

## **ETHICS IN AESTHETIC DENTISTRY**

### **PART 1: THE COMPLEX ETHICAL ARENA OF AESTHETIC DENTISTRY**

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#### **The changing face of dentistry**

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

Treatment options have increased and the approach to care is now aimed more 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, has made our society more aware of appearance and globalised the perception of what is attractive, desirable, and appealing (**Mousavi, 2010**). 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 positioning their practices to appeal to the aesthetic and dental implant market (**Newsome, 2003**). 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 (**Tiernan, 2010**).

#### **What is aesthetic /cosmetic dentistry?**

Nash (**1988**) 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). The formulae for marketing or presenting beauty and attractiveness in the cosmetic industry are simply: “Look better, then everybody treats you better, you will then feel better.”

Facial appearance, specifically the oral region, is 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 (**Davis, Ashworth and Spriggs, 1998; Mousavi, 2010**).

Aesthetic dentistry is essentially elective procedures performed on normal tissue(s) 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, specialist and laboratory technician. (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) (**Nash, 1988**).

Ethically achieving aesthetic enhancement goals is only possible through patient participation, a multidisciplinary treatment approach and excellence in treatment performance.

### **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 (**Priest and Priest, 2004**), primarily popularized by the media and television (**Gold, 2002**). Access to the internet and various forms of media has increased the public’s knowledge and fuelled its 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 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 and mal-aligned teeth, inter-dental spacing and disproportioned gums. The dramatic development and improvement in restorative materials and techniques in recent decades has 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 (**Leffler, 2008**). 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 (1988) 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 moral behavior. The application of ethical principles provides various ways of understanding and examining moral behavior, (Beauchamp and Childress, 2001), inquiring why an individual action is right or wrong, or establishing the reasons why a person is good or bad (Jessri and Fatemitabar, 2007).

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 (Simonsen, 2007). 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 and 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 or participate in decision-making and make their own choices) and (4) justice (fairness in treating each other justly) (Beauchamp and Childress, 2001). 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 benefiting 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 (American Dental Association, 2005). 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 information 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 (ADA, 2005; Thomas and Straus, 2009). 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 of 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, and respectful of patient preferences, aimed at preserving normal tissue and function and based upon current scientific evidence (American Association of Endodontists, 2007).

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 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 the patient's needs, desires and abilities, facilitated by the process of informed consent (Leffler, 2008).

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. (Nash, 1988). Dental health care providers are obligated to tell the truth, protect confidentiality and respect privacy (Jessri and Fatemitabar, 2007). 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 (Jessri and Fatemitabar, 2007). Justice requires that dental healthcare providers ensure that patients are given the same treatment options as anyone would receive 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 as, or better health than they found them in, while meeting their demands. (Dental practitioners should embrace this changing

market, attempting to meet their patients' demands, but always leaving them in as good as or better health than they found them in.)

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## **ETHICS IN AESTHETIC DENTISTRY**

### **PART 2: ETHICAL CONSIDERATIONS OF OVERTREATMENT – PATIENT INTERESTS VS BUSINESS INTERESTS**

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#### **Introduction**

It is a commonly known fact that increasing 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.<sup>1</sup> 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.<sup>2</sup> 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? <sup>3</sup>

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<sup>4</sup> 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.<sup>5</sup> 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.<sup>6</sup>

Studies have shown that dental imperfections in tooth shape color and size, dental developmental defects,<sup>7</sup> dental fluorosis, missing teeth,<sup>8</sup> dental malocclusions and mal-aligned teeth, and missing teeth and gingival appearance impact the psychosocial well-being of individuals.<sup>9,10</sup> 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.<sup>11,12</sup>

### **Defining what is elective and necessary dentistry**

Elective 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,<sup>13</sup> 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 is 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.<sup>14</sup> They also compete in a capitalist market economy, guided by economic or profit motivations in order to survive and thrive.<sup>15</sup> Professionalism imposes high ethical standards on dentists, whilst business imposes management requirements.<sup>16</sup>

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. <sup>17</sup> 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. <sup>17</sup>

### **Overtreatment in aesthetic dentistry – causes and ethical concerns**

#### **Unnecessary and inappropriate 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 neither legitimate nor evidence-based. <sup>18</sup>

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. <sup>18</sup> Such unnecessary care is not in the patient’s best interest.

Inappropriate dental care is treatment that should have been done differently, (e.g. treatment that is technically and clinically not preferred). Examples of such cases include dental treatments that are performed in the absence of basic disease control and follow-up care, 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.<sup>19</sup>

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.<sup>14,19</sup> Solo practitioners are particularly susceptible to the financial pressures that arise from owning and running a dental practice, and especially so during troubled economy.<sup>2</sup>
- **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.<sup>19</sup> 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.<sup>14</sup> 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 implants. 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.<sup>20</sup>

- **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.<sup>14</sup>

- **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.<sup>19</sup> 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.<sup>19</sup>

In addition, aesthetic services are desirable and lend themselves well to promotional efforts and marketing on Web pages.<sup>17</sup>

- **Technological 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.<sup>14</sup>

## **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<sup>18</sup>: “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.<sup>18</sup>

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 insure 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 is 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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### **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.<sup>1</sup>

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 important to identify and discuss potential failures and risks with patients *before* they occur, in order to ensure that patients have realistic expectations before treatment is rendered.<sup>2</sup>

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.<sup>3,4</sup>

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.<sup>5,6</sup> Patients should be educated to fully comprehend the treatment plan, treatment sequencing and ultimate restoration possibilities, and expected treatment outcomes.<sup>7</sup>

The final choice of treatment is largely dependent upon the patient's expectations, desires, financial budget and willingness to undergo treatment.<sup>8</sup> 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:

- to anticipate and identify risks or potential harms related to the desires, needs and *wants* of the patient
- to communicate essential information and engage the patient in treatment planning discussions that will enable them to make informed choices about their treatment
- 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.<sup>9</sup>

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.<sup>10</sup> Communication implies the sharing of positive and negative information. Dentistry is a service business, thus communication is essential for success.

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.<sup>6,8</sup> 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.<sup>6,11</sup> 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 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.<sup>6</sup> 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.<sup>7</sup> 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.<sup>6</sup>

### **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 “aligners” to move teeth, such as Invisalign® or In-Line®, 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.<sup>5</sup>

- **Tooth reshaping and recontouring**

Reshaping and recontouring teeth is a very conservative, fast, effective, inexpensive and less aggressive approach to producing a desired aesthetic effect.<sup>12</sup> 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 anesthesia, 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.<sup>13,14</sup>

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.<sup>12</sup>

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.<sup>12</sup>

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.<sup>15</sup>

- **Porcelain/Ceramic Veneers**

According to Christensen,<sup>12</sup> 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.<sup>16</sup> Ceramic veneers are also a highly effective procedure to correct severe tooth discoloration.<sup>12</sup>

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.<sup>17</sup> The reduced removal of healthy tooth structure decreases the amount of dentin exposed and minimizes the possibility of creating pulpal or periodontal problems.<sup>15</sup> 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 anesthesia 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.<sup>17</sup>

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.<sup>12,15,18</sup> These restorative procedures are commonly referred to as “instant orthodontics”.<sup>17,20</sup> 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.<sup>15</sup>

Ceramic veneers, often de-bond, result in post-operative sensitivity or pulpal death when bonded to dentine.<sup>12</sup> 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.<sup>5</sup> 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.<sup>21</sup> The longevity of bonded porcelain veneer restorations still favor an enamel substrate for best predictability.<sup>22</sup>

- **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.<sup>12</sup> 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.<sup>12</sup> The possibility of crown replacement, root canal therapy and even tooth loss are increased once the first crown is placed on a tooth.<sup>5</sup>

- **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.<sup>8</sup> 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.<sup>23,24</sup> 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.<sup>8</sup> 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:

- 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
- lack of identification or anticipation of problems or risks
- 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.<sup>8</sup>

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.

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 patient's 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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