

Min Son

**Fill the Gap:** Assessing moral permissibility of rejections in dental practices, and promoting pro bono dental work through a non-profit organization

*While the level of urgency in dentistry cannot compare to that in an emergency room, oral healthcare is a crucial part of overall health. Poor oral health can lead to systemic health conditions, such as heart and respiratory diseases, oral cancer, and diabetes. Therefore, the solution to health disparities may lie in addressing oral health disparities first. Nonetheless, most dentists are business owners of their own dental practices. Hence, they work in between business and patient care, sometimes facing associated conflicts. But they are obligated to make ethical decisions when the values between the two fields clash. The dental community is in agreement that dentists are allowed some reasonable latitude in selecting which patients to accept as long as their decisions are not based on their personal biases, such as race and gender. But due to the professional nature of dentistry, I argue that the dental community has an obligation to expand opportunities for dental professionals to provide pro bono care for those who cannot afford dental care or in regions that lack healthcare professionals. I offer a multi-phase model for how to achieve this.*

Keywords: Dentistry, patient rejections, Fill the Gap

Angelina Anthony is a single mom of two children living in the outskirts of Philadelphia. Angelina loves to exercise and maintain her wellbeing. However, as a small thrift shop owner, she makes barely enough money to pay for basic necessities: water, safe shelter, her children's education, and food. Luckily, Medicaid helps to pay for their healthcare insurance, so at least she does not have to worry about healthcare. One day, Angelina brushes her teeth, and her gums start to bleed. She does not think too much about it, believing she brushed too harshly that morning. Nonetheless, for two consecutive weeks, her gums continue to bleed during and after brushing, and her children complain about her bad breath. Worried about her oral health, Angelina goes to visit a local dentist, Dr. Johnson. Dr. Johnson's manager informs Angelina that Dr. Johnson cannot look over her gums because he does not accept any Medicaid patients. Knowing she cannot pay full price for her dental treatment, Angelina goes to find other dentists near her neighborhood. Five other dentists reject her.

In emergency rooms, it is illegal for the doctors to reject any patients, and they are accountable for those patients until they become stable since EMTALA (the Emergency Medical Treatment and Active Labor Act) was passed in 1986. In contrast, dentists have been allowed to reject their patients for various reasons. While the level of urgency in dentistry cannot compare to that in an emergency room, oral healthcare is a crucial part of overall health. Poor oral health can lead to systemic health conditions, such as heart and respiratory diseases, oral cancer, and diabetes. Therefore, one cannot overlook the importance of oral health in the right to healthcare debate.

Most dentists are business owners of their own dental practices. They are also healthcare providers, who are committed to watch over their patients' oral health. Hence, they work in between business and patient care, and are obligated to make ethical decisions when the values

between the two fields clash. Are dentists obligated to treat patients who cannot pay for dental treatments? Such ethical complications in dentistry are readily revealed through the incidences of patient rejections and abandonment.

Let's look at Angelina's case from Dr. Johnson's point of view. Dr. Johnson is a forty-year-old dentist, who recently paid all his student debt. As the leader of his clinic, he is responsible to bring decent paychecks to his dental assistants and hygienists, and to make sure his patients receive top-notch oral care. Such financial and professional values led him to reject any Medicaid patients. He avoids Medicaid because of the low rates of reimbursement and of the bureaucratic delay of payment. When he considers to provide treatment for Medicaid patients, he is tempted to provide them with cheaper, faster, but mediocre treatments, which go against his professional rule of conduct. Therefore, he chooses not to examine Angelina because he needs the payment in order to provide the treatment she needs.

*American Dental Association (ADA) Principles of Ethics and Code of Professional Conduct* is a moral and professional agreement made among dentists. In return for the "privilege and obligation of self-government," the American Dental Association holds individual dentists responsible to follow ethical standards in order to gain public trust and to maintain the high reputation of the dental society. The ADA Code of Ethics brings in four principles: patient autonomy, nonmaleficence, beneficence, and justice. Throughout my research, I plan to use this code of ethics to show what dentists have ethically and professionally committed to as they acquired their dental medical degree, and what, if any, should be amended in order to require higher ethical standards for the dentists.

According to the ADA Code of Ethics, dentists are allowed to "exercise reasonable discretion in selecting patients for their practices," as long as they do not reject patients based on

the “patient’s race, creed, color, gender, sexual orientation, gender identity, national origin or disability.” This guideline suggests that dentists may refuse to treat a patient as long as it seems reasonable. What may be the justifiable reasons for dentists to reject their patients?

As seen by Angelina and Dr. Johnson’s case, the inability to pay for dental treatment may hinder a patient from receiving any care. While dentists, as leaders in medicine, have a duty to use their skills and knowledge to improve public’s dental health, their relationships with patients are built upon a contract: a payment in return for a treatment. Then, both dentists and their patients have obligations to start and maintain such a contract, and if a patient cannot pay, then dentists do not have to accept and treat this patient.

Dentists may also practice conscientious objection. Perhaps there is a patient with a criminal record of sexual assault. While the patient has done nothing to physically harm the dentist, treating a patient with such a criminal record may go against the dentist’s moral values. On the other hand, a dentist may reject a patient simply because they do not feel obligated to alleviate the terrible job the previous dentist has done. Are dentists morally obligated to treat a patient even if they can’t pay? Is conscientious objection morally permissible for healthcare professionals like dentists? Are these reasons ethically acceptable on the ADA’s standards, and should they be? These questions will be further explored throughout my research.

Mark Adams, in his late 50s, is Dr. Johnson’s new patient. Mr. Adams has dental insurance that Dr. Johnson’s clinic accepts, so the dentist proceeds with his inspection. Dr. Johnson informs Mr. Adams that he needs mouth rehabilitation, including insertion of four crowns, a partial denture, and a periodontal surgery. The total bill was expected to be around \$15,000. Mr. Adams has been having difficulties chewing his food, and therefore, asks the doctor to proceed on with his treatment. For the next four months, Dr. Johnson serves Mr.

Adams, and the procedure is half completed. Mr. Adam's dental insurance covered \$2,000 of his total bill, but Mr. Adams paid none of the remaining \$13,000 for the past four months. Dr. Johnson now considers to stop treating Mr. Adams.

According to the ADA Code of Ethics, "once a dentist has undertaken a course of treatment, the dentist should not discontinue that treatment without giving the patient adequate notice and the opportunity to obtain the services of another dentist." Therefore, as long as the patient's oral health is not in danger, a dentist may choose to abandon their patients in the case of non-payment. For Dr. Johnson, his choice towards abandonment seems reasonable according to the ADA Code of Ethics. Mr. Adams has not paid any part of the bill, breaking the dentist-patient agreement and trust. The procedure is only half complete, and therefore Mr. Adams has enough time to seek other dentists.

Dentists may abandon their patients for reasons other than delayed paychecks. A patient may consecutively refuse to follow dentists' medical advice, or a patient may verbally abuse the dentist and their team. For these types of patients, a dentist may lose the desire to help and continue their work. Nonetheless, abandonment is morally challenging, perhaps more than patient rejection, because an interpersonal relationship between the patient and the doctor has already developed. What more is owed to the patient, as the relationship starts to build between the dentist and the patient? How does the moral duty of the dentist change after accepting the patient? Should dentists be allowed to abandon their patients at all? In order to answer such questions, this research will look into the nature of human rights, and what rights dentists and patients have within their relationships.

People have natural rights based on the virtue of being human. People have rights to their life and health just because they are human beings. These rights are inherent, and should not be

taken away from anyone for any reasons. On the other hand, there are ethics that come from commitment—a sense of obligation that comes from agreements people make with one another. Rights given due to commitment are conditional, as obligation may change case by case. While a dentist may initially choose to treat a patient without insurance, and therefore commit to give their patients their right to health, they may lose the sense of obligation to treat a patient who does not comply with their advice. So is healthcare a right that people have because they naturally deserve it, or it is a commitment made by the society to its people?

In law, under the Sixth Amendment in US Constitution, all defendants have a right to be represented by an attorney during trial. Even if a client cannot afford to pay for an attorney, the government will appoint one for them without any cost. Additionally, the American Bar Association officially requires all attorneys to dedicate fifty hours of free service per year. Therefore, everyone is given the opportunity to be defended in court, although not everyone is given adequate healthcare. What makes the right to be defended different from the right to health assistance? Should dentists hold themselves to the same professional standards as the attorneys?

To understand the moral permissibility of patient rejections and abandonment in dentistry, legal and moral rights in regards to dental healthcare should be clearly understood. Legal rights are more transparent, as it is in written form. In dentistry, legal rights of patients and dentists are stated within the ADA Code of Ethics. The certification to practice dentistry is legal proof that the dentists agree and will abide by the standards stated within the professional code of conduct. These rights are protected with law enforcement. On the other hand, moral rights are enforced interpersonally—they are what we owe to each other. Such rights may lie beyond what is stated within the ADA Code of Ethics. Dr. Johnson has the legal right to abandon Mr. Adams in the middle of his procedure. But is it ethical?

## **Duty to Treat: Moral Obligation of Dentists**

In order to make a conclusion about the moral permissibility of patient rejections and abandonment, it is important to ask—do people even have a moral right to healthcare, and do dentists have a moral duty to provide it? Ethicists attempt to answer these demand questions by outlining the professional and moral commitments of dentists.

While dentists are not committed to secure every component of their patient's well-being, Ozar, Sokol, and Patthoff believe that it is the moral duty of dentists to use their expertise to maintain and improve certain parts of the patient's well-being, specifically their general and oral health. It is by the virtue of being in the role of a dentist, a healthcare professional, that they are obligated to care for the health of the people whom they serve—dental patients. Hence, the authors claim that the patient's life and general health, and the patient's oral health are the most important practice values in dentistry among four others—the patient's autonomy, the dentist's preferred patterns of practice, aesthetic values, and efficiency in the use of professional resources (Ozar, Sokol, and Patthoff). Nonetheless, these practice values focus on the interpersonal relationship between an individual dentist and their patients in a clinical setting. Do dentists have no moral duty to secure the general and oral health of patients outside their office? Do people who do not seek dental care not deserve a right to dental care?

Graskemper claims that dentists do not have any duty to treat a patient. The duty to treat arises only when the patient-doctor relationship is established; therefore, as long as the dentist does not reject a patient based on their underlying bias, Graskemper believes that it is morally permissible for dentists to reject a patient. Such a claim supports the ADA Code of Ethics, which legally prohibits dentists from rejecting a patient based on their color, creed, race, religion, national origin, or disability, but allows them to select against certain patients based on founded

reasons (Graskemper). It is notable that Graskemper's chapter on "May you refuse to treat?" is only a page long, and it mainly discusses the patient's rights to be informed of the risk of being treated by a dentist who has contracted HIV or AIDS.

### **Moral Creativity and the Burden to the Last Dentist in Town**

In October 2018, the ADA amended its code of ethics in order to provide equal and just care for patients with disabilities. It specifically states that patients with disabilities cannot be rejected from dental service, or at the very least, should be referred to another dentist who can provide treatment. Nonetheless, a recent report shows that special needs patients are still selected against by dentists because they are incapable of providing care. Even if they accept patients with disabilities, they are tempted to provide a quick and easy treatment, such as pulling out a tooth instead of providing a root canal therapy (Louis).

Louis shares a story of Bella, a patient who has special needs and requires a wheelchair. She does not like getting restrained and touched; therefore, it is difficult to have her teeth cleaned. Unfortunately, many dentists can't and won't treat patients with disabilities because of various reasons. First, it takes more time and employees to care for these patients. According to Dr. Queen, to treat a patient with Parkinson's disease, she requires one dental assistant to "hold their head still, another to retract their tongue, and another assistant to suction," while she does all the dental work. Secondly, some dental facilities do not have proper equipment to treat patients with disabilities. Bella was rejected by eight dentists and one root-canal specialist because they either did not feel they were competent enough to treat her or did not have wheelchair accessible equipment to take her X-ray or to look into her mouth. One dental office made Bella's family wait for six months until they rejected her the day before the appointment (Louis).



In her article, Louis shares a glimpse of hope that would allow patients with disabilities to have access to dental care. For Bella, it causes anxiety when people move her out of her wheelchair and place her onto a dental chair, and it is a struggle for dental offices to work with patients like Bella. To solve this problem, the New York University School of Dentistry renovated their clinical setting to include wheelchair-accessible dental chairs (Louis). This moral creativity, or creatively addressing a moral dilemma, gave Bella the opportunity to receive her root-canal therapy. Such a solution is not the work of a single dentist—it is a communal work of humanity that brings us closer to equity in basic human rights, such as the right to healthcare.

Moral creativity is a way to bring heroic goods to the society and can be further encouraged as more people join the movement. Dentists' duty to treat develops when their colleagues are sacrificing some of their personal interests for the best of their patients. Dr. Morton Cross is the director of large Midwestern city dental health department, and he faces difficulties in getting dentists to treat HIV-infected patients. However, there are a few dentists in the community who are morally committed to treat these patients. While the number of dentists is enough to provide oral care for the HIV-infected patients in the town, Dr. Cross believes that such an unfair distribution of obligation leads to a higher risk of infection for the dentists who accept infected patients. Hence, the doctor claims that HIV-infected patients should be treated in all private practices, and that the burden of risk should be evenly distributed amongst all dentists (Rule and Veatch).

Through this case study, Rule and Veatch suggest that a duty to treat lies within all dentists. The ADA Code of Ethics states that “a decision not to provide treatment to an individual because the individual has AIDS or is HIV seropositive, based solely on that fact, is unethical” (Rule and Veatch). If some dentists are abiding by this code of conduct, while others

are not, then the duty to treat does not exist for anyone because the decision to treat becomes a personal choice rather than a duty. Therefore, the obligation of each dentist is clear when the work of dentistry is considered as communal. If a dentist rejects a patient because they cannot pay, then another dentist has an increased burden to accept and treat that patient.

### **What Challenges Dentists' Moral Integrity?**

An 8-year-old patient was rejected by his dentist because his family could not pay for his pulpotomy, a procedure that would have relieved his pain. This is a true case. While the dentist is not legally accountable to provide free service, Graskemper agrees that ethically, his dentist should have provided the treatment because the patient was still in pain. What is challenging the dentists and their sense of moral and professional obligation? Graskemper discusses three factors: societal, environmental, and personal (Graskemper).

Our society pushes individuals to have a perfect smile. Due to advancements in dental cosmetics, patients often pressure dentists into treating their perceived cosmetic wants rather than treating what needs immediate care. Also, a patient may have a different perceived value of dental healthcare. They would want the dentist to proceed with the cheapest option, or with the treatment covered by their insurance company—for example, extraction of a tooth rather than a root-canal therapy (Graskemper).

Environmental factors include “intrusions of dental manufacturers, self-made dental gurus, and private dental continuing education institutions,” as they affect the choices of materials and treatment protocols. In addition, due to the advancement in technology, patients can now gather information outside their patient-dentist interaction. Whether it be through direct advertising from the manufacturer or a blog written on the Internet, patients develop biases about

which type of technology, materials, and dental practice in general is appropriate for them (Graskemper).

Finally, dentists' ethical integrity may be challenged by the expectations of their family, friends, and staff—expectations that cannot be attained unless the dentist bends his ethical standards. For example, a dentist's family may pressure the dentist to pay off her debt within seven years of graduating from dental school. Such financial stress may lead her to reject a patient who cannot afford to pay for a pulpotomy (Graskemper).

Graskemper expresses his concern that dentistry is changing from a healthcare profession to a merchant-like occupation. As dentists internalize their profession as marketers and business people, the value of providing healthcare diminishes. At the end of the day, what seem to matter is how many crowns are inserted in an hour, how many teeth were treated in a day, and how much money is earned through immediate bleaching (Graskemper). What should matter to the healthcare professional is how many people were relieved from their pain, how many lives were saved, and how much the society has progressed through their work. Graskemper's three factors shows that the self-image of dentists is mostly shaped by surrounding pressures, and therefore, it is important for the dental community to use their continuing education to remind dentists of their duty to care for patients' health.

### **Comparison to Law Ethics: Professional Duties**

In the United States, we highly value the individual's right to be defended in court. This right is authorized in the Sixth Amendment to the U.S Constitution, which states that the accused shall have an "assistance of counsel" (U.S Constitution). After the 1963 Supreme Court case *Gideon v. Wainwright*, indigent criminal defendants, who are unable to afford an attorney, were

given the right to free legal representation (FindLaw). What implication does the universal right to counsel have on the moral duties of attorneys? What makes the right to oral care different from the right to be defended in court that prevents people from getting dental care if they don't have money?

Just like the American Dental Association, the American Bar Association (ABA) has their own Model Rules for Professional Conduct, which outline the expectations for rejecting or terminating representation. Attorneys are granted permission to decline representation if (1) it violates the professional code of conduct or other law, (2) the lawyer is physically or mentally unable to fully represent their client, or (3) the lawyer is discharged (American Bar Association). Recall that the ADA's Code of Ethics allows dentists to "exercise reasonable discretion" in selecting their patients as long as such selection is not based on underlying biases. There seems to be one clear distinction between the ADA's and the ABA's guideline for client or patient rejections: the ADA protects the dentists' right to self-govern their practice with few limitations, while the ABA protects the client's right to be fully represented in court as long as it does not violate other criteria in their code of ethics.

The Sixth Amendment furthers the right to counsel with this statement: "Lawyers in criminal cases 'are necessities, not luxuries.'" Jones references Justice Steven's *Cronic* opinion to highlight that the right to counsel ought to be pervasive, as it enhances an individual's ability to protect their other rights. He claims that if lawyers withdraw from their duty to counsel a criminal defendant, then our country would become a totalitarian state where accusation means guilt. Therefore, Jones believes that the judicial branch would be "eroded" if attorneys play the role of the judges and juries by choosing to accept or reject their criminal clients. It is the role of attorneys to defend their clients, not to judge who is guilty and who is not. Here, Jones

emphasizes that law is a profession, not a trade; therefore, the duty of the lawyer is similar to that of the priest or the surgeon, which is to serve their clients unless there is an “insuperable obstacle in the way” (Jones).

Jones further discusses the issue of the unpopular client: who is responsible to defend a client whom everyone does not want to defend? According to the ABA Defense Function Standard 4-1.6(b), “all...qualified lawyers should stand ready to undertake the defense of an accused regardless of public hostility toward the accused or personal distaste for the offense charged or the person of the defendant.” The Model Code of Professional Responsibilities states that while lawyers are not obligated to defend and advocate for every single person who wishes to be their client, they should not decline lightly any prospective clients. It is clear that an attorney’s responsibility to accept clients is heavy, as the personal interest of lawyers is considered a lesser value than the client’s right to be defended in court. The only time the lawyer is encouraged to decline employment is when their personal feelings would impair their ability to fully represent their clients. If the attorney is able to effectively defend their client, despite their personal feelings or interests, then that attorney has no good reason to decline employment (Jones).

What’s the difference between dentistry and law? First, as Jones states, law is no business. Due to the Sixth Amendment, even those who cannot afford to hire an attorney can seek counsel, as the government would appoint one for them. An attorney is all that is necessary to protect people’s right to be defended in court. On the other hand, dentistry is a crossover between a profession and a business, and the United States government does not protect every person’s right to oral health. Perhaps the difference comes from the advancement in technology and high cost of dental practices. In order to provide treatment for their patients, dentists need

more than their hand skills and high-level education—dentists themselves have to buy all the necessary equipment and products, from x-ray scans to porcelain-fused-to-metal crowns. Hence, a dentist who treats their patients for free is not only offering their time, skill, and knowledge, but also emptying their own pockets.

### **Comparing Dentistry to Dermatology and Plastic Surgery**

Dentistry, dermatology, and plastic surgery have a common thread—these fields include a crossover between cosmetics and healthcare. While professionals can provide their clients with white teeth, clear skin, and a perfect nose to increase people’s confidence in their self-image, they also provide healthcare that is necessary for the basic functioning of life, such as full dentures, treatment for burns, and facial implants. Therefore, I looked into patient rejection cases within dermatology and plastic surgery in order to evaluate whether or not rejecting patients is morally permissible in dentistry.

Dr. Joseph Eastern claims in his “Firing patients” article that just as patients have a right to select their doctors, doctors have equal rights to dismiss their patients. However, due to the ethical demand of the occupation, he believes that doctors ought to place the patients’ welfare above self-interest, and therefore, patient rejections should be the “absolute last resort.” Nonetheless, to protect a doctor’s legal right to decline patients, he suggests to other doctors to keep a written list of what counts as a dismissible behavior. His list includes threats or violence toward physicians and staff, repeated rude or disruptive behavior, refusal to adhere to agreed-upon treatment plans, and repeated failure to pay medical bills (Eastern). Such a guideline is also familiar in dental practices, as many patients are selected against, especially because they repeatedly fail to pay for their dental bills.

Verwey and Carstens distinguish cosmetic plastic surgeons from other conventional doctors, and state that such a practice requires a different degree of ethical conduct. Cosmetic surgery is elective rather than therapeutic. It is a procedure taken to change natural appearance, not to improve general health. On the other hand, these plastic surgeries may have medical care components as well, including psychological support and improvement of sex life. Nonetheless, general cosmetic surgeries involve exposing healthy patients to medical risks and side effects for “benefits that are, arguably, non-medical.” For procedures that involve aesthetics, the success of the treatment is based on the patient’s opinion, not the doctor’s. In fact, cosmetic surgeons do not have much authority in the course of the treatment. Instead, they are just a source of information for their patients (Verwey and Carsten).

Unlike other doctors, cosmetic doctors have a duty to select their patients carefully due to psychiatric concerns in the patient population. Consider a patient who is unsatisfied with their body image. They go see a plastic surgeon to remove their body fat, hoping to transform into Jennifer Lopez. However, there are limits in what surgeons can do, and in the end, the patient is disappointed with the results. This unhappiness is toxic to the patient’s general wellbeing, especially if they have preoperative psychological problems, as they may have suicidal thoughts, depression, and resentment towards the surgeon. Thus, it is recommended for cosmetic surgeons to reject any patients with a history of mental illness (Verwey and Carsten). Such selection seems to be for the best of the patient’s safety in case of an unsatisfactory outcome.

On the other hand, it is difficult for Medicaid patients to find service in dermatology, as patient insurance affects access to care. According to Resneck et al., out of 612 physicians, acceptance rates for Medicaid patients was 32%, while that of private insurance patients was 87%. The average waiting time for Medicare and private insurance patients was 37 days, while

Medicaid patients waited for about 50 days. There was also a correlation between payment rates and rejection rates: in geographic regions where there are relatively low Medicaid payment rates, Medicaid patients faced higher rejection rates (Resneck et al., 2004). Such rates seem to reflect the popular view on dermatology—a field that provides privileged skincare rather than necessary healthcare. Nonetheless, dermatology is a crucial sector to general health, as skin is the first layer of protection of the human body. In order to protect people’s right to basic health and to make skincare more accessible, separation of cosmetic and medical dermatology may be necessary in policy reform.

Dermatology, plastic surgery, and dentistry are all combinations of cosmetics and healthcare. Perhaps such a duality is what creates the ethical dilemma during patient selection. However, it is important to note that in all three fields, the providers call themselves *doctors*. Their duty lies within the health of the patients first. But rejections do not always mean business first. Plastic surgeons are allowed to reject patients to advocate for the patient’s mental health, suggesting that there are good rejections—rejections that promote the well-being of patients. Then are rejections morally permissible in fields in which healthcare and cosmetics crossover? We have to be careful of such rejections that may promote unwanted discrimination against certain groups of people.

### **Implicit Bias and Rejections**

A National Health and Nutrition Examination Survey in 2011-2014 studied the prevalence of edentualism in adults aged greater than 65 years old across different races and Hispanic origin. Edentualism is the loss of all natural, permanent teeth. The survey showed that non-Hispanic black adults were more likely to be edentulous than non-Hispanic white, non-Hispanic Asian, and Hispanic adults. Additionally, higher number of Hispanic and non-Hispanic



black children had untreated dental caries, or tooth decay in primary teeth compared to non-Hispanic white children age 2-5 years old (Centers for Disease Control and Prevention).

Although the ADA prohibits patient selections based on race, creed, sexual orientation, and other personal identities, oral health disparities are still prevalent. Even if a dentist purposefully rejects a patient based on their race or gender, the burden of proof is too high for the patient to ask for legal accountability from the dentist. Additionally, in 2017, a significantly higher number of black (20%) and Hispanic (16%) individuals experienced poverty in comparison to white (8%) (Henry J Kaiser Family Foundation). If dentists are able to reject patients who cannot pay, then it is likely that black and Hispanic populations are more discouraged from getting dental care than white populations.

Implicit bias also affects dental practice. Patel researched 57 dentists and their unconscious racial bias. The survey gave these dentists a clinical scenario with patients' clinical photographs and radiographs, which showed either Black or White patients with tooth decay and irreversible pulpitis (an inflammation of dental pulp tissue). Both explicit and implicit bias were measured. The results showed that dentists were significantly more likely to recommend root canal treatment to the white patients and extraction to the black patients (Patel). It is scary to think that underlying biases can dictate the course of dental practices; therefore, it is crucial for dentists to be aware of their implicit biases and be educated on how to reduce the effects of these biases in their practices.

### **Paying Off Student Loans**

Dental schools are expensive. The American Dental Education Association reported that about 30% of dental graduates have a debt of more than \$300,000, and the average student loan

reached about \$286,331 for the class of 2017. This average was higher for students who graduated from private schools: \$341,190. How difficult is it for dentists to pay off their debt? According to the U.S Department of Labor's Bureau of Labor Statistics, average dentists earned about \$173,860 in 2016. The annual wage of the bottom 10% was about \$67,690 that same year. It is important to consider that salaries change according to different industries and locations. In 2016, residential intellectual and developmental disability, mental health, and substance abuse facilities paid dentists about \$184,620, and annual incomes were higher in overall in Delaware (\$236,130) and North Carolina (\$236,020).

Let's use the numbers from Student Loan Hero to get a grasp of how long it would take for a recent dental school graduate to pay off their debt. If a student borrowed \$261,149 with the Grad PLUS rate of 6.31%, she owes a monthly payment of \$2,940. With interest, she would have a total debt of \$352,813. If she graduated from undergraduate college as a chemistry major, she lost about \$220,000 of earning throughout her four years in dental school because the typical annual salary for chemistry majors is approximately \$55,000. Therefore, "between missed earnings, student debt principal, and interest, a dental school graduate can count on sinking about \$570,000 into dental school" (Kirkham). Assuming that the graduate has a starting salary of \$111,800 and a 5% increase in earnings each year, it would take an average of eight years to offset the cost of going to dental school. It is important to note that the investment in dental school generates \$90,000 more income than a graduate with a bachelor's degree after the eighth year of graduating dental school (Kirkham).

It is undeniable that a principal debt of approximately \$300,000 is burdensome. From their family members, friends, and colleagues, dental students and the graduates are pressured to pay off their student loan as soon as possible. With such demand to generate money, it seems too

much, even unethical, to require those with debt to provide free dental treatments for those who cannot afford to pay. While treating a patient to the extent of sacrificing personal economic status is heroic, such sacrifice is not morally required for dentists. Nonetheless, as dentists pay off their student loans, they start to generate an impressive amount of money with six-digit annual incomes. Also, healthcare will always be a demand—the prices for crowns, implants, bridges, and other treatments would still be expansive in the future, and dentists are likely to stay in business. Then are there different expectations for dentists in debt and dentists who paid off their student loans? My answer is yes. While dentists who paid off their debt still have no obligation to treat patients who cannot pay, I believe they have more opportunities to use their profession and skills for the general good of the population. It is an obligation of a healthcare community, instead of an individual, to extend such opportunity as much as possible to serve the people we signed up to serve.

### **Patient Rejections, a Right to Dental Care, and Professional Obligations**

Recall the case of Angelina Anthony. Her dentist, Dr. Johnson, rejected her because she was a Medicaid patient and was unable to pay for her treatment. As someone who does not have my own dental practice, it is tempting to accuse Dr. Johnson of prioritizing his business over a patient's health. Nonetheless, in order to evaluate this situation, we have to discuss—is dental care a moral right? What contributes to being a dentist? Running a dental business? Being a moral human being? I argue that while patients do not have a right to claim service from their dentists, the dental community ought to provide patients with unlimited opportunity to exercise their right to pursue basic dental care.

Healthcare is not a right. To stay healthy, we buy the skills, material, and time from highly-educated professionals. Therefore, healthcare remains a privilege for those who are

financially stable. During our interview, Dr. Cortina mentioned that dentists are equivalent to car mechanics. If there is no payment, then there is no treatment, or at least the client does not have a right to demand service from the providers. However, perhaps the analogy is not perfectly parallel between the car mechanics and dentistry. If someone is unable to pay for car mechanics, alternatives exist. Ride a bicycle, walk, or ask a nearby friend for a ride. Although having one's own car has a high convenience value, fixing a car is not essential to life. On the other hand, there are no alternatives for dental care. If someone has a serious tooth decay or a pile of plaque in between their teeth, the lack of dental care would deteriorate their health conditions. Dental care is fundamental in maintaining life, and therefore, dentists should have different standards than the car mechanics when selecting their clients.

It seems more reasonable to compare dentists with farmers. Food, like healthcare, is also a fundamental human need—without it, we cannot sustain life. Let's say a homeless person walked up to the farmer's stand, and it was very clear that they have not eaten for days. The farmer would be morally pressured to provide them with leftover fruits and vegetables, or even provide substantial food from their own fridge. Is such kindness morally required? I strongly believe so. Consider the horrendous case of Kitty Genovese. On March 13, 1964, Kitty was walking to her apartment located in Kew Gardens, Queens, and that's where she was ruthlessly stabbed by Winston Moseley. But Moseley's knife wasn't the only weapon that took away Kitty's last breath. There were bystanders. If her neighbors who heard her scream responded by calling the police, she could have survived or at least would have had a chance to live. Hence, their ignorance also killed Kitty.

On the other hand, as soon as the homeless person walks up to the farmer, the farmer's kindness becomes more morally demanding. It is as if Kitty made an eye contact with one of her

neighbors and yelled, “can you help me?” What excuse would this bystander have for denying to save her life besides “I didn’t want to help”? Then what difference would there be to stab someone to death and to leave someone in front of you to starve to death? Inaction should be morally forbidden when 1) one’s life is at risk and 2) the targeted helper has the capability to help. In both scenarios, saving life does not require much effort, skill, time, or resources. For a farmer, they may give up leftover vegetables or fruits that they were going to throw away anyways, or even leftover dinner they saved from few days ago. For the bystanders, all that was required was a phone call or even yelling at the prosecutor to stop.

It is important to note that the farmer’s duty to help a hungry homeless person differs from the dentist’s obligation to treat a patient who cannot pay. It is undeniable that both food and healthcare are fundamental necessities to life, but the risk for denying customers or patients is not equivalent. For someone who has not eaten for days, one meal may save their life. The severity is not the same for dentistry. If a patient cannot pay for a filling or for cleaning, their life is not at a serious risk at the moment; thus, a rejection may not be fatal. Nonetheless, consider how neglect in dental care can ultimately lead to more serious health conditions, such as heart disease and oral cancer. Therefore, dental healthcare is preventative care—most patients in search of dentists invest in their future health conditions rather than their present. Hence, it is difficult for both dentists and the patients to recognize the connection between dental care and right to life when dentistry does not deal with urgent life and death situations in the moment.

Furthermore, dental treatments are more expensive than fruits and vegetables. First, dentists spend four years or more in dental school to earn their degree, resulting in the average student loan of \$300,000. Such debt takes eight or more years to pay off. Moreover, dentists who own their own business invest around \$100,000 more and take responsibility to pay their

employees, including dental hygienists and technicians. The financial burden would increase if they treat a patient for free, and such treatment requires capping a tooth with a crown that is worth \$800. Treating a patient who cannot pay would not be possible for a dentist who has such financial restraints. In fact, it would be unethical to require service for free when such work demands a lot of money.

It is undeniable that dentists have a higher income than other occupations with the average annual salary around \$150,000. Do dentists who paid off their debt have different moral standards to help those in need than dentists who still owe money? Consider a farmer with a great surplus of vegetables versus a farmer who had a tough year and could not make much profit. A poor customer comes by and requests free food, and it is clear that they are not fatally starving. While it is morally permissible for both farmers to withhold food from the poor customer, the farmer with surplus food has a stronger duty to give some food.

The moral expectations change in the situations where money is not the problem to providing service, and the rejections are based on not only the provider's strong personal interests and values, but also targeted discrimination. Consider the case of assisted suicide. While the legal and moral permissibility of intentional death is still under debate, the question arises—do doctors and pharmacists have a right to conscientiously object to the patient's request if they feel strongly about ending one's life? In the case of euthanasia, the reason behind conscientious objection lies within the act itself, not the person requesting the procedure. The society has no right to force an individual to perform an action that they believe is true evil, such as ending life. The analogy is not the same in dentistry because the act of providing care is not controversial. In fact, it is a true good. If dentists are conscientiously objecting to provide care, it is not because

they believe the act of treating a cavity is pure evil. It is because they have a strong feeling against the person and their identity.

For instance, Emily, who is a sophomore in high school, walks into the practice of a Korean dentist, Dr. Kim, due to a potential cavity in her lower molar that has been preventing her from chewing food. The dentist kindly accepts the patient and starts the examination. During their conversation, Dr. Kim discovers that Emily is a Japanese immigrant, and abruptly lets her employees know that she can no longer treat Emily. The Korean dentist refuses to treat Emily because her grandparents were tortured by the Japanese military during Japanese colonialism. Although Emily as a sixteen-year-old did not contribute to this violent history, Dr. Kim's anti-sentiment towards Japanese people prevented her from treating Emily. Such is an example of conscientious objection in dental practice.

This conscientious objection is not supported by the ADA's Code of Ethics, as dentists ought not to reject patients based on their race, creed, color, gender, sexual orientation, gender identity, national origin or disability. Julian Savulescu vehemently claims that "when the duty is a true duty, conscientious objection is wrong and immoral...If people are not prepared to offer legally permitted, efficient, and beneficial care to a patient because it conflicts with their values, they should not be doctors" (Savulescu 2006). Dr. Kim's reason to reject Emily is irrational and even dangerous to the society because she is requesting moral release from an individual who has not violated her rights personally. In fact, if dentists are morally permitted to reject patients based on their personal values and feelings, oppressed and marginalized communities would have more difficulties finding a dentist to treat them. Therefore, conscientious objections may increase oral health disparities.

Micro-aggressions, stereotypes, and prejudice may hinder those who are worthy and entitled to receive care when conscientious objections are morally and legally permitted. If a dentist claims that they are going to refuse any patients with a criminal history, then they are more likely to reject black patients than white. Furthermore, selecting against patients who are accused of a criminal act is beyond the scope of the dentists' profession. It is the duty of the court to decide whether the individual is guilty or not, and it is the duty of the dentists to treat individuals who need oral care. As a National Health and Nutrition Examination Survey showed in 2014, the prevalence of edentulism is higher among black and Hispanic individuals than whites in adults aged greater than 65 years old. Such oral health disparities would worsen with conscientious objections in dentistry.

The American Dental Association does not discuss the borderline issues where conscientious objection seems reasonable and permissible. For instance, is it legally and morally permissible for Muslim female dentists to reject male patients because it is religiously forbidden that Muslim women touch men before marriage? Although the ADA discourages rejections that are based on the patient's gender, I believe that such conscientious rejections are permissible based on two criteria: 1) rejections should be consistent and clearly indicated to the public that the dentist cannot treat male patients. 2) the rejections are not based on anti-male sentiment, but rather following through on one's religious beliefs and practice. The fundamental notion of this rejection is not that the dentist does not want to treat this patient, but rather she can't due to her religious practice. This makes a difference between a Korean dentist rejecting a Japanese patient based on historical mistreatment and a Muslim female dentist rejecting a male patient based on her religious practice.



Then, is “it is part of my religious belief” always a permissible reason to reject patients? Consider an extremely conservative Christian dentist who is against gay marriage. Can this dentist reject gay couples away from the practice? The danger of conscientious objection is that such practice allows dentists to decide who is worthy of receiving dental treatment. In grocery stores, all human beings have access and are permitted to buy anything in stock. It is morally wrong to put up signs such as *all Jews cannot buy fruits and vegetables* or *gay couples cannot buy any meat* because regardless of personal identities and values, food is a fundamental human need. So is healthcare. Regardless of race, gender, sexual orientation, religious affiliation or disability, all human beings deserve dental care. It is only the physical barriers, such as finances, that we should be concerned about when selecting our patients into the practice. Because there are grey areas in which the right to pursue healthcare conflicts with other human rights, such as the right to practice religion, the dental community ought to outline what kinds of rejections should be acceptable and not acceptable.

Because the ADA prohibits patient rejections based on personal biases, Dr. Kim is legally prohibited from rejecting Emily from her practice. Would it be immoral for Dr. Kim to proceed with the treatment if her negative bias against the Japanese patients could affect the quality of her work? While discrimination is highly discouraged, so is unprofessional work. Dr. Kim may be more prone to suggest more expensive and perhaps more painful treatment for Emily if her hostility towards Japanese people becomes transparent in her practice. When her abhorrence transfers over to her action, then the patient’s wellbeing could be jeopardized. If Dr. Kim preconceives such danger and rejects Emily for her own safety, should such rejection be allowed?

According to the American Bar Association, a lawyer is encouraged to not represent a client if “the lawyer’s physical or mental condition materially impairs the lawyer’s ability to represent the client.” Perhaps we should allow dentists to make the call to reject patients if they strongly believe that their vehement feelings would affect their ability to treat patients well. Nonetheless, such permission can be abused and therefore, a specific guideline is necessary to when conscientious objections ought to be allowed in dental practice and when it should not be.

Rejections based on financial reasons also affect marginalized communities. Higher numbers of black and Hispanic individuals fall below the poverty line in the United States. Thus, a higher number of these individuals would be rejected from dental practices, based on the reason that they are not able to pay. It is inevitable for oral health disparities to be prominent between oppressed and privileged communities. How would we be able to close such a gap in oral health? I believe the answer lies within pro bono work from the professionals. The dental community should expand the opportunities for dental professionals to donate their time and skills for the good of our society.

### **The Power of Free Will**

It is legally and morally impermissible to demand service from the dentists to help those who cannot pay for dental care. However, free service is always welcomed, and has been making a differences to our community. While healthcare providers may not be able to take care of Medicaid and Medicare patients every day, they may be able to designate one out of five working days to open the doors for those in need. Even if it is not every week, even one day of service within six months has proven to make an impact on our society’s dental health. If we magnify the amount of free service provided to the community and expand the opportunities for

dental professionals to donate their time and skills, then there is hope in which our country does not suffer from the injustice of oral health disparities.

Mission of Mercy is a non-profit organization that provides free healthcare and dental care for uninsured and underinsured patients. It is a faith-based community organization that does not receive any government funding, and therefore can treat patients without any pre-qualifications. In other words, their patients do not have to prove their state of social status nor residency in order to receive care. The organization receives free funding, and relies on dentists, dental hygienists, and dental technicians to close their practice for a day or two in order to provide free work for the people who cannot afford dental care.

Maryland, specifically, has four clinics throughout the state in which they host free service for the underserved community for two days at a large venue. They have rows of dental chairs and equipment set up, and services include cleaning, endodontics, restorative work and even oral surgery. Because the service is free for all, the line is long, and people who could not receive treatment on the first day usually wait overnight to receive care on the second day.

Mission of Mercy is a successful movement that brought oral care to many patients. In 2017, over 3,000 patients were treated with over 6,000 procedures performed. Over three million was spent while none of the patients spent any money to receive the treatments. What is more surprising is that 5,000 volunteers were willing to close their practice for days and come to Mission of Mercy clinics to help those in need. Access to dental care was achieved through volunteerism.

Although Mission of Mercy is a successful non-profit organization and has made a difference to many individuals who are uninsured and underinsured, there are limitations. First,

patients and their families spend many hours waiting in line to receive free treatment, and they may be sacrificing their hours to work. While oral care is important, such a queue may hinder patients from seeking service from Mission of Mercy. Secondly, some dentists may not be able to provide service on the designated days and time of the clinics. While a lot of dentists already volunteer with Mission of Mercy, if we can expand opportunities for more dentists to provide pro bono work, then the gap in oral health may close faster.

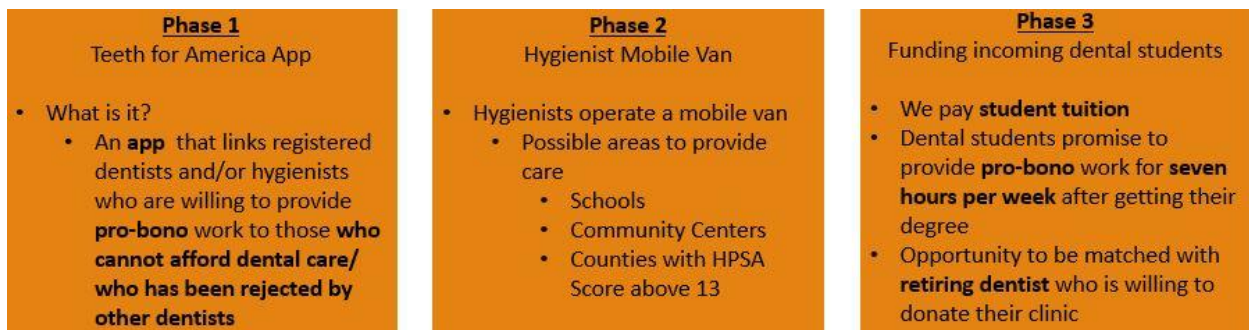
Dental Lifeline Network's Donated Dental Services is another volunteer program that is nationwide. Donated Dental Services provides free dental treatment for people with disabilities or who are elderly or medically fragile. It is a network of 15,000 dentists and 3,500 dental labs. Since 1985, the organization has provided \$378 million worth of dental care, treating 120,550 people. People receive care as they call Dental Lifeline Network, and then its coordinator reaches one of the registered dentists to ask if they can treat the patient. The dentist has the freedom to accept or reject the patient based on their availability and capability to treat the patient.

Dental Lifeline Network has another project called Dental House Calls, which is currently located only in Denver, Colorado. Dental House Calls provide services to people who cannot easily travel to dental offices including homebound individuals with disabilities, elderly people in residential centers, and those with little income. The mobile van transports a fully equipped, portable dental office, which can be set up at the bedside or in a facility.

Non-profit organizations like Mission of Mercy and Dental Lifeline Network depend on the dentists' free will to provide service for underserved communities. With this free will and kind heart, there is hope that we can broaden our range of providing free service for those in need.

## Fill the Gap

I believe there is still a place for our society to improve where all people receive the dental treatment they deserve. How do we bring basic dental care to areas where there is a high shortage of dental professionals? How can we reduce the waiting line for non-profit organizations like Mission of Mercy? How can we foster a dental community that values pro bono work? To address these questions, I introduce a three-phase model—Fill the Gap.



The purpose of Fill the Gap is to address the oral health disparities in the United States by: 1) increasing the opportunities for dentists, hygienists, and dental technicians to provide free to low cost work to the people who cannot afford healthcare or have been unable to receive dental care, 2) allowing pro-bono work to take place in private dental practices with minimal interference with their business, 3) reaching districts and counties with high healthcare professional shortage areas (HPSA) score, and 4) providing an efficient way for low-income individuals and underserved communities to reach the dental community.

## Reference

- “About: Mission of Mercy: MSDA Foundation: Board of Directors.” *MSDA Foundation*,  
[www.msdaf.org/about](http://www.msdaf.org/about).
- Biggs, Amanda. “Dental Reform: an Overview of Universal Dental Schemes.” *Home – Parliament of Australia*, CorporateName=Commonwealth Parliament; 9 Jan. 2014,  
[www.aph.gov.au/About\\_Parliament/Parliamentary\\_Departments/Parliamentary\\_Library/pubs/BN/2011-2012/DentalSchemes](http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BN/2011-2012/DentalSchemes).
- Eastern, Joseph S. “Firing Patients.” *MDedge Dermatology*, 28 Mar. 2019,  
[www.mdedge.com/dermatology/article/196325/business-medicine/firing-patients](http://www.mdedge.com/dermatology/article/196325/business-medicine/firing-patients).
- Educational Debt*,  
[www.adea.org/GoDental/Money\\_Matters/Educational\\_Debt.aspx#sthash.SEyxD1lv.dpb](http://www.adea.org/GoDental/Money_Matters/Educational_Debt.aspx#sthash.SEyxD1lv.dpb).
- “FindLaw's United States Supreme Court Case and Opinions.” *Findlaw*, [caselaw.findlaw.com/us-supreme-court/372/335.html](http://caselaw.findlaw.com/us-supreme-court/372/335.html).
- Galewitz, Phil. “Medicaid Patients Struggle to Get Dental Care.” *USA Today*, Gannett Satellite Information Network, 15 Feb. 2015, [www.usatoday.com/story/news/2015/02/15/medicaid-patients-struggle-to-get-dental-care/23315811/](http://www.usatoday.com/story/news/2015/02/15/medicaid-patients-struggle-to-get-dental-care/23315811/).
- Graskemper, Joseph P. *Professional Responsibility in Dentistry: a Practical Guide to Law and Ethics*. Wiley-Blackwell, 2011.
- “Health Systems in Transition, Poland: Health System Review.” *Mafiadoc.com*, MAFIADOC.COM, [mafiadoc.com/health-systems-in-transition-poland-health-system-review\\_5994a08a1723ddcd6988d4f0.html](http://mafiadoc.com/health-systems-in-transition-poland-health-system-review_5994a08a1723ddcd6988d4f0.html).
- Jones, Stephen. “A Lawyer's Ethical Duty to Represent the Unpopular Client.” *Chapman University Digital Commons*, [digitalcommons.chapman.edu/chapman-law-review/vol1/iss1/5/](http://digitalcommons.chapman.edu/chapman-law-review/vol1/iss1/5/).
- Kim, Nayoung, et al. “Inequality in Unmet Dental Care Needs among South Korean Adults.” *BMC Oral Health*, BioMed Central, 26 Apr. 2017, [www.ncbi.nlm.nih.gov/pmc/articles/PMC5406911/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC5406911/).

Kirkham, Elyssa. "Is Becoming a Dentist Worth \$261,149 in Dental School Debt?" *Student Loan Hero*, Student Loan Hero, 3 Apr. 2018, [studentloanhero.com/featured/dental-school-debt-worth-it/](http://studentloanhero.com/featured/dental-school-debt-worth-it/).

Louis, Catherine Saint. "Saving the Teeth of Patients With Special Needs." *The New York Times*, The New York Times, 2 May 2019, [www.nytimes.com/2019/05/02/well/live/special-needs-dentist-nyu.html](http://www.nytimes.com/2019/05/02/well/live/special-needs-dentist-nyu.html).

Ofri, Danielle. "The Business of Health Care Depends on Exploiting Doctors and Nurses." *The New York Times*, The New York Times, 8 June 2019, [www.nytimes.com/2019/06/08/opinion/sunday/hospitals-doctors-nurses-burnout.html](http://www.nytimes.com/2019/06/08/opinion/sunday/hospitals-doctors-nurses-burnout.html).

"Opinion: It's Time for Universal Dental Care in Canada." *Daily Hive*, Daily Hive, 28 Mar. 2019, [dailyhive.com/montreal/universal-dental-care-canada-opinion](http://dailyhive.com/montreal/universal-dental-care-canada-opinion).

"Our Programs." *Dental Lifeline Network*, [dentallifeline.org/about-us/our-programs/](http://dentallifeline.org/about-us/our-programs/).

Ozar, David T., et al. *Dental Ethics at Chairside: Professional Obligations and Practical Applications*. Georgetown University Press, 2018.

Patel, N., et al. "Unconscious Racial Bias May Affect Dentists' Clinical Decisions on Tooth Restorability: A Randomized Clinical Trial - N. Patel, S. Patel, E. Cotti, G. Bardini, F. Mannocci, 2019." *SAGE Journals*, [journals.sagepub.com/doi/abs/10.1177/2380084418812886](http://journals.sagepub.com/doi/abs/10.1177/2380084418812886).

"Poverty Rate by Race/Ethnicity." *The Henry J. Kaiser Family Foundation*, 29 Nov. 2018, [www.kff.org/other/state-indicator/poverty-rate-by-raceethnicity/](http://www.kff.org/other/state-indicator/poverty-rate-by-raceethnicity/)

"QuickStats: Prevalence of Untreated Dental Caries in Primary Teeth Among Children Aged 2–8 Years, by Age Group and Race/Hispanic Origin - National Health and Nutrition Examination Survey, 2011–2014 | MMWR." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, [www.cdc.gov/mmwr/volumes/66/wr/mm6609a5.htm](http://www.cdc.gov/mmwr/volumes/66/wr/mm6609a5.htm).

Resneck, Jack, et al. "Medicare, Medicaid, and Access to Dermatologists: The Effect of Patient Insurance on Appointment Access and Wait Times." *Journal of the American Academy of Dermatology*, Mosby, 24 Dec. 2003, [www.sciencedirect.com/science/article/abs/pii/S0190962203024630](http://www.sciencedirect.com/science/article/abs/pii/S0190962203024630).

“Rule 1.16: Declining or Terminating Representation.” *American Bar Association*,

[www.americanbar.org/groups/professional\\_responsibility/publications/model\\_rules\\_of\\_professional\\_conduct/rule\\_1\\_16\\_declining\\_or\\_terminating\\_representation/](http://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/rule_1_16_declining_or_terminating_representation/).

Rule, James T., and Robert M. Veatch. *Ethical Questions in Dentistry*. Quintessence Publishing Co., 2004.

Savulescu, Julian. “Conscientious Objection in Medicine.” *BMJ (Clinical Research Ed.)*, BMJ Publishing Group Ltd., 4 Feb. 2006, [www.ncbi.nlm.nih.gov/pmc/articles/PMC1360408/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1360408/).

“The ADA Principles of Ethics and Code of Conduct.” *ADA Principles of Ethics and Code of Professional Conduct*, [www.ada.org/en/about-the-ada/principles-of-ethics-code-of-professional-conduct](http://www.ada.org/en/about-the-ada/principles-of-ethics-code-of-professional-conduct).

Verwey, et al. “Cosmetic Surgery and Responsible Patient Selection - Does a Legal Duty to Screen Patients Exist?” *De Jure*, University of Pretoria, [www.scielo.org.za/scielo.php?script=sci\\_arttext&pid=S2225-71602013000200005](http://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S2225-71602013000200005).