commitment to regular dental check-ups and oral hygiene maintenance program in order to maintain implant, periodontal and rehabilitation work performed. This is essential to long-term success. Consider a log of rehabilitation, periodontal and implant patients at your practice to ensure that appropriate recall intervals are maintained.

• Communication

Listen to your patient, be open and honest about treatment options and explain all options, not just those that you are interested or experienced in performing. If it is in the patient's best interest to be referred, then do that. In the long run it will benefit your practice and you will be seen to act with integrity.

• Deal appropriately with dissatisfied patients

Never rebuff a patient when he/she has expressed dissatisfaction with treatment at an early stage and make

a request for remediation, e.g., retreatment, referral for a second opinion or a refund. To avoid litigation in cases where dentists have been threatened or dissatisfaction expressed by the patient, the optimal course of action by the dentist is to simply refund the fees paid by the patient, refer the patient for a second opinion and/or retreat the patient at no charge.[27]

Conclusions

Dental malpractice claims are extremely expensive, emotionally stressful and time-consuming. It is therefore in the patient's as well as the clinicians' best interest to prevent dental malpractice claims. Dentists have an ethical duty and obligation towards their patients to observe ethical principles and code of conduct in practice, as well as to adhere to acceptable evidence-based standards and protocols of diagnosis and treatment. Clinicians who fail to adhere to the fundamental ethical principles not only violates the trust placed in them, but may also expose themselves to malpractice and litigation.

To provide cautious, skilful and prudent care, clinicians need adequate training and experience. Clinicians should also follow evidence-based science to advance their skills, stay up-to-date with technology, equipment and methodologies, and ensure that they have adequately trained support staff.

Every effort should be made to identify and avoid situations and procedures that may lead to potential harm. Applying ethical decision-making principles and good risk management protocols in dental practice will not only reduce dissatisfaction and risk exposure, but will also improve the standard of patient care.

To best serve the patient, dental clinicians need to act with empathy, integrity, competence and they have to communicate effectively with patients and team members. The better the communication, the less the risk and the more successful the treatment outcome. Empathy and sympathy in treating our patients may go a long way to avoid unpleasant outcomes.

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Stress, burnout, substance abuse and impairment amongst members of the dental profession

Elizabeth Meyer[1]

"Stress is the physiological, emotional and behavioural response of a person seeking to adapt and adjust to internal and external pressures or demands. It is basically a physical survival response leading to a fight or flight reaction".[1]

Dentistry is recognised as a very stressful occupation.[2] Dentists experience daily stress and have to deal with difficult situations on a daily basis. As a highly regarded, skilled professional, the expectations of patients and society places a dentist in a challenging and vulnerable position. Forrest [3, 4] hypothesized that the practice of dentistry is a rewarding but demanding profession. He claimed that dentists need to identify factors that cause stress and must take measures to eliminate or at least reduce the harmful effects of stress on their health and emotions. He claimed that the health of dentists might depend on how successfully they keep the rewards and demands of their profession in proper perspective.

Stress Inducing Factors

1) Work-related stressors are: [5]

- a high patient load;
- lack of sufficient control, especially over resources for effective service delivery, especially in community-based dentistry;
- lack of recognition and appropriate reward;
- lack of social support;
- quality of working life;
- occupational hazards: exposure to HIV, TB, HBV and now Covid 19, ocular problems, eye injuries, latex allergy and musculoskeletal pain.

2) Dentist - Patient Interaction

Attention-seeking behaviour, the discussion of personal problems, manipulative behaviour, non-compliance and chronic pain are examples of dentist-patient interactions that may be very stressful to the dentist.[6]

3) Personality traits of the clinician

The definition of personality[7] refers to individual differences in characteristic patterns of thinking, feeling and behaving. The study of personality focuses on two broad areas: One is understanding individual differences in particular personality characteristics, such as sociability or irritability. The other is understanding how the various parts of a person come together as a whole. Stress may thus be individualised. What is stressful for one dentist may not necessarily be stressful for the next. Denollet[8] alleges that people with Type D were associated with higher levels of perceived stress and increased levels of burnout.

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4) Perception of stress

Although the sources of stress are varied, the important factor is the individual's perception and reaction to the stressor. Most importantly, an individual must alter his perception of a stressor and improve the relevant coping skills. The source of a stressor may be internal or external frustrations, conflicting needs or goals and pressures. Identification of the stressor could enhance coping skills.[6] According to Moore and Brodsgard[9] dentists perceive the following as intense stressors: keeping to schedule; causing pain; workload too heavy; late and anxious patients.

How much stress a person can tolerate comfortably varies not only with the accumulative effect of the stressors, but also with such factors as personal health, level of energy or fatigue, family situations and age.[6] In South Africa[10] dentists' stress derives furthermore from rising costs, problems with medical schemes, external interference by government and insurance companies, repetitive nature of the work, feelings of isolation, risk of infection and litigation. The most satisfied and least stressed dentists are older, report higher income, attend more continued education and employ more dental auxiliaries than those who are less satisfied.

Professional Burnout

One of the possible consequences of chronic occupational stress is professional burnout.[11] Burnout is defined by three co-existing characteristics: Firstly, the person is exhausted, mentally and emotionally. Secondly, he develops a negative, indifferent or cynical attitude towards patients, co-workers – so called de-personalisation or dehumanisation. Finally, there is a tendency for persons to feel dissatisfied with their accomplishments and to evaluate themselves negatively. The effects of burnout, although work-related, will often have a negative impact on a person's personal relationships and well-being.[6, 12]

It is interesting to note that health professionals who burnout relatively early in their careers were more likely to stay in their chosen careers and adopt a more flexible approach to their work routines. This suggests that burnout does not necessarily have to result in far-reaching negative consequences.[13] Researchers who looked at three types of clinicians found that general dentists and oral surgeons had the highest levels and that orthodontists had the lowest levels of burnout.[14, 15]

Substance abuse

Although substance abuse may be divided into licit (i.e. alcohol, tobacco, cannabis and prescription drugs) and illicit substances, the intention of this article is to concentrate on alcohol and prescription drugs as substances of abuse.

Alcohol

Anecdotally, dentists have been singled out as the healthcare professionals most likely to be subjected to severe stress, burnout, failed marriages, depression, substance abuse and suicide.[16]

Stress and health problems among dentists were determined by Randkin and Harris.[4, 17] They reported that dentists are vulnerable to health problems due to the stress associated with their profession. Unfortunately, most of the literature on the stress that dentists experience is based on opinions rather than systematic research. However, they reported that most dentists use alcohol or drugs in moderation. Males are more likely to consume alcohol and both male and female dentists use alcohol more frequently than other drugs. Meyers[18] conducted an anonymous survey amongst dentists in the UK to assess overall stress, work stress and health. They found that alcohol use is associated with work-stress amongst dentists.[4]

It is estimated that approximately 10-15% of all healthcare professionals will abuse a substance at some time during their career, a rate in fact similar to that of the general population,[19, 20] although there are some indications that the profession could have an even higher prevalence.[20, 21] Alcohol may be the most commonly abused substance amongst dentists,[20,22,23] but other researchers have not been able to find evidence confirming higher alcohol consumption amongst medical students compared with students in other fields of study.[20, 24] Curtis reported that while 10-12 percent of the general American population becomes addicted to alcohol or drugs at some point during their lives, the prevalence for dentists and physicians is probably 12-19 percent.[21]

The factors underlying substance abuse amongst dentists are complex including work stress, personal vulnerability encompassing temperament, motivation, trait disposition, genetic disposition and 'coping mechanisms.' What remains unclear are the relative contributions of stress and personal vulnerabilities as mediators of Alcohol Use Disorder (AUD).[25] The results of the Winwood study[25] indicated that South Australian dentists suffered high levels of stress/burnout and hazardous levels of alcohol consumption (two to four times higher than the normative South Australian population) were reported, particularly amongst males and rural practitioners.

Of significance, Olivier[4] found that the majority of dentists

polled in his study, believe in the existence of the so-called "conspiracy of silence" where colleagues, friends and next-of-kin are reluctant to report dentists who have dependency problem. This "conspiracy of silence" leads to denial and enables the dentist to continue abusing alcohol.

Clarno[26] focussed on the gravity of the consequences of alcoholism and/or drug dependence within the dental profession. He was of the opinion that dentists suffering from these illnesses can be identified through a pattern of abnormal behaviour and personal, vocational, and social consequences that are progressive and potentially fatal. When denial by colleagues, family, friends, professionals, and office personnel is overcome, enabling no longer perpetuates the illness and help is forthcoming. The sophistication of today's alcoholism treatment provides us with the tools to initiate recovery. The dentist and his or her family has an excellent chance for recovery and everyone gains – the victim, the family, the dental profession, the dental patient, and society. Colleagues and next of kin must recognise their denial and enabling and accept the responsibility to help suffering colleagues. Dentists are just as susceptible to disease as other humans, and the tragedy of a wasted life because of alcoholism is inexcusable with our level of knowledge of alcoholism programs today.

Prescription drugs

According to the American Dental Association's Dentist Well-Being Committee (Dentist Health and Wellness),[21] alcohol is the drug of choice for 37 percent of dentists with substance abuse problems, while prescription drugs (particularly opiates and anti-anxiety agents such as the benzodiazepines) are used by 31 percent, nitrous oxide by 5 percent and street drugs (including cocaine) by 10 percent.

Dental students as well as organised dentistry should be made aware of the dangers of abuse of not only prescription drugs, but also of prescribing outside the dental scope of practice, and especially of self – prescribing.[20]

Many clinicians hold the view that the ability to prescribe drugs for themselves, friends or family is a convenient aspect of the job. They argue it can often save time, and perhaps even resources, to make a quick self-diagnosis and write up a prescription without the need to take time away from work to consult an independent GP or dentist.[27]

Although this practice is technically not illegal, it does raise serious ethical concerns and could ultimately result in a complaint to the HPCSA. The regulators worldwide advise against treating and diagnosing yourself or those close to you.

The HPCSA[28] has handled a number of cases where practitioners have been subject to fitness to practise proceedings for either self-prescribing or for prescribing to a family member or friend. Some more serious cases have also been referred to investigators over allegations of defrauding medical aids in relation to prescription charges. In one case, a doctor faced fitness to practise proceedings before the HPCSA after it was found he wrote out prescriptions in his patient's names for drugs that were for his own personal use.[29]

"Other than in emergencies," the HPCSA[30] says, "you should not prescribe drugs for yourself or for anyone with whom you have a close personal or emotional relationship."

This advice is echoed by the GMC[31] in *Good Practice in Prescribing Medicines* which emphasises the importance of objectivity in providing good care, saying: "independent medical care should be sought whenever you or someone with whom you have a close personal relationship requires prescription medicines." It advises doctors not to prescribe a controlled drug for themselves or anyone close to them except in emergency circumstances where a delay "would put the patient's life or health at risk".

There are many reasons for such tight controls on self-prescribing and prescribing to family/friends, most of which are connected to the loss of objectivity. The GDC[32] cautions: "Everyone needs objective clinical advice and treatment. Dentists who prescribe drugs for themselves or those close to them may not be able to remain objective and risk overlooking serious problems, encouraging or tolerating addiction, or interfering with care or treatment provided by other healthcare professionals."

Causing or fuelling addiction is a major factor in self-prescribing, as the GMC warns: "Controlled drugs can present particular problems, occasionally resulting in a loss of objectivity, leading to drug misuse and misconduct." The guidance adds that doctors who do prescribe these drugs "must be able to justify your actions and must record your relationship and the emergency circumstances that necessitated your prescribing a controlled drug for yourself or someone close to you."

A loss of objectivity leaves clinicians unable to provide optimal care which can result in serious problems being overlooked, missed/ diagnosis delayed or misdiagnosed.

While most clinicians should recognise that prescribing opiates or powerful painkillers is entirely unacceptable, it appears many still believe it is acceptable to diagnose and treat themselves or loved-ones for low-level illnesses such as

chest infections or acne.

It appears that the GMC and GDC take a very strict approach to clinicians who prescribe for themselves or those close to them. Recent GMC fitness to practise proceedings[33] have been raised against doctors for prescribing themselves or loved-ones with drugs such as benzodiazepines and opiates as well as with antibiotics and non-benzodiazepine hypnotics.

It is unfortunate that in South Africa, in spite of similar ethical guidelines and rules set by the HPCSA and the law, i.e. the three relevant Acts (Health Professions Act 56 of 1974, the Medicines and Related Substances Control Act 101 of 1965 and the National Health Act 61 of 2003) the law is not applied effectively to protect both the professional and the public.[20]

Impairment

An impaired dentist is unable to deliver optimal care to a patient. Colleagues who become aware of a dentist's dependency have a professional and ethical responsibility to intervene in a constructive manner.[35] Such interventions can involve discussing the issue with the afflicted colleague, calling upon family, friends or other support systems, offering help and finally reporting the dentist to the HPCSA Health Committee, established in terms of the Health Professions Act No. 56 of 1974 section 15(5)(F).

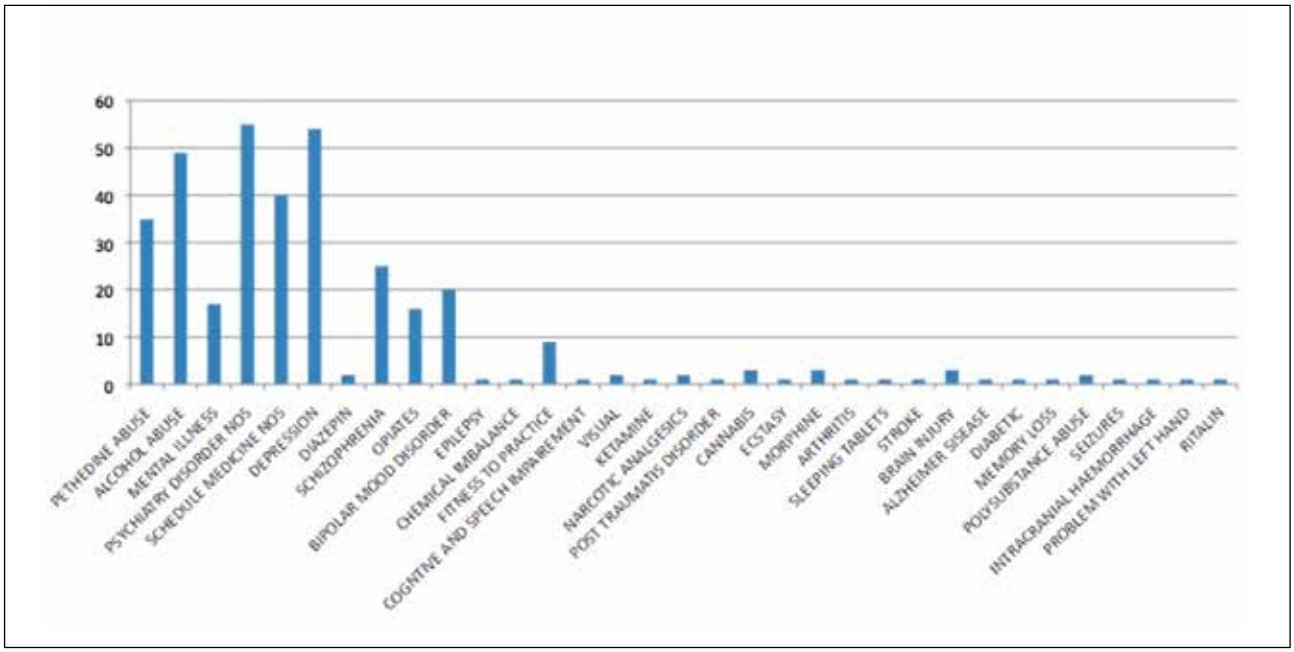
The committee regulates/advises impaired practitioners suffering from mental or physical conditions or the abuse of or dependence on chemical substances, affecting the competence, attitude, judgement or performance of a student or a practitioner.

The committee was established to manage compliance of the practitioners while protecting the public. The committee is non-punitive, meaning that its advice is provided to assist and not to punish.[34]

Conclusion

The dental profession is now, because of the Covid-19 crisis under more stress than ever. There are no indications that the additional financial and emotional pressures of the pandemic will be relieved soon. This will place vulnerable professionals at even a greater risk of stress related impairments. It is important for all dental personnel to be made aware of the risk factors leading to drug and alcohol addiction. It is important that co-workers, colleagues and next-of-kin recognise and understand when a dentist is under stress. It is the imperative that dentists identify support systems and it is perhaps opportune that the professional associations concentrate on creating support structures for the respective professions to help prevent substance abuse and

List of stress-related impairments suffered by health professionals – April 2015 to March 2016 [34]



to provide the necessary support for effective rehabilitation. As previous authors[51] have plead: "A national strategy between professional bodies and academic institutions in this regard is perhaps overdue and should be attended to as a matter of urgency."

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Ethics in aesthetic dentistry Part 1: The complex ethical arena of aesthetic dentistry

Johan Hartshorne[1]

Keywords: aesthetic dentistry, cosmetic dentistry, ethical principles

Executive summary

Rationale

Facial appearance and, specifically the oral region, are of considerable importance in the realm of attractiveness and appearance in contemporary society. Many people seek aesthetic dental care treatment to enhance social acceptance, self-esteem, and to improve their quality of life.

Key points

- Dentistry is continuously being reshaped by new scientific evidence, advances in technology and materials and digitalization.
- Media has made society more aware of appearance and increased the demand for aesthetic dental services.
- There is a trend towards greater 'specialization by general dental practitioners to meet the aesthetic demands of their patients.
- Practices are increasingly being driven by commercialism. This has the potential to tilt the balance or focus of services more towards business interests and profit rather than the patient's best interest.

Practice implications

- The trend towards greater 'specialization' by general dental practitioners in aesthetic and implant dentistry combined with increasing patient expectations and demands, is likely to set off an increase in complaints, negligence claims and litigation cases.
- Dental practice should be driven by three fundamental guidelines, namely fulfilling their ethical obligations, providing services that are evidence-based, and in keeping with the professional standards of care.
- Dental practitioners should embrace this changing market as long as they leave their patients in as good or better health than they found them in, whilst meeting their demands.

The changing face of dentistry

Dentistry is a dynamic profession that is continually being reshaped by new scientific evidence, advances in technology, materials and an increasing focus on digitalization.

Treatment options have increased and the approach to care is now aimed more

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towards prevention and conservation than mere repair. Treatment is increasingly patient-driven rather than entirely dentist-directed, with a greater emphasis on informed consent. The focus and scope of dentistry has also undergone a metamorphosis. Active and aggressive media, which were almost absent 50 years ago, have made our society more aware of appearance and globalised the perception of what is attractive, desirable, and appealing[1]. Collectively, this has prompted a greater demand for elective aesthetic services such as tooth-whitening, tooth colored restorations, ceramic veneers and crowns, dental implants, and "braceless" orthodontics.

This trend has led to an increasing number of dentists that are positioning their practices to appeal to the aesthetic and dental implant market[2]. The trend towards greater 'specialization' by general dental practitioners in aesthetic and implant dentistry combined with increasing patient expectations and demands, is likely to set off an increase in complaints, negligence claims and litigation cases. This is clearly reflected by the number and severity of claims that have grown by more than 50% in the last few years[3].

What is aesthetic /cosmetic dentistry?

Nash[4] defines 'aesthetics' as: "a branch of philosophy dealing with beauty." It can be both enjoyable (subjective and cosmetic e.g. look better and feel better) and/or admirable (objective and definable e.g. whiter and straighter teeth).

Facial appearance and, specifically, the oral region, are of considerable importance in the realm of attractiveness and appearance in contemporary society. Many people seek aesthetic restorative treatment for the same reasons they pursue plastic cosmetic surgery: to enhance social acceptance, self-esteem, and to improve their quality of life[1,5].

Aesthetic dentistry is essentially elective procedures performed on normal tissues in order to enhance appearance whilst maintaining functional integrity. The scope of aesthetic dentistry includes procedures such as teeth whitening (bleaching), resin bonded restorations, ceramic veneers and crowns, reshaping and recontouring teeth, orthodontic therapy, implants, periodontal plastic surgery and orthognathic surgery. Aesthetic dentistry is multidisciplinary and includes the oral hygienist, dentist, specialists and laboratory technicians. The achievement of aesthetic enhancement goals in an ethical manner is only possible through, patient participation, a multidisciplinary treatment approach and excellence in treatment performance[4].

The aesthetic dentistry revolution and its ethical challenges

There is no doubt that an aesthetic revolution has occurred in the dental profession due to changing and increasing demands for elective aesthetic procedures[6], primarily popularized by the media and television[7]. Access to the Internet and various forms of media has increased the public's knowledge and fuelled the obsession and awareness with image and appearance. In the present consumer driven society, patients ask their dentist not only for conventional dental therapy for the purpose of restoring oral health (teeth) but also for newer type aesthetic procedures that create beauty and enhance appearance e.g. teeth whitening and replacement of amalgam fillings with resin bonded composites.

Advances in aesthetic and reconstructive dentistry have revolutionized the management of patients with disfigured (malformed), discolored, worn, missing and mal-aligned teeth, interdental spacing, and disproportioned gums. The dramatic development and improvement in restorative materials and techniques in recent decades have led to an impressive range of capabilities and techniques for restoring these conditions and enhancing an aesthetically impaired dentition or smile. Advanced reconstructive aesthetic procedures such as dental implants, periodontal plastic surgery, orthodontic therapy and orthognathic surgery are also increasingly being used for restoring and reconstructing aesthetically impaired dentitions, jaws and faces.

Although advances in aesthetic dentistry have benefitted patients and improved their quality of life, it has also brought some unique ethical challenges that dental clinicians have to deal with.

Aesthetic services are desirable and lend themselves well to promotional efforts. This trend, driven by the media and by the public demand has begun to foster a practice model of commercialism previously unseen in dentistry[8]. This trend towards commercialism has the potential to tilt the balance or focus of services more towards business interests and profit rather than the patient's best interest. Dentists are taking advantage of the increasing demand for aesthetic procedures by developing their skills and knowledge in this field and promoting aesthetic procedures in their practice. This places a duty on dental clinicians to reduce potential risks and harm by selecting and providing the most appropriate treatment option for each individual case. Dental clinicians are obligated to upgrade their knowledge and skills on all available treatment options so that they are able to inform patients appropriately and adequately on alternative

options, the possible complications and associated risks and to enable them to perform such procedures in a safe and effective manner.

Defining ethics and the fundamental principles of ethics

Nash[4] defines ethics as: "a branch of philosophy dealing with morality". Dentists assume unique moral duties in presenting themselves to society as being uniquely qualified to care for their oral health. Ethics is also used as a generic term for various ways of understanding and examining the moral behaviour[9] and inquiring why an individual action is right or wrong, or establishing the reasons why a person is good or bad[10].

Dentistry has historically been a caring profession with core ethical obligations that centre on the duty to treat and prevent disease and ultimately to promote well being[11]. Our clinical decision-making, behaviour and standard of care is guided by a professional or ethical code of conduct, which is based on four fundamental ethical principles.

The four fundamental principles of ethics that set the moral boundaries, ethical guidelines and duties that drive treatment decisions are:[1] beneficence (promoting or doing good);[2] non-maleficence (preventing harm);[3] autonomy (patient right to make participate in decision-making and make their own choices); and[4] justice (fairness in treating each other justly[9]. Our duties to act in the best interest of the patient, doing good, preventing harm, truthfulness and fairness reflect the underlying nature of the dentist-patient relationship. Ethics help clarify the path of what's appropriate and what's not.

Beneficence (To promote or to do good)

The principle of beneficence expresses the concept that professionals have a duty to care for and to act in the patient's best interest. Under this principle, the dentist's primary obligation is service to the patient with the aim of benefitting or improving the patient's oral health condition. The most important aspect of this obligation is the competent and timely delivery of appropriate and safe dental care within the bounds of clinical circumstances presented by the patient[12]. Patients rely on trust and on their dentist's expert and professional diagnosis to assess their treatment needs. The dentist by virtue that he is also the 'seller' may use his informational advantage to induce overtreatment. Inappropriate or unnecessary care (overtreatment) is usually based on wrong treatment decisions, giving more importance to the interests of the dentist or his practice rather than serving the patient's best interests. The second part of this series: *"Ethical considerations of overtreatment – Patient interests vs. business interests"* is based on the principle of beneficence.

Non-Maleficence (Do no harm)

This principle expresses the concept that dental clinicians have a duty to refrain from harming the patient e.g. doing irreversible harm or placing teeth at risk by selecting appropriate therapies and informing patients of unavoidable risks[12, 13]. Under this principle, the dentist's primary obligations include keeping knowledge and skills current, knowing one's own limitations and limiting and managing risks with the ultimate aim minimizing harms and maximizing benefits for the patient.

Quality and safe dentistry can only be provided when both the clinician and the patient make treatment-planning decisions, based on the patient's general health status and specific oral health and aesthetic needs. The treatment recommended should be safe, predictable, cost-effective, respectful of patient preferences, aimed at preserving normal tissue and function, and based upon current scientific evidence[14].

The third part of this series, based on this principle, will cover the topic of: *"Balancing benefits and risks"*.

Autonomy (right to self-determination)

The principle of autonomy expresses the concept that dental clinicians have a duty to respect the patient's right to select and/or to refuse treatment according to their desires, within the bounds of accepted treatment. Dental clinicians' primary obligation includes involving patients in treatment decisions in a meaningful way, with due consideration being given to the patient's needs, desires and abilities, facilitated by a process of informed consent[8].

Informed consent is obtained by conducting a structured, formal consultation with a patient to explain the goals of treatment, alternative options, the probable benefits (advantages) and risks (disadvantages) of treatment, alternative options, prognosis or treatment outcome, costs and the risks of non-treatment[4]. Dental health care providers are obligated to tell the truth, protect confidentiality and respect privacy[10]. By communicating relevant information effectively, openly and truthfully, dental practitioners assist patients to make informed choices about all treatment options available and to participate in achieving and maintaining optimum oral health, rather than promoting the most profitable option.

Part 4 of this series is based on the principle of autonomy, will discuss: *"Informed consent – How much information is adequate?"*

Justice (fairness)

The fourth fundamental ethical principle is justice. Justice expresses the concept of fairness in treatment, respect for people's rights, and demands consideration of fair distribution of scarce resources[10]. Justice requires that dental health care providers ensure that patients are given the same treatment options, as anyone would have received in a similar position.

Conclusion

Dental clinicians that are providing aesthetic dental services that are evidence-based; built on the foundational concepts of beneficence, non-maleficence, truthfulness and respect for patient autonomy; and in keeping with professional standards of care, are fulfilling their professional and ethical obligations. The ethical principles are the moral rules, foundations and justification for our treatment decisions and behavior. Failure to adhere to the fundamental ethical principles not only violates the trust placed in the dental profession, but also leaves the clinician vulnerable to litigation.

Dental practitioners should embrace this changing market as long as they leave their patients in as good or better health than they found them in and that they should be meeting their demands.

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Ethics in aesthetic dentistry Part 2: Ethical considerations of over-treatment – patient interests vs business interests

Johan Hartshorne[1]

Keywords: Aesthetic dentistry, ethics, professionalism, commercialism, over treatment

Executive summary

Rationale

The aim of this paper is to clarify the concepts, causes, and ethical issues related to professionalism, commercialism and overtreatment, and to provide the dental practitioner with some practical ethical guidelines on how to balance patient and business interests.

Key points

- Most people feel that oral health has a major bearing on their appearance, comfort and how they eat and believe that oral health was an important factor in terms of their self-confidence and social life
- Dental imperfections impact the psychosocial well-being of individuals.
- Elective aesthetic (want) dentistry is cosmetic improvement or enhancement of normal teeth or soft tissue.
- Necessary (need) dentistry is any dental care that will improve the patient's physical, mental, and social well-being.
- Elective and necessary dentistry are no longer considered mutually exclusive.
- Professionalism imposes high ethical standards on dentists, whilst business imposes management requirements.
- There is a conflict of interest between professionalism (caring dentistry) and commercialism (selling dentistry)
- Overtreatment (inappropriate or unnecessary care) is unethical and not evidence-based.
- Patient treatment is grounded on the fundamental ethical principles of autonomy, beneficence, non-maleficence and justice.
- The key element of any procedure is to ensure that the value and benefit that the patient receives is always greater than the potential risks and harms that will occur with the proposed treatment.

Practice implications

- Never act against the patient's 'best interests' or in a way that may harm a patient.
- Efficiency, cost containment and increased productivity are the business tools of a modern dental practice that is used to increase profitability without sacrificing the

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interest of the patient or doing harm to the patient.

- Aesthetic dentistry should never be concerned only with smile enhancement without thorough examination and addressing the health status of the entire masticatory system.
- Dental clinicians practicing aesthetic dentistry must ensure that they are knowledgeable and skilled in its methodology, techniques and materials.
- Dentists must also know their limitations and when to refer cases to a specialist.
- Salesmanship (selling aesthetic dentistry) should never supersede clinical judgment and the obligation to care in the best interests of the patient.

Introduction

It is a commonly known fact that increasing demand for dental care may be better for the practice but is not necessarily better for the patient. In fact, patients may often be worse off.

At the heart of this problem are the two fundamental images of dentistry namely professionalism and commercialism.[1] The primary goal of a profession is caring for the patient, whilst that of a business is to generate a profit. The core values of professionalism are thus in conflict with what is in the best interest of the business.

As competition for business increases and the economy continues to struggle, it may become tempting to relieve financial pressures by overstating one's realm of expertise or recommending more dental work than a patient actually needs.[2]

Additionally, the increased focus and demand for aesthetic dentistry has also forced the profession to face the ethical dilemma of when does dental treatment in the name of improving appearance become necessary, when it is deemed unnecessary or inappropriate? [3]

The aim of this paper is to clarify the concepts, causes, and ethical issues related to professionalism, commercialism and overtreatment, and to provide the dental practitioner with some practical ethical guidelines on how to balance patient and business interests.

The context and rationale of aesthetic dentistry

The World Health Organization[4] defines health as: "A state of complete physical, mental and social well-being and not merely the absence of disease and infirmity".

Oral health affects people physically and psychologically and influences how they grow, enjoy life, look, speak, chew, taste food and socialize, as well as their feelings of social well-being.[5] A recent study indicated that the majority of people (76%) felt that oral health had a major bearing on their appearance, comfort and how they ate, whilst less than 50% said they believed that oral health was an important factor in terms of their self-confidence, social life and romantic relationships. [6]

Studies have shown that dental imperfections in tooth shape color and size, dental developmental defects,[7] dental fluorosis, missing teeth,[8] dental malocclusions and mal-aligned teeth, and missing teeth and gingival appearance impact the psychosocial well-being of individuals.[9,10] Management of these conditions fall within the realm of aesthetic dentistry and contributes towards the enhancement and improvement of physical, social and psychological well-being. Aesthetic dentistry takes the psychological suffering and wishes of the patient into account and is highly sensitive to social and psychological norms and values. [11,12]

Defining what is elective and necessary dentistry

Elective aesthetic dentistry can be defined as the cosmetic improvement or enhancement of normal teeth or soft tissue.

From a biological point of view, much of elective aesthetic dentistry is *want* dentistry and not *need* dentistry. Procedures generally considered as elective dentistry are:

- teeth whitening
- removal of amalgam fillings for cosmetic purposes
- closing diastemas with resin bonded composites
- placement of veneers
- orthodontic therapy to improve appearance of anterior teeth.

Necessary dentistry on the other hand is any dental care that will improve the patient's physical, mental, and social well-being. Most of necessary dentistry has an aesthetic or cosmetic component. The overwhelmingly powerful role that physical appearance plays in patients' lives, increasingly places aesthetic dentistry in the category of necessary dentistry.

Dentists' need to acknowledge that patients' needs, wants, and desires are thus primary determinants of necessary care. According to Di Matteo,[13] elective and necessary dentistry are no longer considered mutually exclusive.

The conflict of interest between professionalism (caring dentistry) and commercialism (selling dentistry)

Dentists have a foot in each of these conflicting worlds, professional and business. The primary goals of a dental practice are to achieve clinical success through serving the public and secondly, to achieve economic success by

generating profit. These two goals are in conflict with each other and at the core of the dilemma of over-treatment. The primary goal of service to the public is achieved by acting in the best interest of the patient by treating and preventing disease, and to protect and do no harm.

Professionalism implies that dental clinicians are guided by an ethic of care.[14] They also compete in a capitalist market economy, guided by economic or profit motivations in order to survive and thrive.[15] Professionalism imposes high ethical standards on dentists, whilst business imposes management requirements. [16]

The commercial philosophy is based on the foundation that dentistry is a business based on a value system of making a profit. The patient's needs and well-being can potentially be overlooked in the process of seeking financial gain.

In comparison, the professional philosophy is based on truth, values, and moral boundaries. The professional health care view accepts individually and collectively an obligation to "do good" and to "do no harm" to patients.

In real life, there is a very delicate balance between the ideal caring world and the real business world of a dental practice. If a practice is not successful from a business perspective, dental professionals are not going to be able to care for their patients. Taking care of people in a profitable manner is vitally important if you want to have a sustainable business. Sustainability of the business therefore requires that the interests of the dentist must be served. One of those interests is economic success. [17] It is intelligent to be concerned about remuneration, and that is a legitimate goal of a professional. Efficiency, cost containment and increased productivity are the business tools of a modern dental practice that is used to increase profitability without sacrificing the interest of the patient or doing harm to the patient. [17]

Overtreatment in aesthetic dentistry – causes and ethical concerns

- *Unnecessary care*

Overtreatment can be defined as unnecessary or inappropriate dental care. Unnecessary dental care is basically treatment done that is not required or performed in excess for financial gain. Convincing patients that removal of functional and non-defective amalgam restorations and replacement with direct resin bonded composites or ceramic restorations are mandatory for systemic health reasons is an example thereof. This type of treatment is unethical and not evidence-based.[18]

Patients frequently receive treatment plans from their dentist for veneers and an occlusal rehabilitation. Many of these over-treated cases present with fracture failures of ceramic restorations, de-bonding of veneers placed over grossly over-prepared dentine surfaces.[18] Such unnecessary care is not in the patient's best interest.

- *Inappropriate care*

Inappropriate dental care (e.g. treatment that is technically and clinically not preferred) is treatment that should have been done differently. Examples of such cases include dental treatments that are performed in the absence of basic disease control and follow-up care (e.g. doing orthodontic treatment or placing implants when the patients has periodontitis), or overly aggressive treatment approaches with financial gain or profit as the primary motive. It is not uncommon to see multiple porcelain veneers or crowns used on cases that could have been more appropriately managed with orthodontic therapy and/or teeth whitening.[19]

A full coverage anterior ceramic crown on a tooth with 40 to 50% structural damage is clearly a more aggressive approach where a bonded porcelain veneer would be a more appropriate option.

Factors contributing towards overtreatment

Various factors can stimulate or encourage overtreatment:

- *Economic environment:* An environment characterized by a struggling economy and a glut of dentists in "upscale communities" is the ideal potential breeding ground for overtreatment to be able to survive financially and to support an above average lifestyle after covering high overhead expenses. [14,19] Solo practitioners are particularly susceptible to the financial pressures that arise from owning and running a dental practice, and especially so during troubled economy. [2]

- *Greed and self-interest:* Greed together with an aggressive, overzealous business approach that has appeared along with the heightened emphasis that is being placed on aesthetic dentistry, within an already competitive dental industry, can be a potential motivating force towards unnecessary care.[19] Dentists impose their own preferences for aesthetic care whilst not taking the desires and best interests of the patient into consideration. The potential for fast profit can attract operators of lesser integrity. Financial income to the practitioner should be related to the needs and decisions of the informed patients, not the needs of the practitioner.
- *Profit motive:* In the commercial marketplace, dentists

have a proprietary interest in their product or service. Profit is the goal. Overtreatment is sometimes the only alternative to prevent struggling to obtain profit and being eliminated from the game.[14] The corrupting force in dentistry is profitability. When a dentist puts profit before a patient's needs, optimum care becomes all about funneling people towards extensive care such as "extreme makeovers", removal of amalgams and placement of as many implants as possible. Least invasive and less profitable services will be neglected and the more aggressive and profitable ones promoted heavily.

• *Patient insistence and demand for instant gratification:* Patient insistence and increased demand for cosmetic enhancements, (promoted by the media) and the patient's right to self-determination, has been a real driving force promoting aesthetic dentistry. [20]

• *Dental insurers/dental insurance:* The omnipresence of dental insurers or medical aids trying to impose their financial needs on patients and dental providers through policy treatment restrictions, sub-minimal benefits and establishment of alternative care delivery systems have the potential to drive practice decisions, and to place unduly financial pressures on practitioners that may prompt overtreatment or inappropriate treatment. [14]

• *Salesmanship and selling:* When selling aesthetic dentistry, there is a great psychological aspect because the dentist can take advantage of the vulnerability of the patient who wants to look better. Selling cosmetic rehabilitation to the public represents the very real possibility of overtreatment by exploiting human vanity and ignorance and its less costly, more biologically acceptable alternatives.[19] Patients rely on trust and on their dentist's expert and professional diagnosis to assess their treatment needs. The dentists by virtue that he is also the seller may use this advantage to induce overtreatment.

• *Overzealous marketing and promotional efforts in dentistry:* The popularity of both aesthetic dentistry and business management courses say much about the direction in which many dentists see themselves heading.[19]

In addition, aesthetic services are desirable and lend themselves well to promotional efforts and marketing on Web pages.[17]

• *Technological and digital innovations:* Innovations by dental supply companies (e.g. bleaching materials and techniques, laminate veneer techniques and materials, and CAD/CAM systems) make aesthetic dentistry treatments easier to accomplish and more aesthetically pleasing.[14]

Ethical considerations in overtreatment

Patient treatment is grounded in the fundamental ethical principles as described in Part 1 of this series.

• *Autonomy (Informed consent)*

To quote Christensen[18]: "Over-treatment in the name of aesthetic dentistry without informed consent of the patient, primarily for the dentists' financial gain is nothing less than overt dishonesty in its worst form"

Dental clinicians should elaborate on different treatment options available, the advantages, risks, costs involved of each alternative, their prognosis and long-term consequences, and allow patients the opportunity to participate in treatment planning discussions rather than focusing on promoting the most profitable treatment option. By listening to the desires and wants of patients and communicating relevant information openly and truthfully, dental practitioners assist patients in making informed choices about the treatment options available and also empowers the patient to participate in achieving and maintaining optimum oral health.

Patients who are fully informed will better understand the treatment and implications thereof and how to maintain optimum oral health to ensure a predictable and successful outcome. A patient that demands and accepts a radical treatment plan will then also accept more responsibility for their treatment.

• *Beneficence (Promoting or doing good)*

Aesthetic requirements are only a small part of the whole system of health care and quality of life. The treatment could be applied for medical reasons, preventive purposes, health promotion, or it could be structural, functional or aesthetic in nature. Besides looking at the patient's desires, periodontal health, tooth structure and occlusal health should also be managed and included as part of the overall treatment plan to ensure a successful treatment outcome with long-term stability. The responsibility of the dentist is to do what is best for the patient, physically and emotionally. Every patient should be presented with an ideal treatment plan that has been developed to take into consideration the patient's clinical, functional, and aesthetic needs. Dentists have the responsibility to provide a high standard of professional care and they are accountable for the intended benefit and

outcome of any treatment.

- *Non-maleficence (Preventing harm)*

Dentists have a duty not only to improve the oral health of their patients, but also not to harm them whilst doing so. Quality and safe dentistry can only be provided when treatment-planning decisions are made by both the clinician and the patient, based on the patient's general health status and their specific oral health and aesthetic needs, wants and desires. The treatment recommended should be safe, predictable, cost-effective, and respectful of patient preferences, aimed at preserving normal tissue and function, and based upon current scientific evidence.

Questionable "invasive" and "aggressive" "cosmetic" dental practices have become too well accepted within dentistry. Teeth are put at risk by removing and replacing perfectly serviceable restorations simply because they are silver –or gold-colored. Teeth are also placed at risk when they are damaged by irreversibly removing healthy tooth structure for the placement of porcelain veneers or full ceramic coverage.[18]

This principle requires that the health care providers (dentists) never act against the patient's 'best interests' or in a way that may harm a patient. Patients with serious health problems are at increased risk of suffering complications. Aesthetic dentistry should never be concerned only with smile enhancement without thorough examination and addressing the health status of the entire masticatory system.

Dental clinicians practicing aesthetic dentistry must ensure that they are knowledgeable and skilled in its methodology, techniques and materials. Dentists must also know their limitations and when to refer cases to a specialist.

The implicit assumption accompanying any treatment is that the benefits of that treatment will outweigh any negative consequences or risks. The treatment proposed should also be better than no treatment at all.

Practical ethical guidelines

The following are some practical guidelines for ethical aesthetic dentistry that will enable the dentist to act in the patient's best interest, deliver predictable treatment outcomes that are based on realistic expectations, and to ensure patient satisfaction:

- Listen to, and understand the patient's concerns, desires and expectations.
- Take a thorough history and perform a complete examination before proceeding with treatment discussions.
- Ensure that all treatment options are presented to the patient. The option of doing nothing must also be presented as a viable option.
- Ensure that the patient is properly informed about advantages, disadvantages, risks and costs relating to treatment alternatives.
- Treatment plan discussion should start with the least invasive and progress towards the more invasive options.
- Never impose your own aesthetic preferences onto the patient or promote procedures that will provide the best financial gain.
- The benefits of the proposed treatment modality should always be greater than the amount of potential harm that can be done.
- Do not undertake any advanced or extensive aesthetic procedure until all underlying biological disease has been treated first.
- Use the least invasive option that will accomplish the patient's aesthetic goals.
- Salesmanship (selling aesthetic dentistry) should never supersede clinical judgment and the obligation to care in the best interests of the patient.
- Skills development and understanding of procedures and materials and the biological environment are key elements in ensuring that the patient's best interests are being served, and to prevent litigation.

Conclusion

The trend toward an increasing demand for "aesthetic" or "cosmetic" dentistry is an example of how confusion between business principles and professional care plays out in the dental world.

The dentist's primary duties and obligations are:

(i) to ensure that the patient has been appropriately informed, participated in the treatment discussions and given consent to treatment

(ii) to provide competent and timely dental care that is in the patients' best interest

(iii) to prevent acting against the patients 'best interests' or in a way that may harm a patient.

This should be achieved by keeping knowledge and skills updated, communicating truthfully and without deception and maintaining professional integrity with due consideration being given to the needs, desires of the patient within the clinical limits and circumstances presented by the patient.

The key element of any procedure is to ensure that the value and benefit that the patient receives is always greater than the potential risks and harms that will occur with the proposed treatment. What is best for the *patient* should

always come first, not what is best for the dentist or the practice. What is best for the patient involves satisfying the patient's desires whilst achieving a successful predictable outcome of function, long-term stability and quality of life.

If dentists are going to promote themselves as aesthetic dentists, they should have appropriate skills, understand the characteristics of the materials, and know how to place them in the biological environment.

From a business and professional point of view, overtreatment makes no sense. A dentist's integrity and reputation are his greatest business asset. It is not the flashy car you drive or house you own; it is your reputation and whether your patients like you enough to tell other people about you.

This paper will hopefully give dentists a better perspective and appreciation of running a business successfully without compromising patient care and professional integrity.

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Ethics in aesthetic dentistry Part 3: Balancing benefits and risks

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Keywords: aesthetic dentistry, ethics, benefits, risks, harms

Executive summary

Rationale

- The ethical principle of "first, do no harm" is a fundamental principle and key foundation of dental practice and is considered to be a moral imperative of a dental practitioners' behavior.
- The aim of this paper is to elucidate the ethical issues and the treatment processes related to identifying, communicating and avoiding known or potential risk factors. Practical guidelines are given on how to maximize benefits, minimize risks and avoid harm.

Key points

- One of the most common ethical dilemmas is the conflict of interest between the two fundamental ethical principles, namely beneficence *("to do good")* and non-maleficence *("do no harm")*.
- The principle of non-maleficence involves taking positive steps to actively prevent or avoid any act (i.e. financial, emotional or physical) or treatment that would be against the patient's best interest. Avoiding harm can also be met by doing nothing.
- Dental clinicians have an obligation to minimize potential harms and maximize benefits of therapy.
- Ultimately, the potential benefits of any therapy must always outweigh the potential risks in order for it to meet the requirement of "being in the best interest of the patient".
- To best serve the patient and building a trusting relationship, dental clinicians need to be competent, compassionate and communicate effectively and consistently with patients.

Practice implications

Risks are best managed through:

- Proper patient assessment and treatment planning

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- Discussion of treatment options, good communication and informed consent
- Allowing adequate time for procedures
- Perform the most appropriate treatment that will meet the patient's desires and unique circumstances.
- The cost of the proposed treatment plan is of great relevance.
- Patient commitment to oral hygiene maintenance and regular follow-up
- When in doubt or lacking necessary skills, refer the patient to a specialist
- Commit to continuing professional development

Introduction

The ethical principle of "first, do no harm," is a fundamental feature of the foundation of health practice since Hippocratic times and is considered to be a moral imperative of health practitioners' behavior.

No treatment comes without risks. There are actual and potential risks in each treatment that may result in varying consequences, complications, and harm either physically, emotionally or financially. Harm from overuse, misuse, errors, failures, technology and material flaws, accidents, complications, and known risks are all consequences of treatment that must be avoided wherever possible.[1]

Aesthetic dental procedures generally enjoy very high success rates and are very predictable. As with any other treatment modalities in dentistry, failures do occur in aesthetic dentistry; treatment outcomes vary, but so do patients' expectations. From an ethical and medico-legal perspective, it is therefore important to identify and discuss potential failures and risks with patients before they occur, and to ensure that patients have realistic expectations before treatment is rendered.[2]

It is the duty of each dental professional to maximize benefits and minimize harms and risks that result from treatment. As with any form of dental treatment, the anticipated benefits must always outweigh the risks posed by the treatment in order to be in the patient's best interest. This requires balancing the best clinical research evidence currently available, with the clinician's clinical skills and knowledge and the patient's unique values, circumstances, and desires.[3,4]

The aim of this paper is to elucidate the ethical issues and the treatment processes related to identifying, communicating and avoiding known or potential risk factors. Practical guidelines are given on how to maximize benefits, minimize risks and avoid harm.

Ethical considerations in balancing benefits and risks

Caring and treating patients ethically requires that dental professionals not only treat individuals autonomously (i.e. respecting patients' right to self-determination and to make their own choices regarding treatment) thereby contributing to their health and welfare, but dental professionals should also refrain from doing any harm.

One of the most common ethical dilemmas is the conflict of interest between the two fundamental ethical principles, namely beneficence *("to do good")* and non-maleficence *("do no harm")*.

Beneficence

The principle of beneficence *("doing good")* involves the moral duty of providing care or services that will benefit the patient in terms of his or her health or welfare. Thus, to provide treatments that would be in the patient's best interest.

Non-maleficence

The principle of "non-maleficence" *("prevent doing harm")* involves the following moral duties:

- to refrain from harming the patient intentionally
- to avoid, prevent and protect the patient from any harm
- to minimize risk to the patient.

The principle of non-maleficence involves taking positive steps to actively prevent or avoid any act (i.e. financial, emotional or physical) or treatment that would be against the patient's best interest. Avoiding harm can also be met by doing nothing.

Balancing benefits and risks

Beneficence and non-maleficence are complementary principles because both rest on the fundamental ground rule of treatment outcome that is in the patient's best interest.

Balancing the benefits and risks of treatment plays a role in nearly every medical and dental decision. In aesthetic dentistry some treatments have benefits but also have associated risks and harms. Dental clinicians have an obligation to minimize potential harms and maximize benefits of therapy.

By providing informed consent, dental clinicians give patients the information necessary to understand the scope and nature of various treatment modalities and their potential risks and benefits in order to empower patients to make informed choices about the treatment they need or desire.

Ultimately, the potential benefits of any therapy must always outweigh the potential risks in order for it to meet the requirement of "being in the best interest of the patient".

Informed consent

Consent forms cannot replace an informed treatment discussion and thorough documentation in the dental chart before any work begins. Patients should be informed about the benefits, actual or potential risks and cost of each treatment alternative prior to performing procedures.[5,6] Patients should also be educated to fully comprehend the treatment plan, treatment sequencing and ultimate restoration possibilities, and expected treatment outcomes.[7]

The final choice of treatment is largely dependent upon the patient's expectations, desires, financial budget and willingness to undergo treatment.[8] Complex treatment plans require more detailed descriptions and discussions. It is essential that the patient understands the treatment proposals and is given the opportunity to clarify any matters.

Key considerations in maximizing benefits and minimizing risks and harms

Dental clinicians are faced with three key challenges in aesthetic dentistry in their quest to maximize benefits and minimize risks:

(i) to anticipate and identify risks or potential harms related to the desires, needs and wants of the patient

(ii) to communicate essential information and engage the patient in treatment planning discussions that will enable them to make informed choices about their treatment

(iii) to perform the most appropriate treatment that will meet the patient's desires and unique circumstances.

• *Communication and building trust*

As in all dentistry, establishing a good personal relationship is key in building trust and managing risk. Two key elements of building a trusting relationship is communication and compassion .[9]

The ability to communicate the treatment possibilities, limitations and risks of treatment between dental clinician and patient is a core clinical skill for all dental professionals.[10] Communication implies the sharing of positive and negative information. Dentistry is a service business thus communication is essential for success.

Thus, to best serve the patient, dental clinicians need to be competent, compassionate and communicate effectively and consistently with patients, specialists, laboratory technicians, oral hygienist, et cetera. Compassion in terms of the doctor-to-patient relationship implies that there is a semblance of protection or caring and that the dental practitioner will not do harm to the patient.

• *Patient considerations*

It is essential that patients undergo a comprehensive history and examination to determine their desires, needs, wants, complaints and expectations, as well as to avoid missing important factors or diagnoses that might affect treatment outcome.[6,8] This assessment should include oral hygiene, caries risk, periodontal status, occlusal status, para-functional and dietary habits.

If the patient's oral hygiene is poor, he or she should be made aware of the problem and the probable consequences thereof in terms of treatment outcome. Gingival and periodontal status must be evaluated with the aid of a periodontal probe and radiograph. Patients with periodontal problems should be referred to a periodontist for a consultation and appropriate treatment. Aesthetic dental treatment should only be commenced after the periodontist has confirmed in writing that the disease is stable and under control.[6,11] Ignoring periodontal disease when doing aesthetic dentistry amounts to setting aside accepted standards of care and setting yourself up for litigation.

Patients who exhibit para-functional habits such as clenching, or bruxism exert traumatic (additional) occlusal forces or pressure that may result in the fracture of restorations.

A careful and thorough assessment should be made as to whether the patient is a suitable candidate for the proposed treatment (e.g. the patient's ability to adopt to proper dietary habits, plaque control techniques and the patient's willingness to comply with regular follow-up evaluation). It would be very risky to place ceramic veneers for a patient who has a history of very poor oral hygiene and rampant tooth decay on tooth necks.

It is also important to establish whether the patient's expectations are reasonable. If patients' expectations are unrealistic or cannot match the ability of the clinician to deliver and satisfy the patient, this needs to be pointed out and treatment should be refused; and the patient should possibly be referred elsewhere for a second opinion.[6] Dental practitioners should understand and communicate to patients that a specific aesthetic procedure may not always be appropriate.

Study models, diagnostic wax-ups, radiography and photos of the patient are indispensable for the formulation of an aesthetic analysis and treatment.[7]

Apart from their contribution to diagnosis and treatment planning, study models, photographs and radiographs form an essential record of the pre-treatment status of the dentition and are an invaluable aid in the defense of any litigation.[6]

- *Treatment considerations*

Today a variety of aesthetic procedures are available to dental practitioners.

It is not within the scope of this article to discuss the techniques or material characteristics of each. Only those factors that are directly or indirectly related to risks and benefits will be discussed. The treatment options discussed are from least invasive to most invasive.

Whitening and Bleaching of teeth

Current bleaching techniques are a simple, effective and relatively inexpensive and non-invasive way of whitening teeth when compared to other whitening techniques such as using ceramic veneers.

However, patients must be cautioned that some teeth bleach well, and other teeth do not respond to bleaching techniques easily. Patients must also be informed about the possibility of tooth sensitivity. Dental clinicians performing teeth whitening procedures must ensure that they take all the necessary precautions to minimize sensitivity.

Orthodontics

Orthodontic therapy is usually a better choice than placement of ceramic veneers for the correction of minor mal-alignment of anterior teeth. Minor or moderate tooth movement is simple, easy and relatively inexpensive and, more importantly, does not require removal of tooth structure and is more permanent.

The only negative aspects of orthodontic therapy are the treatment time and cost.

Patients who find metal braces undesirable can have ceramic braces as an alternative. For some patients the use of "clear aligners" to move teeth can eliminate the aesthetic disadvantage of wearing braces. Aligner therapy, however, is more expensive.

Orthodontics should always be considered a more appropriate option to preserve enamel or remove the need for a restoration altogether.[5]

Tooth reshaping and recontouring

Reshaping and recontouring teeth are very conservative, fast, effective, inexpensive and less aggressive approach to producing a desired aesthetic effect.[12] This technique is recommended for shortening a central incisor, rounding pointed canines, reducing the contour of a slightly rotated anterior tooth or smoothing irregularities from incisal edges. The reshaped enamel surfaces should be smoothed, polished and treated with topical fluoride.

Resin-based composite restorations

The aesthetic and physical characteristics of composite materials is continuously evolving and improving to such an extent that direct composite restorations and veneers have become a more realistic aesthetic alternative in contrast to indirect laboratory generated or CAD/CAM generated porcelain veneer restorations, especially for those patients who have financial constraints.

Resin bonded composite restorations have the advantage that they cost less, can usually be completed in one appointment, may not require anaesthesia, may have a more conservative preparation, give complete aesthetic control to the clinician, are less abrasive on opposing teeth than porcelain, and they can easily be repaired.[13,14]

Resin-based composite restorations are ideal for treatment of Class III, IV or V cavities or defects, minor tooth irregularities, diastemas, slight tooth mal-alignment or discrepancies in tooth shape, form and color.[12]

The major challenge that exists with direct composite restorations is the artistic ability of the dentists because factors such as color, form, contour, characterization, opacity and translucency have to be taken into consideration. Direct composite restorations are relatively inexpensive, effective in solving aesthetic problems and less invasive than ceramic veneers.

Periodontal plastic surgery / Gingival recontouring

Patients frequently complain about their smile that has an objectionable appearance owing to periodontal disharmonies, such as showing too much gingival tissue and/or irregularities of the gingival line, causing teeth to look too short or too long. Periodontal procedures such as a simple gingivectomy, soft-tissue grafting, crown lengthening, and repositioning of gingival tissues, often can correct smiles that have an undesirable appearance. Such treatments provide a long-term solution to irregularities of the gingival tissues and should be the treatment of choice.[12]

It is not possible to correct atypical gingival aesthetics (i.e. uneven gingival margins, and uneven papillae) resulting from mal-aligned teeth through use of ceramic veneer restorations.[15]

Porcelain/Ceramic Veneers

According to Christensen,[12] well executed ceramic veneers are the most beautiful and longest lasting of all aesthetic restorative procedures.

Porcelain veneers are mainly suggested for non-bruxing patients, minimum rotation or mal-alignment, minimal

exposure of dentin, and/or minimal defective composite restorations after preparation.[16] Ceramic veneers are also a highly effective procedure to correct severe tooth discoloration.[12]

With the correct tooth preparation veneers can be bonded effectively to tooth structure. The majority of opinion, research and suggestions in the literature support either minimal or moderate enamel removal, with the tooth preparation remaining primarily in enamel.[17] The reduced removal of healthy tooth structure decreases the amount of dentin exposed and minimizes the possibility of creating pulpal or periodontal problems.[15] Thin veneers or 'no-preparation veneers' require minimal or no enamel removal, which patients perceive as a strong positive characteristic and leading to treatment acceptance. Other advantages are that no anaesthesia is required, the patient experiences a lesser degree fear and the possibility of reversal.

Preparation of a tooth for a porcelain (ceramic) veneer restoration is not a reversible procedure. Even the most conservative ceramic veneer preparation removes some tooth structure during the initial tooth preparation, initiating a restorative continuum resulting in the removal of additional tooth structure. No-preparation veneers have the disadvantage of an over-contoured, opaque, monotone appearance, and limited translucency. No-preparation veneers are primarily indicated for small teeth, anterior teeth with diastemas, or teeth that are lingually inclined.

Patients who desire lighter or whiter teeth should be informed of the difficulty of masking the color of discolored teeth with no-preparation veneers.[17]

A disturbing trend, however, is where dentists advocate the correction of minor and even severe tooth alignment and tooth discoloration of anterior teeth in young adults using porcelain veneers.[12,15,18] These restorative procedures are commonly referred to as "instant orthodontics".[17,20] These aggressive and unconventional approaches to resolving alignment problems are being justified by some clinicians following the reasoning that the patient does not want orthodontic treatment.[15]

Ceramic veneers, often de-bond, result in post-operative sensitivity or pulpal death when bonded to dentine.[12] Ceramic veneers have a limited life expectancy and are characterized by an increased potential for short-term failure of the adhesive bond and the subsequent need for re-treatment.[5] This treatment modality is very expensive and may require upkeep and eventual replacement.

Current scientific research does not provide convincing evidence to support aggressive tooth preparations for bonded porcelain veneer restorations.[21] The longevity of bonded porcelain veneer restorations still favors an enamel substrate for best predictability.[22]

All ceramic crowns and bridges

Placement of all ceramic crowns is a more aggressive and invasive procedure and indicated in cases with deeply discolored teeth or teeth with large resin-based restorations.[12] In such situations deep tooth preparations are indicated to mask the dark color. Full crowns provide more strength, better retention, and potentially a better aesthetic result in terms of longevity than ceramic veneers.[12]

The possibility of crown replacement, root canal therapy and even tooth loss are increased once the first crown is placed on a tooth.[5]

Implants

Success with implants is highly dependent upon surgical technique. The spacing of individual implants is very important. Placing too many implants in a given space is inappropriate and unnecessary. Spacing is required to provide adequate width of bone and soft tissue between implants and adjacent teeth; to prevent prosthetic components impacting on each other and for the patient to be able to clean the prosthesis effectively.[8] Smoking has been shown clearly to affect implant success and patients should be warned in advance of the higher risk of implant failure and dentists should recommend what measures to take in order to reduce risk of failure.[23,24] Implant retained prosthesis have a high level of predictability.

- *Financial considerations*

The cost of the proposed treatment plan is of great relevance, as this may place limits on treatment options.[8] Standards of care sometimes collide with third party reimbursement and individual patient wishes and finances. It is therefore important that the patient should understand the cost implication of a procedure. If more costly materials are going to be used (e.g. zirconium), the patient must be told why this material is recommended and what the cost implication is.

- *Provider considerations*

The most common provider issues that are directly related to increased prevalence of risks and harms include:

(i) dental professionals that are not participating in regular continuing professional development to keep abreast of the with patient's, technology, and dental

industry's demands
(ii) lack of identification or anticipation of problems or risks
(iii) lack of appropriate referral to a specialist for evaluation.

Dental clinicians have a primary duty to ensure that their knowledge and skills are up to date with current evidence-based science; and they should know their limitations and when to refer to a specialist.[8]

Practitioners must also acquire the necessary knowledge and skills to manage post-treatment complications before deciding to embark on any advanced treatment modality.

Practical guidelines for managing risks

• *Patient assessment*

Do a proper evaluation of the patient's medical, dental and personal history. Assess and understand the patient's needs, desires, expectations and suitability for aesthetic dental treatment. Never ignore the patient's expectations otherwise the case is destined to fail.

• *Treatment planning*

Ensure that study models, x-rays, photographs and a diagnostic wax-up are available for the aesthetic treatment work-up. Document everything - it is still your best defense.

• *Treatment discussion and patient education*

Educate patients so that they fully comprehend all treatment possibilities, sequencing of treatment, limitations and risks. A diagnostic wax-up communicates the treatment plan guidelines to be used throughout the entire restorative process. Use images or photographs to illustrate the proposed treatment(s). Limit the act of creating false expectations and guarantees and inform patients in advance about potential risks and complications.

• *Communication*

Obey the following ground rules for effective communication:
Listen to the patient.
Be honest, frank and open about treatment options.
Speak clearly and with compassion.

• *Cost implications*

Provide the patient with an estimate cost of the various treatment options for the patient's consideration before the final decision is made in terms of a treatment plan. Provide the patient with a final cost assessment of the proposed treatment plan. Let the patient know beforehand what the potential additional cost is for of treating complications (e.g. root canal treatment), re-treatments, and managing failures. In the event that this occurs, the patient is neither surprised nor angered by incurring the additional expense.

• *Informed consent*

Identify and disclose all positive (benefits) and negative (risks) aspects of treatment options to the patient. Obtain informed consent from the patient prior to commencing treatment and ensure that it is part of the treatment record.

• *Treatment selection*

Proceed with prosthodontic work only when periodontal disease and caries is under control. Always select the most conservative treatment option, especially in younger patients with un-restored healthy teeth. Less invasive or more conservative options such as bleaching, orthodontics, and resin-bonded composites should be offered to the patient as alternative options to ceramic veneers. Always give the patient an opportunity to observe the appearance and shade of veneers, crowns or bridges prior to final cementation.

• *Refer to a specialist*

When in doubt or lacking the necessary skills, refer the patient to a specialist.

• *Time management*

Allow adequate time in your schedule for excellence, quality care and artistry.

• *Dental materials*

Use the best materials available.

• *Team effort*

An ideal treatment plan can often be achieved only by a team effort involving various specialists, oral hygienists and laboratory technicians.

• *Dental laboratory*

Employ the best laboratory technician. Find an "artist" who understands your work, shares your work ethic and aesthetic goals and who does not mind reworking a prosthesis until it fits perfectly. Take advantage of the dental laboratory technician's knowledge regarding diverse restorative options offered by modern dental products. Establishing a team relationship with your laboratory technician helps build confidence and ensures consistent and successful treatment outcomes, especially in complex cases.

• *Maintenance and follow-up*

Secure patient commitment to regular dental check-ups and oral hygiene maintenance program in order to maintain the work performed. To achieve long-term success the patient should be provided with an oral hygiene and maintenance protocol.

• *Continuing professional development*

Ensure that you are knowledgeable in the latest dental procedures and products.

Acquire the necessary knowledge and develop the prerequisite clinical skills before attempting advanced aesthetic treatment modalities.

Conclusions

To best serve the patient, dental clinicians need to act with passion, compassion, competence and they have to communicate effectively with team members. The better the communication, the lesser risks will be encountered and the more successful the treatment outcome will be.

In addition, dental clinicians need to make every effort to identify, inform and avoid situations and procedures that may lead to potential harm or where the risks outweigh the potential benefits. Any anticipated complications and risks should be communicated clearly to the patient during the treatment planning discussions to provide the patient with realistic expectations of the final treatment outcome. An appropriate treatment is one that is least invasive and preserves the most tooth structure while meeting the patient's needs and desires.

Unfortunately, no matter how well trained or experienced one is, every clinician will have some failures. Since we can never eliminate all risks involved for patients it is exceedingly important that dental practitioners are conscious of managing and preventing potential risks and improving patient safety and treatment outcomes.

Each dental clinician should know his or her limitations. Dental clinicians are obligated to refer their patients to a specialist if they are lacking the required skills for the specific procedure that the patient has requested.

In doing ethical aesthetic dentistry we are weighing and balancing competing values of the patient and the service provider; searching for consistency, longevity, predictability and success in treatment outcome; as well as considering the impact of our actions on patients. All treatments have potential risks. Risks should be avoided or minimized to ensure that the benefits of treatment always outweigh the risks. In our treatment discussions and planning we must attempt a systematic and reasoned approach to the question: "What is the right thing to do?" This will help dental professionals to conduct a safer and more ethically based practice.

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Ethics in aesthetic dentistry Part 4: Informed consent – How much information is enough?

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Keywords: Autonomy, informed consent, ethics, aesthetic dentistry, disclosure, confidentiality

Executive summary

Rationale

- In aesthetic dentistry, informed consent is crucial because a malpractice or litigation claim is typically triggered when a patient is dissatisfied with the result of his or her treatment.
- The aim of this review is to provide dental practitioners with guidance regarding the concept of informed consent; the key elements of valid informed consent; the minimum information required; and relevant ethical considerations associated with informed consent.

Key points

- Aesthetic dentistry is a developing niche market driven by an expanding consumer demand and a shifting dynamics of patient choice.
- Patients are more demanding with increasing expectations on treatment outcome.
- Respect for patient's autonomy and right to self-determination, provides the ethical foundation for informed consent.
- Provide patients with sufficient and relevant information.
- Drastic and complex treatments require more information compared to simple minor interventions.
- The dentist is obliged to discuss all serious and typical risks but is not obliged to discuss unusual and remote risks.
- Disclose risks that a reasonable patient would need or want to know.
- Disclose material risks or adverse effects that have a high seriousness or high occurrence.
- All discussions related to disclosure or relevant information related to withholding of risks should be documented.
- Truthfulness is a key aspect of disclosure.
- Effective communication and understanding by the patient are critical.
- The patient should have an opportunity to ask questions regarding the proposed treatment.
- Any treatment or intentional physical contact with the patient undertaken without valid consent may amount to assault and a breach of the patient's human rights.

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- Consent must be freely and voluntary.
- Informed consent is an ethical and a legal obligation.
- Written consent is preferred

Practice implications

- Good communication lies at the heart of successful dental-patient relationships.
- Poor communication is more likely to lead to apprehension, dissatisfaction , suspicion and litigation.
- Visual aids (i.e., info graphics, radiographs, photographs and models) contribute towards interactive education and the informed consent process.
- Explaining costs goes a long way to avoiding problems during the treatment process.
- Consent must be provided for each procedure to be undertaken.
- It is not appropriate to give guaranties or warranties for a successful treatment outcome.

- Written notes remain the best evidence.
- Consent must be subject to review over time.
- All personal information gained from a patient must be kept confidential.

Introduction

Aesthetic dentistry is a developing niche market driven by an expanding consumer demand and a shifting dynamics of patient choice rather than entirely dentist directed. Given the growing strength of this influence and that patients have to pay the bill, it is to be expected that patients have tended to become more demanding and have raised their expectations on treatment outcome.

In this day and age, time and productivity are core elements of managing a dental practice, especially for dentists who are trying to treat as many patients as possible in a given day. This means that some dentists will try to obtain a patient's informed consent relatively quickly in order to be able to perform the procedure and move onto the next patient. In order to save time, dentists may be tempted to only offer a limited number of options with little explanation and may pressure the patient to consent to treatment as quickly as possible. When dentists obtain informed consent from their patients in this manner, they are denying their patients relevant information to make an informed decision. Patients will not be able to make educated decisions because they have not been given the opportunity to understand all the available options. This lack of education may lead to patient dissatisfaction with their treatment and their dentist.

In aesthetic dentistry, informed consent is crucial because a malpractice or litigation claim is typically triggered when a patient is dissatisfied with the result of his or her treatment. Aesthetic dentistry can thus turn ugly when a patient is dissatisfied with treatment results. In keeping with the extensive advances in knowledge, technology, materials and level of skill in dentistry, medical law too has developed and evolved and has seen the development and refinement of important medico-legal concepts. One of the most important continually evolving medico-legal concepts developed in recent times is the concept of informed consent.[1]

The aim of this review is to provide dental practitioners with guidance regarding the concept of informed consent; the key elements of valid informed consent; the minimum information required for; and relevant ethical considerations associated with informed consent.

Why is informed consent required?

Success in dental practice depends on successful relationships between dental practitioners and their patients. This relationship is dependent upon mutual trust. To establish and maintain that trust practitioners must respect patients' autonomy. An important feature of patient autonomy is the patients right to self-determination and to make choices regarding their treatment according to their desires, values and priorities. In contemporary medical ethics, it is widely accepted that respect for patient's autonomy and right to self-determination, provides the ethical foundation for informed consent.[2, 3]

The purpose of obtaining informed consent is to protect the patients' right to autonomy and to ensure that the patient is fully informed and understands available treatment options including their risks and consequences. This will enable the patient to make an informed choice regarding acceptance or refusal of a proposed treatment. Patients who make properly informed decisions about their health care are also more likely to take responsibility for their treatment and to co-operate fully with the agreed post-operative care.[4]

Although the original purpose of informed consent was to protect the patients right to autonomy, informed consent has now also evolved into being a form of evidence that protects dental practitioners from malpractice and potential litigation from dissatisfied patients. Any treatment or intentional physical contact with the patient undertaken without valid consent may amount to assault and a breach of the patient's human rights.[5]

The core principles of dental ethics and legal standards of care have similar foundations. Both are dedicated to place

the patient's best interest first and the dental practitioner's interest, as secondary.[6] Informed consent is therefore not only an ethical obligation but also a legal obligation.

Key elements of a valid informed consent process

Valid informed consent requires the following through of a process that includes the following key elements:

(i) Disclosure of information

Dental practitioners have a duty to provide patients with sufficient and relevant information in a way that they can understand, and to enable them to exercise their right to make informed decisions about their care. [4, 7]

Informed consent requires a full explanation of the following information: [8, 9, 10, 11]

- the nature of their oral health problems, needs, demands and wants
- recommending a preferred treatment plan with its associated risks, benefits and cost thereof
- treatment alternatives and their associated risks, benefits and consequences and uncertainties
- cost estimates for the various treatment options
- the consequences of not having the treatment.

Effective communication in a language that the patient can understand is the key to enabling patients to make informed decisions. Truthfulness is a key aspect of disclosure of information and central to communication between the patient and the dental practitioner.

Patients must also be informed that they can change their minds about a decision at any time and reminded that they have a right to seek a second opinion.

(ii) Discussion

Securing the patient's informed consent is a process whereby the dental clinician enters into a dialogue with the patient or a duly authorized third party, such as a parent, with discussions and questions. It is during this dialogue that treatment options, benefits and risks are disclosed along with many other parameters of treatment. The practitioner is obliged to discuss all serious and typical risks but is not obliged to discuss unusual or remote risks.[1]

In most cases the proposed treatment outcome will be successful. Due to patient differences, however, there can never be a certainty of success therefore it is not appropriate to give warranties or guarantees for a successful treatment outcome. There may be a risk of failure, relapse, additional treatment, or even worsening of the patient's present condition despite the best of care.

Patients should also be assisted in understanding their financial responsibility to pay for treatment. The cost of treatment is a key issue for many patients and unfortunately may ultimately decide whether or not they proceed with treatment.[12] It should be made clear to the patient whether or not fees quoted include laboratory fees, x-rays, etc.

The discussion should include advising patients about services that are not covered and where dentist's fees will exceed those covered by the patient's dental insurance/ medical aid plan. An estimate of the laboratory fees should be provided to the patient as well.

The dentist or oral hygienist has an obligation to provide the patient with an oral hygiene maintenance program and ensure that the patient understands the importance of following oral hygiene instructions, including scheduling and attending all follow-up appointments diligently.

The dental practitioner is generally obligated to provide a recommendation and share his/her reasoning process with the patient.[11] The patient should have the opportunity to consider this information, acknowledge his or her understanding thereof, and ask questions in order to arrive at a balanced judgment of whether to proceed with the proposed treatment.[5, 7] Dental practitioners must respond honestly to any questions the patient raises and, as far as possible, answer as fully as the patient wishes. Some patients may want to know whether any of the risks or benefits of treatment are affected by the choice of institution or doctor providing the care. Dental practitioners must answer such questions as fully, accurately and objectively as possible.[4]

(iii) Consent

A competent patient, who has been provided with all the relevant information and deliberated on the problem and proposed treatment, must relate a clear and unambiguous decision to the dental practitioner whether or not to proceed with the proposed treatment. The informed consent process is concluded by the acceptance of the treatment by the patient or guardian either implied or expressed.

Express consent

A patient gives express consent when he or she indicates orally or in writing consent to undergo examination or treatment.[5] Both verbal and written consent are legally acceptable.

Oral consent would normally be adequate for routine treatments, such as teeth whitening and restorations, provided that full records are maintained.

Written consent is necessary in cases of extensive rehabilitations or surgical interventions such a dental implants and essential with complex surgical procedures such as orthognathic surgery, or where a general anaesthetic or conscious sedation is given.[5] Written is preferable as it is easier to prove consent as a matter of satisfying the laws of evidence if there is a dispute in the future.[7] However, the mere fact of a signature on a consent document that elucidates risk and benefit, does not constitute proof of "informed consent". [7] A standard pro forma consent form signed by a patient is merely evidence of some discussion. It is recommended though that verbal consent be confirmed in writing where risks are significant.[13]

Implied consent

Implied consent is usually ascertained by the actions of the patient. In very limited situations consent may be implied e.g. where the patient indicates agreement to an examination by lying in the dental chair and opening their mouth. Consent to dental procedures however cannot normally be implied from complaint actions; an open mouth does not necessarily mean that the patient has understood what the dentist has proposed to do or the reasons why.[5]

Informed consent is not an event or specific form but rather an ongoing dialogue with a patient that begins at the first visit to the office and continues as treatment progresses. Specific consent means that the patient consents expressly to each of the procedure(s) to be undertaken.

For consent to be valid the following parameters must be met:

- *Comprehension*

Comprehension on the part of the patient is equally important as the information provided.[11] All relevant information must be presented in general and layperson terms to ensure that the patient sufficiently understands the information provided. Where possible and appropriate, written material, visual and other educational aids should be used to explain procedures or complex issues associated with treatment.

- *Voluntariness*

Consent should be given freely and voluntarily and only after the patient has had adequate time to consider all the relevant information provided and given the opportunity to ask questions. Consent is not valid if it is obtained under duress or unduly influenced.[4, 5]

- *Competence*

The patient must have the capacity to understand information, the risks associated with the decision at hand, the capacity to reason and deliberate and to communicate a decision based on that understanding.[1, 5,11]

In South Africa the Children's Act state that a minor of twelve years and older with sufficient maturity may consent to medical and dental treatment and, with the assistance of an adult, may also consent to surgery.[4]

Patients with mental illnesses or who are mentally incapacitated are incompetent to make decisions or give informed consent on the basis of inability of full understanding of the need for, nature of and consequences of treatment proposed.[4, 5] In such cases informed consent is normally given by a parent or guardian. The patient or guardian consenting to treatment must be competent, adequately informed of the nature of the procedure that is being agreed to, and consent must be given voluntarily and freely.

(iv) Documentation

The best evidence of a full and complete discussion regarding consent to treatment is still the practitioner's own clinical notes.[13] The dental practitioner must document the fact that all of the patient's questions were answered and that his or her consent was obtained.

It is advisable for the practitioner to have some written record confirming that the benefits and risks of the proposed treatment and alternative treatment options have been discussed. Dental clinicians can document the consent process in the patient's record in a variety of ways, including:

- using abbreviations or acronyms for commonly discussed dental treatments or risks when making notations on their chart
- noting in the chart that they have used visual aids (models, video) or provided printed material to the patient
- discussing treatment plans and risks as outlined in a variety of standard consent forms that patient can sign.

What is the minimum amount of information required for informed consent?

A key issue is to know how much information must be disclosed to enable the patient to make an informed decision about his/her treatment. Most of the literature and law suggest that one of two approaches can be applied namely the reasonable practitioner or reasonable patient standard.[11,14]

Reasonable practitioner standard

This approach requires that the dental practitioner must

disclose those risks that would be disclosed by a reasonable practitioner. This standard allows the dental practitioner to determine what information is appropriate to disclose.

The amount of information that must be given to each patient will depend on the circumstances of each case, and will vary according to factors such as:

• The nature of treatment or procedure

More drastic treatment requires more information. There is clearly a difference between placement of an implant compared to placement of a composite restoration.

Most procedures carried out in general practice would be considered minor. However, an extensive treatment plan composed of numerous minor items will require elaboration, as will more costly or controversial items such as CAD/CAM designed and milled inlay or onlay restorations.

• The magnitude and/or likelihood of possible harm

Patients may need more information to make an informed decision about a procedure that carries a high risk of failure or adverse side effects.

Information about the possibility of serious harm should normally be given even if the chance of it occurring is slight. Similarly, information should generally be given if the potential harm is relatively slight but the risk of it occurring is great.

• The personality, temperament and attitude of the patient

More information must be given to those keen to have it for more than just reassurance, especially in response to specific questions. On the other hand, it is not necessary to force information on a patient who is prepared to leave all decisions to the service provider.

Reasonable patient standard

This approach requires that the dental practitioner must disclose those risks that a reasonable patient would need or want to know to make a decision.

Establishing what the average patient would need to know and understand in order to be an informed participant in the decision can be very complex. Patients accept that they know very little about the technicalities of dental treatment. Although technical features are important and relevant to patient care, dental practitioners should be careful to present the technical merits of treatment only in the context of how they, and the proposed treatment, impact upon the patient in terms of [15]

- Aesthetics – 'Will it enhance my appearance?'
- Function – 'Will I be able to chew an apple?'
- Comfort – 'Will the procedure cause any pain or discomfort?'
- Durability – 'How long will they last?'
- Financial implications – How much will it cost?'

What risks should be disclosed?

A good key is to select those risks that could be "material" to the patient's decision-making. Material risks include those that have a high severity (seriousness) or high occurrence.

In deciding which risks are material that should be explained, a practitioner will rely on his or her professional judgment, but must warn patients of any substantial or unusual risks involved and of consequences that may be slight but occur commonly.[5] Examples include the possibility of nerve damage in oral surgery procedures, perforation or instrument breakage in endodontics, veneer fractures, and crown and bridge failures.

Matters are material if they 'might influence the decisions of a reasonable person in the situation of the patient'.

All aesthetic dental procedures bear some risk or adverse effect. A practitioner, however, cannot anticipate every eventuality. The main criteria for material risk are the probability of the risk occurring and the seriousness of the consequences of the risk.[16] Dentists should also take account of such factors as the patient's age, medical history, habits, and medications.

It is very important that the discussion on risks be documented on the patients record.

Ethical considerations

• Scope of authority

Dental practitioners must not exceed the scope of the authority given by a patient, except in an emergency situation. Dental practitioners must give the patient a clear explanation of the scope of consent being sought.[4] This will apply particularly where treatment is provided in stages, or where different dental care practitioners or specialists provide particular elements of a treatment.

• Managing additional problems under conscious sedation or general anaesthesia

Dental clinicians should discuss with patients the possibility of additional problems emerging during a procedure when the patient is unconscious or otherwise unable to make a decision. They should seek consent to treat any problems which they think may arise and ascertain whether there are any procedures to which the patient would object or prefer to give further thought to before they proceed. Health care

practitioners must abide by patients' decisions on these issues.[4]

• Waiving the right to informed consent

The question is frequently asked: 'What should I do when a patient waives his or her right to informed consent?' This is the typical case where the patient responds: "You are the dentist, I trust you… just do it!" The patient waiver is unique because it is a voluntary act of a competent patient not to receive information or to participate in decision-making. In such a case the dentist is ethically justified in overriding the waiver because of the differences in the level of risks involved in each procedure, and those due to specific patient variation. For these reasons it is recommended that prudent practitioners should not deviate from the full informed consent process.[9]

• Inappropriate treatment at the patient's request

Cases arise where patients ask a dentist to undertake treatment that is not in their best interests and is against the dentist's clinical judgment, for example, removal of healthy teeth and crown and bridgework on teeth that are non-restorable. Treatment should not be undertaken if it will cause permanent damage to the dentition or will be of no clinical or aesthetic benefit.[5] Dentists still are responsible for the clinical treatment provided in these situations and obliged to act in the patient's best interest. If treatment fails, the patient may seek damages for negligence or a refund of treatment costs.

• Withholding information

Health care practitioners should not withhold information necessary for decision making unless they judge that disclosure of some relevant information would cause the patient serious harm or would be contrary to the best interests of the patient.[4] In this context, serious harm does not mean the patient would become upset or decide to refuse treatment. In any case where health care practitioners withhold relevant information from the patient, they must record this, and the reason for doing so, in the patient's medical records and they must be prepared to explain and justify their decision.

• Consent forms and reviewing consent

A signed consent form is not sufficient evidence that a patient has given, or still gives, informed consent to the proposed treatment in all its aspects. Health care practitioners must review the patient's decision close to the time of treatment, and especially where:

- significant time has elapsed between when the consent was obtained and the start of treatment;
- there have been material changes in the patient's condition, or in any aspects of the proposed treatment plan, which might invalidate the patient's existing consent; and
- new, potentially relevant information has become available, for example about the risks of the treatment or about other treatment options.[4]

• Confidentiality and disclosure on information

Dental practitioners have an ethical and legal obligation to keep confidential all personal information gained from patients in the course of their professional relationship and treatment.[5] Essentially, the fact than an individual is a patient at the practice, is confidential and cannot under normal circumstances be disclosed without the patient's consent. Patients must consent to the collection, use and disclosure of their personal information such as photographs and x-rays for promotional use, teaching, publication or other non-treatment purpose.

Practical guidelines to achieve ethical goals

- Good communication lies at the heart of successful dentist/patient relationships and is vitally important to obtaining consent to treatment. Poor communication is likely to engender apprehension, dissatisfaction, suspicion and possible litigation.
- To minimize dissatisfaction, dental practitioners should employ thorough interactive and educational informed consent processes. Use up-to-date written material, visual aids such as radiographs, photographs and models to explain complex aspects of treatment.
- Listen to the patient questions and concerns at every step of the process to determine what the patient really wants and whether it is a reasonable goal.

- Screen patients very carefully to ensure that their expectations are realistic. Patient education is key to encouraging reasonable expectations. Be prepared to say no to patients whose expectations cannot be met.
- Do not make unfounded predictions. Discuss your treatment plan only after you have performed a thorough examination.
- Avoid express or implied warranties, promises or guarantees. A dissatisfied patient may claim that the dentist oversold the treatment or did not fully explain its scope, expense or risks.

- Explaining anticipated costs goes a long way to avoiding problems down the road.
- Good and accurate record keeping of all dental clinician interaction over the course of treatment is key to good dental practice. Also record significant patient comments and questions as well as your responses.
- Allow patient sufficient time to reflect before and after making a decision, especially where the information is complex, the severity of the risks is high, or where costs are high.

Conclusion

The patient-dental care provider relationship is built on the trust that the provider will respect the patient's autonomy, act in the patient's best interest, deliver good dental treatment and will keep the patient's records confidential. Dental practitioners who ignore their patients' rights run the risk of hurting the entire dental profession. Once the patient feels like a victim due to a hasty informed consent process, he or she could lose respect for the dental profession. In essence, the dentist will destroy the very trust that allows him to practice dentistry.

Dental clinicians must be aware of, and practice according to applicable laws, regulations and standards of care regarding the nature, scope, and depth of informed consent discussions. In addition, dental practitioners should ensure that patients are actively involved in their treatment decision processes and not merely dealt with as passive recipients of care. Engaging in open, truthful and helpful dialogue takes up clinical time but, as well as satisfying a dentist's ethical and legal obligations, it increases patient responsibility and satisfaction and increases the quality of care provided. Managing patient treatments through informed consent is the key to minimizing dissatisfaction and potential litigation.

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QUESTIONNAIRE 1

Dental malpractice and its liabilities: Ethical and legal considerations every dentist should know. Hartshorne & van Zyl, page 1

1. *Which of the following general statements are true?*
a The dental profession holds a special trust relationship with its patients
b Business/economic factors has impacted on the dentist-patient relationship
c Aesthetic procedures require low patient expectations and demands
d Dental malpractice claims are emotionally stressful, expensive and time consuming
e Patient rights have no impact on the dentist-patient relationship

2. *Which of the following statements regarding the principle of 'Autonomy' are true?*
a The patient has a right to participate in decision-making and treatment choices
b The principle of autonomy expresses the clinicians right to select treatment
c The final choice of treatment is dependent on the dentist skills and most profitable procedure
d Due consideration must be given to the patients needs, desires and financial abilities
e Complex treatment plans require more detailed descriptions and discussions

3. *Which of the following statements regarding informed consent are TRUE?*
a Informed consent is an ethical and legal requirement
b Consent must be voluntary
c Consent must be in written format and signed by the patient
d The patient has a right to ask questions
e The dentists' best interests are always paramount

4. *The fundamental ethical principle of 'Non-maleficence' means the dentist has a duty:*
a To do good
b To do no harm
c To refrain from placing the patient at risk
d To exercise care

5. *The fundamental ethical principle of 'Beneficence' means the dentist has a duty:*
a To promote or to do good
b To act in the patients' best interest
c To treat the patient fairly
d To respect the patients' rights
e To improve the patients' oral health

6. *Dental malpractice is defined as the failure of a clinician to follow the accepted standards of care of his/her profession resulting in harm injury or loss.*
a True
b False

7. *Which of the following statements regarding standard of care are TRUE?*
a What a reasonable dentist should be doing under similar circumstances while applying evidence-based care
b The standard of care differs between general practitioners and specialists
c The overall criteria for standard of care is whether it is in the patients' best interest
d Standard of care means practicing anecdotal-based dentistry
e Negative clinical outcomes and complications are proof of deviation from the standard of care

8. *Which of the following elements are required for proving negligence or malpractice?*
a The clinician had a duty or an obligation to the patient
b Patient dissatisfaction
c The clinician failed to conform to the required standard of care
d The harm suffered by the patient was a direct result of sub-standard care
e Damages sought are directly related to the harm caused

9. *Dental malpractice is commonly caused by:*
a Inadequate diagnostic testing
b Inadequate treatment planning
c Lack of informed consent
d Treatment errors
e All of the above

10. *Malpractice claims and dental litigation can be prevented by:*
a Systematic and reasoned ethical decision-making
b Ensuring that benefits always outweigh potential risks
c Inadequate documentation and record keeping
d Providing additional services beyond the patients' informed consent
e Referral to a specialist if you lack necessary training, experience or technical competence

QUESTIONNAIRE 2

Stress, burnout, substance abuse and impairment amongst members of the dental profession. Meyer, page 13

1. *Which of the following statements characterizing the dental professions are TRUE?*
a Least stressful of all professional occupations
b Patients and society place a dentist in a challenging and vulnerable position
c Dentistry is a rewarding but demanding profession
d Dentists do not have to deal with stress all day
e Dentists have to deal with difficult situations on a daily basis

2. *Which of the following are stress inducing factors*
a Work-related
b Dentist-patient interaction
c Alcohol
d Personality traits
e Dentists perception and reaction to a stressor

3. *Patients with a Type A personality trait are claimed to have higher levels of perceived stress and increased levels of burnout (TRUE or FALSE?)*
a True
b False

4. *Which of the following are considered as work-related stressors?*
a High patient load
b Recognition and adequate reward
c Effective control over resources
d Quality of working life
e COVID-19

5. *Which of the following are sources of stressors*
a Internal or external frustrations
b Conflicting needs
c Conflicting professional and business goals
d Good coping skills
e Bad coping skills

6. *The most satisfied and least stressed dentists are:*
a Younger dentists
b In the higher income bracket
c Attend more continued education
d Do not employ dental auxiliaries
e Are older

7. *Which of the following statements regarding professional burnout are TRUE?*
a Orthodontists have the highest level of burnout
b General dentists and oral surgeons have the lowest level of burnout
c Most dentists with burnout are mentally and emotionally exhausted
d Has a negative or indifferent or cynical attitude towards patients
e Tendency by dentists to feel satisfied with their accomplishments

8. *Which of the following statements relating to substance and alcohol abuse are TRUE?*
a Alcohol and prescription drugs are illicit substances
b Cannabis is a licit substance
c Smoking may be the most commonly abused substance among dentists
d Alcohol may be associated with work stress amongst dentists
e It is reported that the prevalence of addiction to alcohol or drugs for dentists is probably 12-19%

9. *Which of the following statements regarding prescription drug are TRUE?*
a A study has suggested that 31% of dentists use opiate and anti-anxiety prescription drugs
b The ability of dentists to prescribe drugs for themselves is technically illegal
c The ability of dentists to prescribe drugs for themselves is technically illegal
d Dentists prescribing for themselves does raise serious ethical concerns
e Relevant legislation is applied effectively in South Africa to protect both the profession and public against self-prescribing by dentists

10. *Which of the following statements regarding impairments are TRUE?*
a The dental profession is now, due to COVID-19, under more stress than ever
b Financial and emotional pressures due to COVID-19 will place a greater risk of stress-related impairments on vulnerable dentists
c An impaired dentist is able to deliver optimal care to a patient
d Colleagues who become aware of a dentists dependency have a professional and ethical responsibility to intervene in a constructive manner
e The HPCSA Health Committee acts punitively against practitioners suffering from impairments

QUESTIONNAIRE 3

Ethics in aesthetic dentistry. Part 1: The complex ethical arena of aesthetic dentistry. Hartshorne, page 18

1. *Aesthetic dentistry is a dynamic field of interest by the dental profession and public at large. Which of the following does not contribute towards reshaping aesthetic dentistry?*
a New scientific evidence
b Politics
c Advances in technology
d Development of new materials

2. *Which of the following are considered as elective aesthetic procedures?*
a Tooth-whitening
b Tooth colored restorations
c Extractions
d Ceramic veneers
e Clear braces

3. *The trend towards greater 'specialization' by general dental practitioners in aesthetic and implant dentistry, combined with increasing patient expectations and demands is likely to set off an increase in complaints, negligence claims and litigation cases.*
a True
b False

4. *Which of the following procedures are not considered as advanced reconstructive aesthetic procedures?*
a Removable partial dentures
b Dental implants
c Orthognathic surgery
d Periodontal plastic surgery

5. *Dental clinicians are obligated to upgrade their knowledge and skills on all available treatment options so that they are able to inform patients appropriately and adequately of alternative options, the possible complications and associated risks and to enable them to perform such procedures in a safe and effective manner.*
a True
b False

6. *Our clinical decision-making, moral behavior and standard of care is guided by which of the following criteria?*
a Patient demand
b Ethical code of conduct
c Media advertising
d Business interest and profit

7. *Which of the following are fundamental ethical principles?*
a Beneficence
b Non-Maleficence
c Justice
d Economy
e Autonomy

8. *The principle of beneficence expresses the concept that health professionals have a duty to care for and to act in the patients' best interest.*
a True
b False

9. *The principle of Non-Maleficence expresses the concept that dental clinicians have a duty to respect the patients' right to select or refuse treatment according to their desires, within the bounds of accepted treatment.*
a True
b False

10. *The fundamental ethical principle of 'Justice' expresses the concept of:*
a To act in the patients' best interest
b Refrain from harming the patient
c Informing patients of unavoidable risks
d Consideration of fair distribution of treatment and scarce resources
e Protecting patient confidentiality and privacy

QUESTIONNAIRE 4

Ethics in aesthetic dentistry. Part 2: Ethical considerations of over-treatment – patient interests vs business interests. Hartshorne, page 22

1. *Oral health affects people physically, psychologically as well as their feelings of social well-being.*
a True
b False

2. *Which of the following conditions and their management fall within the realm of aesthetic dentistry?*
a Dental imperfection in tooth color and shape
b Removal of wisdom teeth
c Replacing missing second molars with implants
d Replacing missing anterior teeth with implants
e Dental malocclusions and mal-aligned teeth

3. *From a biological point of view, much of elective aesthetic dentistry is want dentistry and not need dentistry.*
a True
b False

4. *Which of the following procedures are generally considered as elective aesthetic procedures?*
a Teeth whitening
b Removal of sound amalgam fillings for cosmetic purposes
c Extraction premolars for orthodontic purposes
d Closing diastemas with resin bonded composites
e Orthodontic therapy to improve the appearance of teeth

5. *The overwhelming powerful role that physical appearance plays in patients' lives and well-being, increasing places aesthetic dentistry in the category of necessary dentistry.*
a True
b False

6. *The only primary goal of a dental practice is to achieve economic success by generating profit.*
a True
b False

7. *Which of the following statements relate to professionalism?*
a Dental clinicians are guided by an ethic of care
b Dental clinicians are guided by profit motivations
c Professionalism imposes high ethical standards on dentists
d Professionalism is based on truth, values and moral boundaries

8. *Which of the following statements relating to commercialism (selling dentistry) are correct?*
a Profitability is essential for sustainability of private practice
b Economic success serves the interest of the dentist
c Remuneration is not a legitimate goal of a clinician in private practice

9. *Efficiency, cost containment, increased productivity and availability of services are the business tools of a modern dental practice that is used to increase profitability without sacrificing the interest of the patient or doing harm to the patient.*
a True
b False

10. *Which of the following statements constitute overtreatment?*
a Treatment that is not required
b Performed in excess for financial gain
c Is legitimate and evidence-based
d Is inappropriate dental care

QUESTIONNAIRE 5

Ethics in aesthetic dentistry. Part 3: balancing benefits and risks. Hartshorne, page 28

1. *Which of the following statements regarding the fundamental ethical principles are TRUE?*
a Beneficence – to provide treatments that would be in the patient's best interest
b Non-maleficence – respecting a patients' right to self determination
c Autonomy – patient has a right to make their own choices regarding treatment
d Non-maleficence – Prevent and protect the patient from any harm
e Beneficence – maximizing risk to the patient

2. *Which of the following statements regarding balancing benefits and risks are TRUE?*
a Beneficence and autonomy are complementary principles
b Beneficence and non-maleficence resto on the fundamental ground rule 'that is in the patient's best interest
c Dentists have an obligation to minimize benefits and maximize harms
d Informed consent empowers the patient to make decisions about the treatment they need or desire
e Potential benefits of ant therapy must always outweigh the potential risks

3. *The final choice of treatment is largely dependent on the following:*
a Patient's expectations
b Patient desires
c The dentists' needs
d The patients financial budget
e Patient willingness to undergo treatment

4. *Which of the following are key challenges in aesthetic dentistry the dentists are faced with?*
a To anticipate or identify risks or potential harms related to the patients' treatment needs and wants
b To engage the patient in treatment planning discussion
c To communicate essential information to the patient to be able to make an informed decision
d To perform the most appropriate treatment that will meet the dentists desires
e To perform the least appropriate treatment that will meet the patient's desire

5. *Which of the following statements regarding maximizing benefits and minimizing risks and harms are TRUE?*
a Communication and establishing a good personal relationship is key in building trust and managing risk
b Treatment considerations are directly and indirectly related to risks and benefits
c The cost of the proposed treatment is only of relevance to the dentist
d The patient must be informed if costly materials are going to be used, why it is recommended and what are the cost implications
e Dentists that are participating in continuing professional development are most likely to have the highest prevalence of risks and harms

6. *Which of the following 'Patient considerations' are critical in maximizing benefits and minimizing risks and harms?*
a A comprehensive history and examination to determine their desires, needs, wants, complaints and expectations
b Periodontal disease is of no relevance to maximizing benefits
c Oral hygiene is of no relevance to minimizing risks
d Parafunctional habits may contribute towards risk of fracture of ceramic restorations
e Patient expectations of specific aesthetic procedures may not always be appropriate

7. *The following are invasive aesthetic dental procedures*
a Teeth whitening
b Placing dental implants
c Gingival laser recontouring
d Porcelain veneers
e Orthodontic treatment

8. *The following dental provider factors are directly related to increased prevalence of risk and harms*
a Lack of appropriate referral to a specialist
b Lack of identification or anticipation of problems and risks
c Not knowing their clinical limitations
d Participating in regular continuing professional development
e Knowledge and skills are up to date

9. *Porcelain veneers are mainly indicated in the following cases*
a Bruxing patients
b To correct severe tooth discoloration
c To correct severe mal-aligned teeth
d To correct minimal rotation of incisors
e To replace Class 4 composite restorations on incisors

10. *Which of the following statements relating to risk management are TRUE?*
a Ignoring patient expectations will result in case failure
b Good record keeping remains the dentists' best defence
c It is not necessary to disclose all positive (benefits) and negative (risks) aspects of treatment
d Always select the most invasive option, especially in younger patients
e Oral hygiene and a maintenance protocol is critical to achieve long-term success

QUESTIONNAIRE 6

Ethics in aesthetic dentistry. Part 4: Informed consent - How much information is enough? Hartshorne, page 36

1. *Which of the following general statements regarding aesthetic dentistry are TRUE?*
a Patients are more demanding on treatment outcome
b Dentists try to treat as many patients as possible in a day
c Lack of information may lead to patient satisfaction
d Aesthetic dentistry is driven by expanding dentist demand
e A malpractice or litigation claim is typically triggered when a patient is dissatisfied

2. *Informed consent is required for the following reasons:*
a To build a trusting dentist-patient relationship
b To respect a patients' right to self-determination
c To protect the dentists' right to make choices on treatment he proposes
d To protect the patients right to make informed choices
e To protect the dentist from malpractice and potential litigation claims

3. *Which of the following are key elements of a valid informed consent process?*
a Withholding information
b Disclosure of information
c Discussion
d Consent
e Documentation

4. *Which of the following statements relating to the informed consent process are TRUE?*
a Dentists have a duty to provide patients with sufficient and relevant information
b Patients do not have a right to seek a second opinion
c The dentist is obliged to discuss all unusual and remote risks
d Consent is acceptance of treatment by patient or guardian either implied or expressed
e The dentist must have a written record of the full discussion of the treatment process

5. *For consent to be valid the following parameters must be met:*
a The patient must sufficient understand
b Consent must be obtained under duress
c Patient must be competent
d A child of 8 years old may give consent without the assistance of an adult
e Patients with mental illnesses are considered incompetent to make decisions

6. *More information must be given in which of the following situations?*
a Minor treatments
b Implant placement
c More costly treatments
d Procedures with low risk of failure
e Patient requests more information

7. *The reasonable practitioner standard requires that the dentist must disclose those risks that would be disclosed by a reasonable dentist (TRUE or FALSE?)*
a True
b False

8. *Which of the following risks should be disclosed?*
a Material risks
b Low occurrence risks
c Low severity risks
d Substantial risks
e Adverse effects

9. *Which of the following ethical considerations relating to informed consent are TRUE?*
a Dentists may not exceed the scope of authority given by a patient
b Dentists can deviate from a full informed consent process if waived by a patient
c The dentist is not responsible for inappropriate treatment at the patients request
d Any information that is withheld from the patient must be recorded
e Consent must be reviewed if there are material changes in the patient's condition

10. *Which of the following guidelines will assist towards achieving the ethical goals of informed consent?*
a Good communication
b Ensure that patient expectations are realistic
c Provide warrantees and guarantees
d Do not explain anticipated costs
e Allow patients sufficient time to reflect and to ask questions

Dentistry
INTERNATIONAL DENTISTRY - AFRICAN EDITION

ETHICS 2020 - ANSWER FORM

CPD ACCREDITATION NO: MDB014/003/01/2020 (COLLEGES OF MEDICINE OF SOUTH AFRICA) LEVEL: 1 : 5 CEU'S (ETHICS)

QUESTIONNAIRE 1

Dental malpractice and its liabilities: Ethical and legal considerations every dentist should know. Hartshorne & van Zyl, page 1

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QUESTIONNAIRE 2

Stress, burnout, substance abuse and impairment amongst members of the dental profession. Meyer, page 13

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QUESTIONNAIRE 3

Ethics in aesthetic dentistry. Part 1: The complex ethical arena of aesthetic dentistry. Hartshorne, page 18

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QUESTIONNAIRE 4

Ethics in aesthetic dentistry. Part 2: Ethical considerations of over-treatment – patient interests vs business interests. Hartshorne, page 22

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QUESTIONNAIRE 5

Ethics in aesthetic dentistry. Part 3: balancing benefits and risks. Hartshorne, page 28

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QUESTIONNAIRE 6

Ethics in aesthetic dentistry. Part 4: Informed consent - How much information is enough? Hartshorne, page 36

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