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A Joint Perspective

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Science and Ethics: A Joint Perspective

We would like to dedicate this journal to the esteemed professors of the Stern College for Women Physics Department,

Dr. Anatoly Frenkel

Dr. Emil Prodan

and

Dr. Lea Santos

who are models of scholarship and exemplary character. It is a privilege to be their students.

Yehudit Fischer & Batya Matla Herzberg
Editors-in-Chief

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Human Experimentation in Twentieth Century America

Batya Matla Herzberg

Introduction

The topic of human experimentation is one of great complexity and sensitivity. On the one hand, the unique physiological properties of humans sometimes necessitate experimenting on people themselves in order to deepen our knowledge about the human body or to develop drugs or therapies to cure the body. On the other hand, the sanctity of human life often precludes performing potentially harmful research on human subjects. The latter position may induce visceral agreement, as modern-day human experimentation is often reminiscent of Nazi concentration camps and Auschwitz-Birkenau's Dr. Joseph Mengele, who performed experiments on thousands of human subjects. In response to these and other brutalities, the Nuremberg Code was instituted after World War II. This set of 10 rules was designed to prevent such cruelties from ever being perpetrated again.[1] It contains the guidelines for ethical human experimentation, including such critical factors as informed consent, avoidance of pain and harm,

and the possibility of terminating the experiment at any stage. This code was adopted in 1946. However, taking advantage of humans did not begin or end with WWII; indeed, throughout the century experiments continued to be performed on human subjects. The scale of the atrocities was surely smaller and the intentions more noble than those carried out during WWII, yet 20th century USA holds in its historical infamy numerous human experiments that exploited the vulnerable members of society and used them to the benefit of science. Most well known of these is the Tuskegee Syphilis Study that took place in Tuskegee, Alabama between 1932 and 1972. However, this article will detail and discuss the ethical implications of three lesser known human experiments that transpired on American soil.

Summary of Cases

The Jewish Chronic Disease Study was an experiment in which live cancer cells were injected into 22 debilitated patients in New York in 1963. Performed by Dr. Chester Southam, an acclaimed physician and researcher, the experiment was designed to determine if immunodeficiency was caused by cancer or simply by a general debilitated condition. Although the doctor claimed that he obtained the patients' consent, in reality it is highly unlikely that these incapacitated patients understood, after a brief explanation, what was going to occur. Furthermore, the explanation did not reveal to the

patients that they were being involved in a research experiment, nor that the injection contained live cancer cultures. Ultimately, Southam was found guilty of fraud and deceit, but this stain on his record barely affected his future medical career.

The Willowbrook Hepatitis Study involved research using mentally retarded children as subjects. There, Dr. Saul Krugman of Bellevue Hospital and New York University attempted and succeeded at distinguishing hepatitis A and B as well as developing a hepatitis vaccine. In his own specialized facility at the otherwise rank and filthy Willowbrook State School, Krugman inoculated a group of children with the virus (derived from feces of other infected children) and provided an experimental portion of that group with the gamma globulin he believed would act as a vaccine. He kept the other portion of the group without vaccine, as a control group. Krugman justified these methods by claiming that the children would have contracted the disease anyway had they been allowed to remain in the main Willowbrook facility for any significant length of time, as the hygiene conditions there were far below standard. Furthermore, he obtained consent letters from all the parents before the start of the experiment to ensure that permission would be granted. [3] Ethicists such as Norman Frost have also noted that the experiment "met the ethical standard of the day and did not pose undue burdens on the subjects."[4] Krugman's critics contest that the consent letter was a form of coercion because

the children would not have been admitted into the facility had the parents not agreed to the experiment. Furthermore, the terminology of the letter did not disclose the full intention of the research study. Finally, the experiment could have been performed in an equally effective manner in a regular laboratory (i.e. without human subjects). This was indeed a realistic possibility, as Nobel Laureate Dr. Baruch Blumberg was simultaneously studying the same disease, and made significant discoveries without using human subjects. [5]

Surprisingly, human research did not even cease by the 1990's. The Kennedy-Krieger Lead Paint Study, performed on children in low income housing developments, demonstrates that research on vulnerable populations continued even late into the century. The experiment, funded by the US Environmental Protection Agency, was designed to test the efficacy of lead paint removal by exposing children to housing environments with varying degrees of lead levels in the paint. Lead is known to cause mild to serious health problems ranging from retarded cognitive development to seizures and even death. The well-intentioned researchers sought to reduce such problems in inner-city areas by reducing lead paint in the most efficient manner possible. A group of families who lived in Baltimore City were divided into five groups and each lived in a house with varying levels of paint repair. The experiment was designed to find the least possible repair needed in order to successfully create a non-hazardous environment.

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However, much criticism was hurled at the designers of the experiment for numerous reasons. Primarily, critics alleged that the researchers negligently poisoned the children. Additionally, they complained that the families were not sufficiently informed about the risks and results of the experiment. The Maryland Court of Appeals ruled in favor of those who brought these allegations and declared that it was unlawful for children to be put in such a hazardous situation. Furthermore, they ruled that no parent or guardian has the right to consent to place a child in any non-therapeutic study if there is any risk to the welfare of the child in that study. [6] The designers of the experiment vehemently defended their position in a number of ways. First, the movement to reduce lead levels was a drastic improvement over the families' prior conditions, houses which contained high percentages of lead paint. Additionally, they emphasized that all participants in the research signed consent forms and received information and education about lead poisoning as well as supplies designed to reduce risk. Finally, they argued that the court's decision to prevent all non-therapeutic experimentation that poses any risk is a harmful decision in that it prevents such important studies as those regarding pediatric drug treatments, treatments for mental illness, and vaccines, among others.[7]

Beauchamp's Principles

Tom Beauchamp, the author of the widely acclaimed textbook The Principles of Biomedical Ethics, presents four criteria used to determine the rightness of a given medical act. They are autonomy, beneficence, nonmaleficence, and justice.[8] The aforementioned experiments will be analyzed according to each of these criteria.

Autonomy, accepted as a critical value in American society, is "personal rule of the self that is free from both controlling interferences by others and from personal limitations that prevent meaningful choice, such as inadequate understanding".[9] All three of the abovementioned experiments violated the autonomy of the involved individuals. In the Jewish Chronic Disease Study, the ambiguous and superficial attainment of consent, such as the omission of the word "cancer," violated the ability of the incapacitated patients to make their own decisions as to their desire to participate in the cancer research. In the Willowbrook experiment, the fact that virtually the only way to gain admission into the overcrowded facility was if the parents agreed to their children's participation in the study invalidated the parents' right to autonomy. Here too, the ambiguity of the consent form further reduced the parents' ability to make an educated decision. Finally, the Lead Paint experiment violated autonomy in that children were harmed without their or their parents' knowledge or consent (notwithstanding the fact that they would have been harmed otherwise).

Beneficence is the obligation of a doctor or researcher to "contribute to [a patient's] welfare."[8] In a sheer violation of this principle, Southam injected cancer into his patients in a completely non-therapeutic manner that had no positive value whatsoever for the patients. Similarly, Krugman's hepatitis experiment provided no medical or other benefit to the mentally disabled children. The Lead Paint experiment was not designed to provide aid or advantage to the subjects involved, but rather to use them as experimental models. The related value of nonmaleficence dictates that a medical act or experiment must not harm the subject or patient. Although Southam's experiment was advertised as no risk, by virtue of the fact that he admitted that with regard to himself, "it seemed stupid to take even the little risk,"[10] there is an implication that there *was* an extant risk for the patients. The hepatitis study is a most obvious and admitted example of harm in that otherwise healthy children were injected with a harmful virus, hepatitis, and were meant to contract the disease. The Lead Paint experiment also violated the principle of nonmaleficance in that it knowingly exposed children to lead paint known to be harmful, in an effort to compare lead concentrations in blood.

Justice connotes fairness in the relationship between doctor and patient or patient and society, among other medical relationships. It is often associated with power balances between individuals involved in medicine. The Jewish Chronic Disease Study did not satisfy the

criterion of justice because it created an imbalance between patients and physicians. More broadly, it created such an imbalance between physicians and a vulnerable society who will often believe a doctor without skepticism because of his or her credentials, leading them to unknowingly agree to affairs that may not be in their best interest. The same can be said for the Willowbrook Study, because Krugman took advantage of his position as a doctor to perform procedures on his particularly unwitting patient population. In the Lead Paint Study, the inner-city population was also a vulnerable target of research; the population's lower class status allowed an alleged imbalance of power between the researchers and the ill-informed subjects.

Utilitarianism and Kantianism

There are a number of classical ethical principles used to determine the rightness of a given (medical) decision. Two of the most prominent are utilitarianism and Kantianism. Each of the above cases may also be analyzed by these unique criteria.

Utilitarianism, based on the writings of John Stuart Mill, dictates that the most ethical course of action is that which provides the greatest good or happiness to the greatest number of people. In other words, the appropriateness of an action is based on its consequences.[10] It therefore seems that all three of the experiments are ethical, as they satisfy the utilitarian criteria. Although harm was

done to a small segment of the population, the positive consequences (in the form of revolutionary scientific knowledge, vaccines, or improved housing) which are relevant to large populations far outweigh the damage. However, there is a visceral and logical opposition to this definition of morality as it extends to harming or sacrificing some for the ultimate benefit of others.

Kantian ethics are based on the principles of autonomy, which refers to an individual's right to self-determination, as well as universilizability, the ethical ability to apply a given decision to the public at large. In direct contradistinction to utilitarianism, Kantian ethics demand that any action taken must be done not to benefit extraneous others, but rather to directly benefit the subject of the action himself. The acted-upon is an end in himself, not merely the means to a different end.[8] The abovementioned experiments fail to satisfy these criteria. Because the subjects were ill-informed, coerced, or otherwise manipulated because of their social standings, their right to exercise autonomy was compromised. For example, disallowing the admission of a child to the Willowbrook State School unless parental permission for the child's participation in Krugman's experiment was granted demonstrates coercion, subtle though it may have been. Additionally, the criterion of universilizability was obviously violated, proven by the fact that only specific, easily manipulated populations, such as the indigent, the mentally disabled, and the foreign, were

involved in the experimentation. It is inconceivable that the researchers would perform identical experiments on all members of the population, as this would pose a great danger to society at large. Furthermore, in these experiments the subjects were used as means to the ends of furthering medical knowledge, not as ends in and of themselves. In summary, a Kantian ethicist would firmly oppose performing risk-containing experiments on only the vulnerable.

Jewish Ethics

Considerations based on Jewish Law (*halakhah)* become relevant in this area as well. Much deliberation has been taken place in an effort to find the balance between the benefit of research and such fundamental Jewish principles as the prohibitions against wounding or killing oneself or others, and the obligations to love one's neighbor as oneself and to do what is righteous and good.[11] Thus, different scenarios have elicited varied Rabbinic rulings. For example, in a case of an experiment on healthy volunteers with no anticipated side effects, while some Rabbis rule that it is obligatory to participate in such studies (*hiyyuv)* so as not to "idly stand by while your brother's blood is being shed" others contend that is it merely optional (*reshut).* Similarly, there are a variety of opinions in cases where a healthy person is asked to subject himself to some risk in order to save another who is in a life-threatening situations or where an already life-

threatened individual is asked to participate in some kind of study. Depending on the risk involved and immediacy of aid to the beneficiary of the experiment, opinions range from prohibited, to permitted but optional, to obligated.[12]

Rabbi Immanuel Jakobovits, former chief Rabbi of the British Commenwealth, articulated several scenarios and their rulings. In a study that involves little or no risk, individuals may volunteer to participate. An ill patient may, but is not obligated, to accept experimental treatment if it has not yet proven to be efficacious (this refers to a case in which standard treatment has failed). One may not participate in an experimental procedure designed to test potential applications of, for example, a drug or surgery. An actual beneficiary must be present in order to consider participation in such studies.[4]

Jewish medical ethics requires four criteria before the undertaking of an experimental procedure: A) Standard, proven procedures must be attempted first. B) The experimental procedure must have already been proven successful in animals and other non-human media. C) A knowledgeable and competent physician must perform the experiment. D) There must exist a possibility, even a small one, that the experimented-upon patient may reap some benefit from the procedure.[4]

The aforementioned experiments are thus in violation of Jewish ethics. Although the physicians involved were often competent and

knowledgeable individuals, the other criteria required by Jewish ethics are not fulfilled. Most importantly, there was no possibility of benefit or healing for the patients involved. On the contrary, the experiments were designed to inoculate the patients with different diseases and observe ensuing effects.

Conclusions

In conclusion, human experimentation is a topic which requires great sensitivity and intellectual honesty. Because of the complexities involved in this issue, medical ethicists who analyze the appropriateness of such decisions are generally reluctant to validate experiments which occurred in the last century.

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Medical Ethics in a Time of War

Yehudit Fischer

The Dual Loyalty Conflict

Michael Gross aptly states in *Bioethics and Armed Conflict: Moral Dilemmas of Medicine and War* that "[i]f torture is not justified, then the question of a physician's participation is moot."[1] Much of the literature surrounding the topic of military medical ethics addresses the broader deontological question of modern wartime torture rather than the role of the physician within it. The former matter constitutes a discussion in its own right and is wholly independent of the realm of medical ethics. As such, this essay will focus more on the "dual loyalty" conflict of the physician as both a healer and a citizen; we assume that the action required of the citizen (i.e. involvement in torture-like interrogation practices) is morally justifiable for the purpose of protecting society at large.

The question of dual loyalty is put into modern context by Peter A. Clark.

> Being placed in the situation as primary care physicians to these detainees at a time of war, when the world is living in fear of yet another suicide bomb attack, places these

> military medical professionals in a delicate balancing act between loyalty to their patients and loyalty to their country.[2]

Indeed, much of the discussion about military medical ethics relates to the conduct of United States military officers and physicians at the Guantanamo Bay detention facility and the Abu Ghraib prison in Iraq. Although the average person might be quick to categorize the torture-like activities such as simulated drowning, isolation, sleep deprivation, sexual humiliation and severe beatings that U.S. officers were recently discovered to have perpetrated as gross violations of human rights, some ethicists are more hesitant to pass judgment. Perhaps a situation of war, specifically a "war on terror," warrants a new, more utilitarian code of ethics to replace what is generally considered right or wrong. And perhaps the physician is an exception to this still, having been inextricably bound to the principles of the traditional medical ethics.

AMA Regulations and the Role of the Physician

We must consider whether the American Medical Association (AMA) regulations on physician involvement in hostile interrogations oppose currently accepted practice. The official guidelines state the following:

> Physicians must oppose and must not participate in torture for any reason. Participation in torture includes, but is not limited to, providing or withholding any services, substances, or

> knowledge to facilitate the practice of torture. Physicians must not be present when torture is used or threatened. Physicians may treat prisoners or detainees if doing so is in their best interest, but physicians should not treat individuals to verify their health so that torture can begin to continue.[3]

The United Nations (UN) has issued similar statements regarding treatment of prisoners and detainees in the strictest of terms, forbidding physician involvement in hostile interrogations.[4]

What happens in practice seems to oppose AMA regulations. Evidence shows that physicians have participated in a wide variety of activities as part of the hostile interrogations of prisoners of war (POWs). These include certifying prisoner fitness for torture-like treatment, providing medical treatment so that such hostile treatment can continue, advising interrogators on effective methods, and sometimes even taking a more active role in the torture-like activities themselves. Interestingly, none other than the Department of Defense (DoD) has issued statements that explicitly permit such participation despite the direct violation of the AMA and UN guidelines such participation would constitute.[4,5] As Rubenstein et al. note, "[t]he DoD guidelines make no reference to torture and they may undermine a physician's duty to provide humane treatment by...linking ethical conduct to US interpretations of "applicable law" and disregarding the possible risk of infliction of harm and the violation of international standards..."[4]

The Categorical Nature of Medical Ethics

Journal article titles such as "Participation in Torture and Interrogation: An Inexcusable Breach of Medical Ethics," "Military Medical Ethics: Physician First, Last, Always," and "Coercive U.S. Interrogation Policies: A Challenge to Medical Ethics" reflect the general view among medical ethicists that the physician's duties always triumph in the "dual loyalty" conflict of wartime. They oppose physician involvement in torture-like treatment of POWs because it is an obvious breach of medical ethics as presented by AMA guidelines. Despite this seemingly assertive position, it is difficult to differentiate between a given author's justified condemnation of the horrific treatment of detainees by military personnel (including medically trained officers) and his or her criticism of the physician's specific role when hostile treatment is performed with the greater goal of fighting terrorism.

The authors arguing against any physician involvement in hostile interrogations predicate their case upon the presence of contradictions between various laws and policies. For instance, as mentioned previously, the DoD policy is directly at odds with AMA official policy regarding this matter. What, then, establishes the AMA as the victor in this battle of policy? Simply put, it is tradition, rather than logic, that is the deciding factor. The physician's traditional role has always been that of a healer, and he is forbidden from using his

medical knowledge to harm no matter the circumstance. These duties are embodied within the Hippocratic Oath, and nowadays are expressed by the AMA as well as international guidelines. Thus, Annas decries how "[u]ntil now, and at least since Nuremberg, the U.S. military has consistently operated under the assumption that its physicians are required to follow not only U.S. medical ethics but also internationally accepted medical ethics."[5] Marks demands that the U.S. Army "embrace the positions of the AMA," with no consideration of the reverse.[6]

Arguments Justifying the Physician's Role in Torture-Like Activities

Dr. Fritz Allhoff considers the opposing view in his article "Physician Involvement in Hostile Interrogations."[3] Although Allhoff's perspective is supported by others[7], this seems to be the minority opinion. His agenda, like that of this article, relates to "whether there are any *special* reasons for physicians to not participate in hostile interrogations, *even if* such interrogations are morally justifiable."[3] First, he suggests that the AMA guidelines contradict the traditional principles of medical ethics; according to the latter, the duty of a physician to heal would actually require his or her presence during hostile interrogations and even intervention on some level. However, Allhoff agrees that there is no clear delineation between what the

physician would be required to do and what he or she would be forbidden from doing.

The remainder of Allhoff's article relates to the following point:

> ... [T]here are *no* medical duties or responsibilities that the medically trained interrogator has to the interrogatee, or at least no "special" duties or responsibilities that present themselves *merely* in virtue of the interrogator's medical knowledge and that could not be accommodated by general moral approaches...In other words, no tension results from *a physician's* dual loyalties...because the medically trained interrogator is not a physician at all.[3]

Allhoff thus makes a unique declaration that the medical knowledge possessed by the "medically trained interrogator" does not automatically confer upon him the role of "physician" and the ethical duties that accompany it. In his opinion, the medical personnel involved in POW interrogation have not accepted the burden of the physician-patient relationship that is subject to the principles of traditional medical ethics. He devotes the remainder of his article to bolstering this point with three different arguments, which will not be discussed here: a logical argument, a metaphysical argument, and an argument from analogy.

This line of reasoning represents a clear departure from the normative understanding of medical ethics, namely, the "view that medical knowledge confers moral duties, including the moral duty to

establish a patient-physician relationship and absorb the associative moral burdens."[3] Allhoff's minority position considers the *physician's* ethical obligations to be somewhat voluntary, and thus deferential to those of the human being, which are not.

One letter written by a physician to the editor of the New England Journal of Medicine expresses a practical rather than philosophical argument. Unlike Allhoff, he acknowledges a conflict of ethical obligations. Still, his bottom line is the same as Allhoff's, as the following relates.

> Before becoming an officer, I was a U.S. citizen. But first and foremost, I was a member of the human race. I consider myself to be a compassionate doctor, yet I must confess that my responsibilities as a human being take precedence over any doctrine, professional or otherwise, that I did not create and never agreed to uphold. I believe that terrorism is an axiomatic evil, and that the preservation of life is a moral imperative. If I could use my medical knowledge to prevent another human tragedy such as September 11 or the Holocaust, I would do so without blinking an eye. Isn't that why we entered medicine in the first place?[7]

Physician Involvement in Executions

An interesting matter related to military medical ethics under the umbrella of "dual loyalty" is that of physician participation in legal executions. Dr. Atul Gawande relates the reasoning of several

physicians for assuming leading roles in the administration of lethal injections as part of the death penalty conviction.[8] One glaring difference between interrogation and execution is the particular motive of the physician: while both the POW and the executed convict are being harmed in order to uphold justice in the greater sense, the physician intervenes in the latter case as a means to prevent otherwise avoidable pain on the inmate's part. As one doctor powerfully stated, "Are you, as a doctor, going to let [the warden] stab the inmate for half an hour because of his inexperience? I wasn't. I had no qualms. If this is going to be done correctly, if it is to be done at all, then I am the person to do it."

As Gawande relates, a full seventeen states actually *require* medically trained personnel to assist in the execution process for this reason. Lethal injection is employed as the method of execution in the first place because it is considered the most painless. However, the AMA groups physician involvement in executions together with physician treatment of POWs, forbidding even the smallest measure of participation. Here, again, there is a direct conflict between the law and traditional medical ethics. Gawande sides with the latter, arguing that

> [m]edicine is being made an instrument of punishment. The hand of comfort that more gently places the IV, more carefully times the bolus of potassium, is also the hand of death. We cannot escape this truth. The ethics codes seem right.

He even goes so far as to suggest that the death penalty should be abolished if it cannot be performed in a painless manner without the help of medical personnel.[8]

Barring any discussion as to whether the physician and inmate form a genuine doctor-patient relationship, or if the executed convict even retains his human rights at all considering the horrific violation of those rights he himself has committed, the AMA seems to be preventing the respect of the very same patients' rights it claims to champion. This is akin to Allhoff's insistence that the principles of medical ethics should *require* the presence of a physician during torturous practices in wartime.[3]

In the larger sense, Gawande's proposal (and the AMA's general philosophy) grants overarching supremacy to medical ethics by placing the rights of the "patient" before those of society at large. As discussed earlier, most medical ethicists make the same judgment with regard to physician participation in hostile treatment of POWs.

The *Halachic* Perspective

By its very definition, Judaism embraces an ethic of conduct more overarching than all others, that of *halachah,* the code of Jewish law. R. Abraham Isaiah Karelitz (known as the Chazon Ish), in his monumental philosophical work, "Emunah U'Bitachon," declares that ethical obligations are determined exclusively by *halachah*. The

specific example he uses to illustrate this idea is the Talmudic statement, "*kin'at sofrim tarbeh chochmah*" which can be roughly translated as "jealousy among scholars increases wisdom." The meaning of this statement is that competition between Torah scholars will result in an overall increased level of Torah knowledge. As such, the normal laws relating to business competition do not apply to this trade. For example, although it may seem unethical for a new group of teachers to compete with the already established educators in a given town, the principle of "*kin'at sofrim tarbeh chochmah*" deems it wholly appropriate.[9]

Dr. Abraham Steinberg discusses the role of the Jewish Physician in his monumental Encyclopedia of Jewish Medical Ethics, under the entry "physician." Dr. Steinberg does not provide an unequivocal *halachic* ruling with regard to the various ethical issues outlined in this article. He simply discusses the various viewpoints among modern ethicists about physician participation in hostile interrogations and capital punishment. However, the author does mention cases where a physician may be *halachically* obligated to violate the Hippocratic Oath or similar oaths taken by physicians.[10] This statement supports the perspective of the Chazon Ish that *halachah* is the only moral code to which a Jew is absolutely obliged in a case of a conflict of values.

In his article entitled "The Bounds of Wartime Military Conduct in Jewish Law: an Expansive Conception," Rabbi Michael J. Broyde

provides an extensive analysis of the *halachic* issues involved in war. He emphasizes that a Jew can only participate in a war which is sanctioned by *halachah*, and proceeds to examine the various parameters involved in determining this for both secular and Jewish wars. A defensive war, or even a war which is waged in order to protect a nation from imminent attack, would be permitted according to *halachah*. The "War on Terror" clearly falls into this category. Rabbi Broyde's conclusions echo what the Chazon Ish put forth in general terms; namely, that Jewish law does not bend to any ethical code other than its own. In the exceptional situation of war, *halachah* may even permit the violation of severe prohibitions, such as the killing of innocent people (when there is no alternative). He continues,

> Similarly, what might otherwise be considered outrageous pressure in extracting the information needed to save a soldier the government is seeking to rescue might well be permissible according to Jewish law, first, that it would be effective in extracting the information, second, that less outrageous pressures would not be as effective, and finally, that it is ordered by the army (or an equally responsible branch of government) through a duly authorized military order following the "chain of command" and did not violate international treaties.[11]

This view is aligned with the more utilitarian one expressed by Allhoff and others.

Conclusion

If traditional medical ethics represent the final word on modern medical ethics, then most ethicists believe that physician involvement in hostile interrogations of POWs represents an undeniable breach of these ethics. They believe that the physician is dutifully bound to uphold the principles of confidentiality, beneficence, nonmalevolence, honor, and loyalty[3] at all costs, even in the context of war and terrorism. The opposing view tends to view the principles of medical ethics in a more utilitarian manner, suggesting that extreme situations might mandate their suspension. Judaism seems to ascribe to this view based on its sole commitment to the principles of *halachah*.

As outlined at the beginning of this article, ethical assessment of the practice of torture has not been presented. Rather, the focus was on portraying the various viewpoints among medical ethicists with regard to the unique role of the physician in hostile interrogations of detainees. The fundamental point of contention has been shown to lie at the very heart of modern interpretation of medical ethics, which will certainly continue to be a matter of debate for many years to come.

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Should the HPV Vaccine be Mandatory?

Alla Digilova

Advances in the medical field enable human beings to better protect themselves against infection. Development of vaccines has long been one of the most intensively researched areas in science. Though generally welcomed as vital signs of progress in treatment and prevention of disease, new vaccines are initially subjected to public scrutiny and debate before they become widely accepted or even mandated. Recently introduced into the market, the vaccine against genital human papillomavirus (HPV) has incited much controversy that ultimately led to an ethical debate on whether the vaccine should be mandated.

Demographics

Genital human papillomavirus (HPV), which infects the skin and mucous membranes, is one of the most common sexually transmitted infections (STI). There exist about forty different types of genital HPV, that are categorized as low-risk or high-risk depending on the type of symptoms they may ultimately cause. Most people that are infected

with genital HPV do not display any symptoms. This compounds the problem of spreading the infection, since infected people may not know that they are in fact carrying the disease. In about 90% of cases, the body's immune system will clear the virus out of the body in a two-year time frame. However, in some cases immune protection fails. In such an event, low-risk types of genital HPV cause the appearance of genital warts, and high-risk genital HPV may lead to the development of cervical cancer. The virus has also been linked to causing several other types of cancers in both males and females.[1]

According to the most recent data released by the Center of the Disease Control and Prevention, about 20 million Americans are currently infected with the virus. By fifty years of age, about 70-80% will have become infected with at least one strain of genital HPV. The number of infected people grows every day, with an estimate of 6.2 million new infections a year. Once HPV virus infects an individual, the infection cannot be treated.[1]

Gardasil and Cervarix, two HPV vaccines, are currently under development in the United States. The vaccines defend against four types of HPV that cause genital warts and cervical cancer. Among these four types are types 16 and 18 which cause about 70% of cervical cancer cases. One of the vaccines, Gardasil, was approved by FDA in 2006. The Center for Disease Control, supported by the American Academy of Pediatrics, made a universal recommendation

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for vaccination of girls at ages 11-12 (usually before the onset of any sexual activity). Females in the larger age group of 9-26 also make good candidates for receiving the vaccine.[1]

Arguments For and Against Mandating the Vaccine

In light of the growing number of cases of infection, a vaccine against genital HPV may initially appear as a blessing that should be welcomed by everyone. However, fears of social stigmas, as well as traditional and some medical considerations may hinder an individual's decision to choose vaccination. The problem is aggravated by proposals of some states to introduce mandatory vaccination for school girls. Fueling the debate, beginning in 2006, at least forty one states and the District of Columbia have tried to introduce legislations that requires vaccination and/or serves to increase public awareness and understanding of the vaccine. Of these forty one states, nineteen have enacted the bills. In 2007, twenty four states have introduced legislations that specifically mandate HPV vaccination in order to be admitted to school.[2]

Despite the governmental efforts and mandates, the idea of compulsory vaccination has been met with strong opposition. Many religious Christian groups oppose the idea of making sex safer for teenagers, due to their belief that abstinence is the only truly safe way that should be promoted.[3] Groups such as Family Research Council and

Focus on the Family support the availability of the vaccine but vehemently oppose making it mandatory for school attendance.[4] The opinions of these groups manifest concerns felt by many parents. Such a response is a reflection of complex ethical issues involved with mandatory vaccination against genital HPV.

One group of opponents of mandatory vaccination against genital HPV bases its arguments on the nature of the viral infection. Vaccination against genital HPV is different from previously mandated vaccines since the virus is sexually transmitted. Thus, many parents are concerned, perhaps rightfully, that administration of the vaccine may give an impression to their daughters that the vaccine gives them more freedom in engaging in risky sexual behavior. The vaccine, however, doesn't protect the girls from other sexually transmitted viruses, some of which have deadlier consequences, as in the case of HIV. Genital HPV is only one of the many viruses that are sexually transmitted and this vaccination against it should not be seen as panacea. Therefore, if immunization is coupled with information sessions regarding the results vaccination will achieve and the effects that aren't within its scope, the problem of negatively influencing the girl's sexual behavior may perhaps be resolved. However, since human behavior is not always rational, especially in the case of young females, there is no way to completely refute or support the claims on one or another side of the argument.

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If a girl is not even planning to engage in risky behavior, is it fair to say that she is not in the need of the vaccine? This line of thinking leads many traditional families not to administer the vaccine. Social stigmas still exist and affect human behavior, as can be seen from a recent California study. Even though about 75% of parents would like to immunize their daughters before the age of 13, 25% are not ready to undertake such a step. Among the issues cited by the latter group are "concerns that vaccination might influence their daughter's sexual behaviors, their uneasiness about the morality of immunizing to prevent sexually transmitted infections, and worries about the safety of the vaccine".[1]

Previously enacted mandates do not provide compelling insights with regard to the controversy. The only other largely sexually transmitted disease against which vaccination is required in most states is Hepatitis B. Proponents of the vaccine therefore cite Hepatitis B vaccination as a model. The case of Hepatitis B, however, is not a direct parallel to genital HPV vaccine, since as many as 30% of Hepatitis B infections are transmitted by ways other than sexual contact. Therefore this virus is not generally perceived as a "risky sexual behavior disease." Still, other proponents of the vaccine compare HPV vaccination to infant car seats and bicycle helmets, both of which are legally required in some states. Supporters of mandatory vaccination cite examples of these mandates as previously passed laws

that do not necessarily affect all minors but are passed for the protectoral benefit of all minors.[5] They therefore claim that though HPV vaccine may be less needed for girls who are not at "risk," (as some religious or traditional parents believe), they should be vaccinated since the law is passed for all children, not only for those who will engage in risky behaviors. While there is an ostensible similarity between these two groups of mandates, the argument has little rational value, since they deal with different types of laws. The laws are not continually considered on an individual basis. Rather, they are passed in order to establish a system of regulations for society as a whole. Mandatory helmets only affect children who ride bicycles, just like compulsory seat belts affect only the children whose parents drive them in cars. Mandatory vaccination, however, will affect all girls, regardless of whether or not they are less or more in need of the vaccine. The discussion of whether certain young girls are less or more in need of the vaccine is favored on the basis of the unsound distinction. Young women that are less likely to engage in risky sexual behavior *are not* in less need of the vaccine. Though socially perceived as viruses that are more likely to affect more sexually careless individuals, sexually transmitted viruses can infect anyone. No one is guaranteed knowledge of the sexual history of his or her partner, even members of religious or traditional communities. In fact, in traditional communities, where women may not feel as independent and as the

result wouldn't inquire into their partner's sexual history, not receiving a vaccine makes women even more vulnerable to infection in comparison to other females who would be vaccinated before their first sexual contact. Mandating the vaccine may therefore be seen as a government-imposed protection for all girls.

Larger Concerns

Another questions raised by mandating the vaccine is whether such an act would improve or worsen the situation of existing health care disparities. Among one of the primary considerations to be considered is the cost of the vaccinations. The current prices equilibrate around $120 per dose. Three dose series are necessary for the vaccine to be most effective, corresponding to three health care visits needed for the immunization. Though some insurance companies cover the costs of the vaccine and doctor's visits, others don't. In fact there has been major opposition from the companies who are unwilling to cover the cost of the vaccine.[6] Moreover not every family has health insurance, and not every parent can easily take days off or have someone escort his or her child to a doctor's office three times. Research into demographical data on the women infected demonstrated that poorer women are more likely to get infected with genital HPV and are more likely to develop cervical.[1] If this segment of population is the one that suffers the most, making a vaccine

mandatory from one point of view may seem to only aggravate the problem of vaccine-associated disparities. Is it at all ethical to pass a law mandating an expensive vaccine that will be unaffordable to the most affected population? If one bases his answer on the current situation with health insurance companies coverage of the costs, then perhaps the answer is no. If, however, health care disparities are defined on the basis of the treatments received by different segments of society and not the difficulties in obtaining this treatment, then perhaps mandatory vaccination would eliminate the problem of vaccine-associated disparities. Moreover, the situation with health insurance companies might change if the vaccine becomes mandatory. More companies may start to cover the costs of the vaccination once genital HPV vaccine becomes a compulsory component of immunization. Unfortunately, one cannot predict the behavior of insurance companies and passing a law based on future expectations may not be reasonable.

Mandatory vaccination raises other questions regarding the possible effects of the vaccine. One question raised is whether immunization would stop young women from regular cervical cancer screening programs. Even after the vaccination, women should undergo regular Pap tests. The vaccinated group may start believing that by obtaining immunization they are no longer at risk. Such belief is erroneous, however, since the vaccine only protects from four types of

HPV. There still remain other high-risk types of HPV that can cause the development of cervical cancer. Yet, as of now there is little research conducted in this area and the argument cannot be either accepted or refuted.[5]

Still others ask regarding the legitimacy of the claim that universal immunization would reduce the risk of transmission of the strains of HPV against which the vaccine protects. As of yet, there is no data collected regarding this issue due to the novelty of the vaccine. Because the vaccine prevents the four types of otherwise persistent HPV infections, the universal transmission may decrease. However, in absence of similar vaccination program for males, vaccination of females only may not have a noticeable impact on public health.[5]

Lastly, as in the case of many new treatments, there remains a concern regarding possible adverse effects of the vaccine. Due to little public experience with the treatment, no clinical research has yet been done, since no sufficient data has been accumulated. Thus, we cannot yet establish whether there are possible serious side effects implied with obtaining the vaccination.

The Jewish Perspective

The issue of adverse effects of HPV vaccination is of primary concern in examining the implications such vaccination has in Jewish law. Immunization with the newly developed vaccine falls into the

general category of choice between: "*shev v'al taaseh*" - sitting and not acting -- versus "*kum v'aseh*" -- choosing the proactive response. The general rule in such questions is "if the outcome of action versus inaction each has a significant downside, we opt for inaction".[7] This holds true if action and inaction carry risks of equal magnitude. However, in cases, when risks imposed from inaction are greater we chose the action mode.

Based on action versus inaction model, Jewish law allows vaccination even if there exists a small risk of death from the vaccine. The ruling was even implemented in practice in 19th century, when Rabbi Yisroel Lipshutz allowed vaccination against smallpox. The case of smallpox, however, is different from HPV since the latter is not an easily spread contagious disease, but a sexually transmitted virus. Thus, one can argue that the risk of infection is not as large as was the case with smallpox. On the other hand, though we can't asses the full picture of side effects, laboratory studies demonstrate that the health risks implied by HPV vaccination are much smaller than the dangers posed by the virus. Therefore, the question of whether the risks of HPV vaccine outweigh its benefits remains unresolved until more clinical data is available.

What remains to be examined is the opinion of Jewish law on mandatory vaccination. As a general rule, Judaism recognizes the benefits imposed by universal vaccination, while honoring individual

decisions. This standpoint gave rise to different opposing interpretations. Rabbi Sholom Kamenetsky, of the Talmudical Yeshiva of Philadelphia explains that society can mandate immunization despite the possibility of rare serious complications. However, one can refuse immunization, as long as such refusal would not pose a public health risk. In case if a large enough number of people refuse vaccination thus causing a public health risk, the government may require everyone to be immunized. The renowned Jewish legal expert, Rabbi Eliezer Yehuda Waldenberg (the *Tzitz Eliezer)*, agrees that preventative medical treatments may be mandated. However, Rabbi Yehoshua Neuwirth, a major contemporary Israeli decisor of Jewish law, has a different opinion about the extent to which society can mandate a treatment. According Rabbi Neuwirth:

> One may not obligate any healthy person to receive treatment as a preventive measure. Although one may try to convince the individual, he may do no more. If there was absolute evidence that [an individual] could be a danger to others, such as in spreading infection which could be fatal, then there would be a case for forcing him to have a vaccine, but only if it was certain that the vaccine itself was not dangerous to him.[7]

Conclusion

In light of opposing opinions about HPV vaccination from ethical, legal, and Jewish perspectives the question of mandatory

immunization remains quite controversial. The problem is exacerbated by the novelty of the vaccine, since at this stage society cannot clearly assess the extent of risks and benefits implied by the treatment. Therefore, both more data accumulation and more time are necessary for the concerns to be properly evaluated.

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A Sporting Dilemma: What is Cheating?

Danielle Lent

According to the American Heritage Dictionary, "sports" is defined as "physical activity that is governed by a set of rules or customs and often engaged in competitively." This definition, however, does little to encompass all of the ethical questions that have recently surfaced with regard to competitive sports. How competitive should sports get? How much should an athlete train? Should the talent be all-natural or is outside help allowed? Most importantly, based on the realities of today, if "performance-enhancers," as they have come to be known, are permitted, to what extent may they be utilized? These questions, and the ramifications of their answers, have come to dominate the headlines and discussions of modern sports almost as much as the games themselves. This is because as science and technology advance and sports become increasingly competitive and lucrative, the number of athletes seeking to use science as a means of advancing their athletic career has skyrocketed. As a result of this, every sport at every level of competition has a code of ethics and most have their own ethics bar.

However, at the current rate of scientific achievement, what will soon be left of the "purity of sports?"

Sports ethics panels have many issues to consider on this burgeoning topic. They must examine what they believe to be the sanctity of sports and examine how much the advance of technology should be allowed to affect sports. As some athletes and scientists claim, "if the technology is out there, why not use it?" An even more extreme position can lead one to claim that the use of the technology can level the playing-field for athletes who otherwise would be unable to do so. This would enable them to fulfill another particularly important goal of sports, overcoming adversity. On the other hand, considering the obsession with records and comparing athletes inherent within sports, on what basis are two athletes in different generations to be compared if one is using the latest technology while the other is not? What is the difference between a) steroids and gene therapy, both of which are prohibited by most sport agencies, and b) prosthetics, where there is a conflict with regard to permissibility, and surgeries and the use of mechanical equipment to improve performance, which are generally accepted and even encouraged by sports franchises? Most importantly, is this all the beginning of a slippery slope in the world of sports, resulting in a group of "bionic athletes" where athletic prowess is hatched in a laboratory rather than a gym? This article is an analysis of the various "lesser-known"

technological advancements that are currently shaping the world of sports and the ethical dilemmas surrounding them.

Prosthetics

The case of Oscar Pistorius, the 21-year old double amputee sprinter recently brought the ethical dilemma of sports technology to world attention. Pistorius, whose legs were both amputated below-knee when he was 11 months old, wanted to become the first amputee to compete in the Olympics after conquering the world of disability track with multiple medals and world records. Pistorius, however, runs on J-shaped carbon-fiber blades called Cheetah Flexfeet. Due to these unknown variables in his performance, much debate erupted over if and to what extent the "Cheetahs" give Pistorius an advantage over rivals running on human legs.[1]

On January 14, 2008 the International Association of Athletics Federations (IAAF) declared Pistorius ineligible to compete in able-bodied competitions after scientific reports found that the prosthetics provided an unfair advantage. The use of such prosthetics, according to the IAAF, violated the policy that it is prohibited to compete using "a technical device that incorporates springs, wheels, or any other element that provides the user with an advantage". This ruling was reversed, however, by the Court of Arbitration for Sport on May 16, 2008 due to the lack of sufficient evidence supporting these reports.[2]

The inherent challenge in prosthetics is the impossibility of knowing for certain that the advantages they provide outweigh the disadvantages. According to the experiments performed by the IAAF, Pistorius' Cheetahs enabled him to run exerting 25% less energy than he would were he running on human legs. The Cheetah blade was also reported to store and release more energy than a human leg can, according to current data. These studies show that Pistorius is able to run at the same speed while investing less energy than other runners do. Additionally, it is impossible to know what Pistorius' natural height would have been had his legs not been amputated. Thus, the IAAF feared the prosthetics may make him taller, unfairly lengthening what would have been his natural stride.[3]

Pistorius countered that the idea of his disability being an advantage is absurd. Because Pistorius does not have an ankle, his muscles must work harder in order for him to run at the same speed as the other athletes. Also, the Cheetahs require him to exert a lot more energy than able-bodied athletes in order to maintain his balance. In addition, unlike the high-tech sneakers his opponents wear, Pistorius' blades provide him no traction on wet surfaces. Is it fair to ban Pistorius from the most prestigious sports competition based solely on supposition that he may have an advantage?

This particular case was decided in Pistorius' favor. He was able to leave the less prestigious Paralympics and enjoy the limelight

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provided by the headlines of the Olympics. However, the issue of whether he entertains an advantage over able-bodied athletes, which would render him ineligible to compete, is still unclear. It is a question that will likely be posed many more times as prosthetics engineering further advances in sophistication.

Surgery

The Oscar Pistorius case opened a Pandora's box of questions regarding the ethics of body enhancement in sports. One of the major questions involved the discrepancy between such strict measures as zero-tolerance policy for steroids and multi-volume codebooks regulating equipment, and the fact that there is no regulation on surgeries that athletes undergo to enhance their performances. Surgeries, such as Lasik eye surgery and Tommy John surgery, have, since their conception, been the darlings of the sports world. Such renowned sports stars as Tiger Woods, Hale Irwin, Greg Maddux, and Tiki Barber have abandoned their contact lenses in favor of the "permanent" contact lens provided by Lasik eye surgery.[4] Pitchers such as Kerry Wood, Mariano Rivera and of course, Tommy John, have, through Tommy John surgery, made miraculous returns to baseball after what would have been a career-ending injury or arm fatigue due to old age.[5] Just because a surgery exists though, should athletes be allowed to make use of it to further their career?

The results produced by Lasik eye surgery are astonishing. According to William Saletan, the national correspondent for Slate Magazine, the surgery produces the effect of 20/10 contact lenses. This greatly enhances the ability to spot such things as a 90 mph fastball, or a 43 mm ball on a tee. After Tiger Woods' surgery, for example, his vision was enhanced to 20/15 and he won 7 out of his next 10 events. Poor vision is not a necessary prerequisite for eligibility for the surgery. For example, Jose Cruz, Jr., a former outfielder, had 20/30 vision before the surgery and improved to 20/15 afterwards. As he succinctly stated, "every ½ cm counts." Professional golfers want "to optimize any competitive advantage," a Lasik surgeon told the Los Angeles Times. "They're already tuned in to the best clubs, the best putter, the best ball. ... Clearly having great vision is one of the best competitive advantages you can have." Lasik eye surgery has become just another way of one-upping the competition.

Tommy John surgery is a procedure that replaces a ligament from the elbow with a tendon from a different part of the body. It has an 80 to 85 percent success rate and has prolonged the careers of many major leaguers. Originally intended for aging pitchers, it has become popular among young pitchers hoping to improve their pitching velocity. In order to help their chances of getting that coveted spot on the roster, pitchers as young as ten years have been willing to sacrifice the two years necessary for recovery time for the surgery in

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return for the chance to reach the major leagues. Renowned physicians such as Dr. Brian J. Sennett, the director of sports medicine for the University of Pennsylvania Health System, and Dr. Frank Jobe, the surgeon who invented Tommy John surgery, have denied the link between the surgery and increased pitching velocity. Nonetheless, parents are increasingly subjecting their healthy sons to the painful surgery.[6]

Should these two surgeries, which unnaturally enhance a player's ability and length of career, be allowed? How is it possible to compare records and statistics of athletes if some have received the surgery and others have not? The lack of regulation on these surgeries has created a reality in which uninjured children's still-growing arms are being operated in the hopes that the children will be offered a spot on the team. Lasik eye surgery has given golfers and ballplayers, according to Tiger Woods' eye surgeon, eyesight that "may be better than normal vision." Do these surgeries not fall under the category of cheating? Are such surgeries in the long-term best interest of the patient? The lack of legislation by sports ethics panels demonstrates the lack of clarity surrounding the question of what is truly considered cheating.

Halacha

While using unnatural methods to enhance physical stature may seem like a modern phenomenon, it can be traced as far back as *Tanach*. *Melachim I*, 1:5, it states that "He prepared him chariots and horses and fifty men to run before him." R' Yehuda comments on this *pasuk* that the spleen of each of the men was removed to remove the heavy feeling the spleen causes, and that the flesh on the soles of their feet were cut off to make the runners' feet resistant to thorns.[7] This was all done to enable swift running before Adoniah, King David's rebellious son. What, if any, implication does this have on *halacha*, particularly since swift running is not reserved just for royalty but is also practiced in competitive forms?

When it comes to the use of steroids in professional sports, there are two issues that must be addressed. First is the problem of *gneivat da'at,* with regard to the deception involved in steroid use. This is based on the gemara in Talmud Bavli, Chullin 94a, where Shmuel states, "It is prohibited to steal the mind of any individual". Rabbi Moshe Feinstein, in exploring the issue of cheating on exams, applies this ruling of Shmuel to any case of deception that results in actual gains (Igrot Moshe, Chosen Mishpat chap. 32). In situations like these, Rabbi Feinstein equates *gneivat daat* with actual theft. It would seem from this *halachic* ruling that in professional sports, when the monetary gain made possible by rule-breaking is so high, and especially when it is contractually forbidden, the use of steroids to

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attain higher levels of physical prowess is *halachically* forbidden.[8] This ruling, however, only covers the "old-fashioned" forms of gaining ground on the competition.

The second issue regarding the use of pharmaceuticals in professional sports involves the problem of *venishmartem me'od l'nafshoteichem*, the harm that may result from unregulated steroidal intake. In *Devarim* 4:15 it is stated, "You shall be very careful of yourselves," a commandment that attempts to prevent the harm that may result from unregulated steroidal intake. This concept has been used to *halachically* ban smoking, sedentary lifestyles and various other activities that may cause bodily harm. What, however, is its application to the world of sports?

Halacha recognizes the occasional need to take physical risks for occupational purposes. Rabbi Herschel Schachter outlines three levels of possible risk in a profession. There are activities that are dangerous and serve no other purpose other than that of their risk factor, such as Russian roulette and other violent activities. These are clearly not permitted by *halacha*. Then there are permissible activities that are not viewed as dangerous activities but may have a remote possibility of danger, such as snowboarding, football and other active sports. The third category delineated by Rabbi Schachter includes the activities which some view as dangerous and others do not. These types of activities rely on the concept of "*Shomer peta'im Hashem,*" God

protects the simple.[9] Steroid use is difficult to classify due to the fact that research determining its level of harm is still being performed. However, current research maintains that anabolic steroid usage can cause liver damage, clotting disorders, cancer, rapid weight gain and premature heart attacks and strokes.[10] This puts steroid use somewhat on par with smoking: it does not definitively have adverse side effects for any specific person, nor are these side effects immediate, but the likelihood is that a person will be harming himself by taking them. Thus steroids are found somewhere in-between the first and the second categories, with their *halachic* status from a health perspective questionable.

The principles outlined by Rabbi Schachter do not cover, however, the use of prosthetics and surgery. As representatives from the Schlesinger Institute for Jewish Medical Ethics stated, "*Halacha* can treat a prosthetic as an integral part of the body, but that would not define the eligibility to compete in sports at a specific competition class."[11] The extent to which one can unnaturally enhance his or her sporting ability is an issue that must be decided with regard to every sport individually.

Conclusion

This article has examined the ethical and *halachic* issues surrounding the current methods of bodily enhancement for sports.

The use of prosthetics on the one hand enables the disabled population to compete in more distinguished sporting competitions. However, it is difficult to determine whether the prosthetics actually give those using them an advantage over able-bodied competitors and to regulate their use in the future. The use of body-improving surgery, which has restored and possibly enhanced the careers of many athletes of late, also poses questions as to the ethics of operating on healthy people in order to improve their ability beyond its natural level. Halacha poses additional questions on the matter of improving oneself for sporting purposes. An athlete must be wary of any form of *gneivat da'at* that might be inherent in the use of such methods to improve his or her ability, as well as any possible dangers to his or her health. The current lack of clarity surrounding the issue suggests that it should be examined on both an organizational and *halachic* level.

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Practicing Preventive Oncology: Halachic Problems and Preferences Regarding the BRCA Gene

Tirtza Spiegel

Introduction

The most common cancer diagnosed in women is breast cancer. The average female has approximately a twelve percent risk of developing breast cancer.[1] The odds are raised if the woman carries the BRCA mutation gene. While the odds of carrying the mutation in the general population are 1 in 1000 for BRCA1[2] and 1 in 5000 for BRCA2[3]; in the female Ashkenazi population, 1 in 40 women carry this mutation.[4,5,6] There are three common mutations in Ashkenazi Jews; 185del AG and 5382ins C in BRCA1, and 617del Tin BRCA2.[7] By age seventy, women who carry the BRCA1 mutation have a cumulative risk of 55% and women who carry the BRCA2 mutation have a cumulative risk of 47% of developing breast cancer.[8]

Discussion

There are a number of ethical dilemmas that arise with the possibility of inheriting the BRCA gene. However, the Biblical

commandment to guard our health must be a critical consideration when dealing with such questions.[9] Therefore, many Rabbinic authorities believe that it is imperative to be tested for BRCA genetic mutations if there is an elevated family risk, in order to begin preventive procedures at the appropriate time. However, a positive genetic test does not imply a cancer diagnosis, and implementing preventive procedures does not always prevent breast cancer. Undergoing genetic testing may be psychologically difficult for women and leave the women with higher distress in the long term for those who test positive.[10] Therefore, there are other Rabbis who, while strongly encouraging testing, do not enforce it for these reasons. This is especially pertinent to a woman will not take the appropriate proactive measures for her health once she has tested positive.

Once a woman has tested positive for the BRCA gene, a number of ethical questions arise. As she now has elevated risk of developing breast cancer, she may have other relatives who are at risk for carrying this gene. The Torah commands us not to stand by idly when our fellows are in danger.[11] Is such a woman therefore obligated to inform her relative of her findings? This is particularly difficult in ultra-Orthodox circles, where any negative family history may prove detrimental to finding a spouse. If a woman is married when she tests positive, is she required to inform her spouse? If the woman refuses

to inform her relatives, is her doctor allowed to inform them even though this is a breach of confidentiality?

For the proactive woman, there are different options regarding her positive status and her elevated lifetime risk of developing breast cancer. Intense surveillance, which should begin by 25 years of age, consists of annual MRI and mammography, and a clinical breast exam every six months.[12] If required, targeted ultrasounds or biopsies may be performed. For women who have higher breast cancer distress and/or global anxiety, a mastectomy may be preferable as it lowers the risk of breast cancer by over 90%[13] and when combined with a bilateral oophorectomy it lowers the risk of breast cancer by 95%.[14]

A number of issues may arise from either of these options. The most obvious problem lies in the mastectomy, a mutilating procedure which is done while the patient is not ill, and is not certain to be ill in the future. The procedure is painful and has risks of complications.[15] Removing the ovaries will induce early menopause, which may increase the risks of osteoporosis[16] and cardiovascular disease.[17] Thus, undergoing the procedure causes a woman to endanger herself. Also, her health may be significantly affected by the menopause-induced hot flashes, vaginal dryness and sexual dysfunction, and possible cognitive changes as well as sleep disorders. However, these may be counteracted with medication.[18] One of the major problems of inducing early menopause is that this causes infertility, and if one is

not ill and may not be ill in the future, this may be against Jewish law. However, this can possibly be solved by having the woman under question freeze her eggs and hire a surrogate mother. Each Rabbi's specific opinion may differ on this matter, particularly depending on the age a woman plans to have her oophorectomy and whether or not she has had any children yet.

Rabbi Moshe Feinstein in his Igrot Moshe refers to a particular case where a hysterectomy was done and the surgeon also removed the ovarian and fallopian tubes though there was no concern of a cancer developing there.[19] From this case it is possible to extrapolate that a woman who is at high risk for ovarian cancer (as are BRCA mutation carriers) can have her ovaries removed especially since there is a high potential risk for cancer developing there. Though Rabbi Feinstein was concerned about the five percent risk for surgery, saving lives takes precedence. This was written in 1982; since then the risks of surgery have decreased. Therefore, surgery is not considered dangerous especially since it has the chance to save lives. Since this can potentially be a lifesaving surgery, it may be possible to extrapolate that a Jewish surgeon can perform this surgery.

MRI, combined with mammography, has a sensitivity of over 94% to detect tumors. However, MRI is less specific and has a 26% recall rate.[20] This may induce anxiety in women with an already elevated baseline and destroy their quality of life, in which case it may

be more appropriate to perform prophylactic surgery. Perhaps even women under forty who carry the BRCA1 mutation may be obligated to undergo a mastectomy since they have the highest interval cancer rate.[21]

If a woman undergoes a mastectomy, there are a number of different cosmetic options which may be appealing. There are also surgical procedures, such as prostheses, expanders, implants, and autologous flaps. A *halachic* issue may arise from the Transverse Rectus Abdominis Myocutaneous (TRAM) flap procedure or the Deep Inferior Epigastric Perforator (DIEP) flap procedure, as the TRAM flap uses the rectus abdominis muscle and the DIEP flap uses the abdominal tissue.[23] This causes an unnecessary surgery to another part of the body, and surgery has many possible risks. Another side issue is tattooing the nipple for cosmetic results once the cosmetic surgery has been performed. The Torah forbids tattooing one's body.[24] Another related question may be whether a Jewish plastic surgeon may perform the tattooing.

Conclusion

As technology is constantly changing and new scientific discoveries are made every day, many of these questions are very difficult to answer. What may have been pertinent five years ago may be out of date due to new medical breakthroughs. As many of these

questions specifically relate to Ashkenazic Jews, they are not abstract and often must be considered on a practical level. Therefore, one's local Orthodox Rabbi should be consulted for counseling regarding such questions.

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Informed Consent

Anne Press

When there is a disparity between the wishes of a patient and doctor, whose wishes are granted? Is a doctor required to listen to the patient even if the participant's refusal to receive treatment may result in death? The principle of informed consent mandates that a patient may agree to a proposed course of treatment after having been fully informed of the possible risks and benefits of having the treatment preformed.[1]

Emergence of Informed Consent

Informed consent was first introduced into the patient-physician relationship in the United States in 1947. Prior to this, it was common practice to withhold necessary information that would be required for a patient to make an informed decision. For example, Hippocrates (460-370 BCE) would instruct the physicians to treat a patient however the physician saw fit without revealing the prognosis to the patient. This was decided based on the ethical assumption that the doctor knew what was best for the patient.[2]

During the Nuremberg Trials after World War II, it became apparent that the Nazis had used their victims as subjects of inhumane research experiments. These studies constituted a severe breach of the principles that would later be codified as "informed consent." The medical community compiled the Nuremberg code in response to the experiments. The code is a ten-point document that delineates the particular ethical principles to which doctors must adhere with regard to informing patients of treatments being administered to the patients. The code states that "the voluntary consent of the human subject is absolutely essential. This means that the person involved should have legal capacity to give consent; should be so situated as to be able to exercise free power of choice, without the intervention of force..." Since 1947, when the code was established, the US and many other countries have continued to update and observe the guidelines of these ten different points. Thus, the viewpoint in respect to the patient doctor relationship began to emphasize individual freedoms and a person's right to have autonomous control over his or her body.[3]

The Doctrine of Informed Consent

The Doctrine of Informed Consent is perhaps the most important legal doctrine that contributes to the relationship between patient and physician. The law is based on the belief that one has autonomy over his or her body, and it states that before a physician administers any

treatment, the patient must provide his or her consent. Prior to releasing consent, the physician must provide the patient with information about the treatment in clear and understandable language. The information must include:

1. A description of the possible treatment.
2. A description of possible risks and benefits of the treatment.
3. Possible alternative treatments and the risks and benefits of these alternative treatments.
4. The likely result if no treatment is given.
5. The probability of the treatment's success.
6. Major difficulties during recuperation time.

As evidenced from these six points, matters addressed by the doctrine are very straightforward and include all factors that can provide a patient with enough information to make a well informed decision about his or her health care.[4]

Exceptions to the Doctrine of Informed Consent

A doctor is not obligated to obtain the consent of a patient when the risks are minor and well known. Additionally, if the patient understands there are serious risks to his or her upcoming procedure and asks not to be made aware of the potentials hazards of the treatment in more detail, then the doctor no longer needs to obtain the patients informed consent. Additionally, a physician is not required

to obtain the patient's informed consent is when the doctor has an objective reason to believe that any information provided to the patient will greatly upset the patient, and will therefore render the patient unable to make a rational decision.

Furthermore, if a patient is deemed incompetent, unconscious or mentally ill, or is a minor, the obligation of informed consent falls upon a surrogate caretaker or family member. This person can make decisions for the patient in one of two ways. The first option is to make a decision that the surrogate feels is in the patient's best interest. The second possibility is for the surrogate to make a decision that the patient would have probably made if he or she were competent. For example, if a person is incompetent and needs to be on life support in order to continue living, the caretaker may opt to continue or discontinue the patient's life support because it is what she feels is right for the patient in this specific case. According to the second option, the caretaker can opt to continue or discontinue the patient's life support because the patient suggested to her either directly or indirectly that she would not want to continue to live on life support.[5]

Informed Consent of a Minor

In most cases the consent of a child is placed on the parent. However, there are a few exceptions. Many states allow minors to undergo treatment for illnesses related to drugs or alcohol abuse as

well as pregnancy without parental consent. Furthermore, a minor who is no longer under his parent's care (called an emancipated minor) is able to consent to treatments and surgery without parental consent. Similarly, a minor who is assessed to be able to understand the consequences of a given medical treatment is permitted to give consent to proposed treatment.

Moreover, when a child's parent does not allow the child to undergo a life saving treatment or procedure, the physician can override the decision of the parents. The physician can appoint a court official who will act according to the best interest of the child. For example, in some cases, if a Jehovah's Witness disallows their child to get a blood transfusion, the hospital can place a court ordered official to order the blood transfusion, overriding the parent's religious concerns.[4]

Conclusion

The laws of informed consent state that a doctor must relay to his patient the possible risks and benefits of any administered treatment in an understandable language in order for the patient to make a well informed decision and to accept the proposed treatment. This way of thinking was first introduced to the world after the horrible treatment of the Jews, by the Nazis, in WWII. Since then, the Western world has accepted the notion that a patient must be involved in the

medical decision making process. There are a few exceptions, however, when a doctor does not need the consent of a patient. For example, if a patient is deemed incapable of making rational and logical decisions a surrogate is given the responsibility of making these decisions for him. Additionally, a doctor must receive parental consent to administer treatments to a minor. However, if the parents are withholding their child from a life saving procedure a court appointed official will be placed over the child and can override the parent's decision.

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Animal Experimentation: A Necessary Evil

Barrie Cohen

Introduction

For years, medicines and remedial procedures have been tested on animals. Many of these experiments have contributed to significant advances in research of various diseases, while others have been deemed futile, causing needless harm to animals. Pictures of government laboratories, most often posted by animal rights activists, have led scores of people to believe that animal experimentation is cruel and often unnecessary. To many people, cats and dogs are pets, and monkeys are too close to humans to be subjected to painful experiments. Yet, a belief that using animals ensures product safety and improves human health keeps a slight majority of the nation in support of animal research.[1]

During the 1960s, the "three R's" were advocated: *r*eplacing animal experiments with alternative methods, *r*educing the number of animals used in specific experiments, and *r*efining the experiments to eliminate unnecessary suffering. In light of this, the number of animals used in research dropped forty percent from 1968 to 1978.[2] Although the decrease has continued since, this has not mollified those who

oppose animal experimentation. For most of the opposition, the objection stems from moral considerations: animal research is the cruel use of other creatures for human gain. In addition, some believe that it is poor science to extrapolate from experimental results performed with animals to the human condition. They claim that the differences between humans and animals are too great and therefore experiments in animal species are of little use.[3]

However, many researchers do believe animal results are reliable. Alternatives to using animals for human gain, such as computer simulation experiments, the use of modeling, synthetic skins for cosmetics, and tissue cultures have replaced a widespread use of animals. However, many researchers still feel that they do not obtain the same information or results as they would using live subjects.[4] Computers cannot predict with absolute certainty how experimental drugs will react with the body. By looking to past medical breakthroughs involving animal research, most researchers using animals believe that the end justifies the mean. To them, causing an animal pain is a worthwhile sacrifice made necessary by the improvements made within human health.

Proponents of Animal Testing

Americans for Medical Progress is an organization that believes animal experimentation is necessary for medical research. The

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honorary director of this organization, Heloisa Sabin, is the widow of Albert Sabin. Albert Sabin developed the polio vaccine, which was tested on animals. Heloisa Sabin has stated, "Without animal research, polio would still be claiming thousands of lives each year."[5] Besides polio, AIDS research would also be impossible without animal experimentation. Baboons are immune to the AIDS virus, and research on their bone marrow cells continues to be done. Additionally, groundbreaking research on dogs resulted in the production of insulin with which to treat diabetics. Antibiotics for pneumonia, chemotherapy for cancer, surgeries for treating heart disease, organ transplants, and joint replacements are successful largely because of animal experimentation. Smallpox has been eradicated as a result of animal testing. Vaccines that every child receives today – measles, tetanus and tuberculosis – were developed as a result of animal studies.[6] Animals will continue to be a vital component of research in the pursuit alleviating human suffering.

Often overlooked is the benefit that all animals receive from veterinary research. Not only do humans benefit from animal experimentation, but the animals themselves also benefit. Pets such as cats and dogs, as well as farm animals, often suffer from a variety of diseases. The vaccines they receive were developed as a result of research on animals.[7]

The Opposition: PETA

Those who consider animal rights to be more important than research carried out in order to help humans have hampered medical research. Animal rights activists have been successful in passing regulations that severely hinder research advancement. In addition to this hindrance, radical activists have threatened and targeted researchers as well as facilities, causing millions of dollars in damages. These extremists are preventing the discovery of cures and treatments to save human lives.[8] People for the Ethical Treatment of Animals (PETA), wishes to completely abolish medical research using animals. Such a step would be dangerous, as only medical advancements that could be done with computers and synthetic materials and devices would be possible. The damage that would be done by abolishing animal experimentation is inestimable, in terms of discoveries made and lives saved. It is impossible to know what future discoveries would have been made and be lost and in turn the number of lives that would have been saved had animal experimentation not been abolished.

Yet, PETA's statements intend to convince the public that animals rarely make for effective human models. PETA portrays animal researchers to be liars who exaggerate the benefits of animal experimentation. In fact animal research has saved millions of people worldwide. PETA, as well as other animal rights activist groups, claims that non-animal based research has a promising future. While this may

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be true, without animal research many potential scientific discoveries could be lost. Though PETA may have weak arguments, their motivations are altruistic. PETA operates under the simple principle that animals do not belong to humans to eat, wear, experiment on or use for entertainment purposes.

One of PETA's main goals is to target and abolish product testing on animals. Every year, millions of animals suffer or die in the process of safety testing of detergent, furniture polish, nail polish, oven cleaner, soap and cosmetics. Many times these products are dropped into the animals' eyes or forced into their mouths and stomachs. Because most companies are capable of formulating products based on safe ingredients, many of these tests on animals are unnecessary.[9] Not surprisingly, a survey by the American Medical Association found that over 75% of Americans are against using animals for the purpose of testing products.

The Jewish Perspective

Judaism places great emphasis on animal welfare. The manifestation of this is the prohibition of *tza'ar baalei chayim*, which forbids causing suffering to animals. For example, one is required to feed his animals before feeding himself. Also, in *Shemot* it states that an over-loaded donkey must be unloaded even if it is the donkey of an enemy. The feelings of animals are taken into account as well in

Devarim, where one is instructed not to take the eggs from a bird's nest in the presence of the mother bird. Furthermore, Leviticus states that one may not take a baby calf before its eighth day of life, and may not be slaughtered on the same day as its mother. One may only slaughter animals for the purpose of consumption as long as the animals are killed in the proper way, quickly and without suffering.

Judaism permits the use of animals in experiments under certain conditions. Animals may be used in experiments that lead to new information regarding diseases. Every possible provision must be made to minimize pain and ensure that unnecessary suffering is not induced. The experiment under question must be designed to provide an immediate health benefit for mankind. According to Jewish law, causing animals pain, as long as it is minimized and absolutely necessary, is allowed in order to relieve human suffering. Rabbi Yaakov Yechiel Weinberg (the *Seridei Esh*), a leading European Rabbi in the 1960s, states that doctors should not hesitate to cause pain to animals if medical science will be advanced. Rabbi Eliezer Waldenberg (the *Tzitz Eliezer*), who was the rabbi of Shaare Zedek Medical Center and a judge on the Supreme Rabbinical Court in Jerusalem, agreed that medical animal experimentation is permissible if animal suffering is minimized and not unnecessary. He thus maintained that medical and economic advancement are not subject to the laws prohibiting destruction and causing animals unnecessary pain. However, if there

exist alternative methods to achieve the same end, causing pain to animals becomes unjustifiable according to Rabbi Moshe Feinstein, a leading twentieth century American *halachic* authority. Many contemporary Jewish authorities therefore render testing cosmetic products and luxury items on animals, as well as killing animals for luxurious fur coats, to be forbidden.[10]

Conclusion

Animal research is a critical moral issue of our time. Similar to abortion and stem cell research, the ethical controversy of animal research for human health and cosmetics ignites intellectual debate and emotional division. Both sides of the controversy, despite their reasoning for their arguments, call for moral justification. Since all agree that animal lives clearly have value, principled individuals must question whether animal experimentation is justified. Those in favor of animal research have often failed to give the necessary moral justification for the use of animals in health care experiments. Their silence raises the question of whether humans simply abuse their power over animals.[11]

Human morality naturally wishes to save human lives. The limits and restrictions regarding how far humans can subject another species to pain in order to save their own species need to be determined. Despite numerous federal regulations, animals continue to suffer in

vain for product testing. Obviously, experiments done for medical purposes, as opposed to cosmetic ones, are more critical and therefore less easily surrender to the challenge of animal rights. Until more sophisticated technology without using animals is perfected, the necessary evil of animal research for vital human medical purposes must continue.

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The Right to Bear Children

Rabbi Dr. Richard Weiss

Ms. Nadya Suleman generated much interest and controversy when she delivered octuplets in January 2009. The multiple fetus pregnancy was apparently generated through in-vitro-fertilization (IVF), one form of assisted reproductive technology (ART).[1] Ms. Suleman is also the mother of six other children, who apparently were conceived using IVF as well. The ethical issues surrounding the births of the octuplets are multiple and complex.[2] First, since Ms. Suleman already had six other children under the age of eight, was any form of ART indicated or appropriate. In addition, she is a single mother without adequate income to support all her children. Should that factor have been considered by her physicians in determining the appropriateness of treatment, or the number of embryos transferred at one time. In general, based on guidelines established by the American Society for Reproductive Medicine, it would seem that too many were transferred.[3] Its recommendation is that no more than two embryos be transferred into a woman's uterus if she is under the age of 35, except in extraordinary circumstances. Ms. Suleman was 33 at

the time of delivery. The risks to both the mother and the fetuses are of real significance. Preterm delivery could compromise any or all of the fetuses, and the physiologic burden to the mother could lead to significant health concerns. The most basic ethical question that this case raises is whether an individual/couple has/have a basic human right to procreate and bear children. If such a basic right exists then perhaps society and medicine have to facilitate that right within reason. It is this issue that this writer wishes to analyze more fully.

Substantial basis exists for the claim that the right to bear children is a fundamental constitutional right.[4] Such a right is part of the general right of liberty as well as a component of the integrity of the family unit. The essential question is not whether an individual or family has such a right, but to what extent such a right should be honored. To bear a child naturally is quite clearly a basic right, but does a person have the same right to claim that assisted reproductive technology is a constitutional right and must be provided to those who need it. The United States Supreme Court has never issued a decision regarding this specific point. Such a right would imply that the community must accommodate a couple/individual who seek(s) ART. This societal and medical responsibility would likely include financial and medical support. John Robertson, an attorney and ethicist, argues that the constitution grants individuals the right to bear children naturally or by means of assisted reproductive technology.[5] The right

to bear children is based on the appropriate goals inherent in bearing children. Those goals include basic biological, social and psychological needs. Robertson describes the right to procreate in the following terms. "....control over whether one reproduces or not is central to personal identity, to dignity, and to the meaning of one's life."[6] The means by which the goals are achieved is not the granted right, but the resultant fulfillment attained by having children. One has the right to 'pursue' such fulfillment. If that argument is correct, then assisted reproductive technology is a right of all individuals equal to having children naturally, and cannot be denied without an overriding consideration.

In contrast, Arthur Caplan, an acclaimed bioethicist at the University of Pennsylvania, commenting on the Suleman case, stated quite simply that "Medicine is not a restaurant, and doctors are not waiters, they don't take orders from patients."[2] This critical view of what Ms. Suleman and her physicians engaged in does not necessarily negate the right to procreate. Rather, it focuses on situations in which such a right is suspended due to specific concerns that override that right.

From a Jewish bioethics perspective, the Suleman case is rich in concepts. Judaism places a tremendously high value on bearing children and on the family unit. The first *mitzvah* (commandment) in the Torah (Five Books of Moses) is to be "fruitful and multiply"

(Genesis 1:28). Implicit in that commandment is the notion that procreation is an obligation and a responsibility more than a right or privilege. The Talmud discusses in detail what the parameters of the obligation are. Bearing children as a right is not the primary focus in Jewish law. One very interesting and important *halacha* (law) is that women are exempt from bearing children, based on Talmudic interpretation of Biblical verse (Babylonian Talmud, Yevamot 65b). Although a woman's participation in the *mitzvah* is essential, this technical exemption does have implications *halachically* and philosophically. Rabbi Meir Simcha HaKohen explains the rationale behind a woman's exemption from a mitzvah that clearly is so dependent on her and in which she is most immediately involved.[7] He suggests that the Torah could not impose an absolute obligation upon a woman knowing full well that pregnancy carries real health risks to her. A person is not expected to place oneself in situations of potential risk to one's life. In short, a woman, unlike a man, is not mandated by the Torah to bear children, but she has a right to do so. Procreation in Judaism, therefore, includes components of both obligation and right. If one focuses on the obligation aspect, then one could argue that if the only way to fulfill that mitzvah is via ART, then one may, not only be entitled to utilize ART but obligated to do so. This is, however, not the accepted position of Judaism. Rabbi Shlomo Zalman Auerbach states specifically regarding IVF, that pursuing such treatment is not a

religious requirement that can be imposed upon an infertile couple.[8] *Halacha* only expects individuals to strive to perform a mitzvah utilizing reasonable and routine efforts. Efforts that are considered beyond the scope of routine, and which potentially carry certain degrees of burden, either physically, psychologically, or financially, are not necessarily required. They both state that ART is often a legitimate option for a couple, or in other words, a *halachic* right, but not a mandate. Rabbi Dr. J. David Bleich eloquently summarizes the normative view as follows.

> Recognition that the commandment to "be fruitful and multiply" requires only conventional sexual activity within the context of a marital relationship yields the conclusion that no form of assisted procreation is mandatory. Although Halakhah may demand employment of extraordinary and heroic measures in prolonging life, with regard to the generation of life it requires only that which is ordinary, normal and natural. However, so long as the methods employed in assisted procreation do not entail transgression of halakhic strictures such methods are discretionary and permissible.[9]

As a final point regarding right vs. mandate, it is worth noting that one of the most important factors in consideration of ART is the emotional risk/benefit to a couple considering ART. If a couple is truly experiencing profound emotional pain from not bearing children, then

that itself serves as a major *halachic* motivation to seriously consider ART as a right in that situation.

It is, however, John Robertson's idea of a goal oriented view of procreation rather than a methods view, this writer would like to focus on briefly in this final section. How one should precisely define the *mitzvah* of "be fruitful and multiply", is a subject of significant debate. Rabbi Yosef Babad refers to medieval rabbinic sources that understand the nature of the mitzvah of procreation as defined by engaging in coital activity.[10] The activity itself is, simply put, the fulfillment of the Biblical command. Rabbi Babad, however, dissents with this definition. He argues that the result of coital activity, namely giving birth to and having children is the definition of the *mitzvah*. The coital activity is simply a mechanism by which to reach that goal. Achieving the goal is the mitzvah. As such, he understands the mitzvah as a perpetual obligation and fulfillment once the child is born. This view is consistent with that of John Robertson's, in that the goal and purpose of bearing children defines its essence, and its ethical considerations. According to Rabbi Babad, ART could accomplish essentially the same goals as natural means, and would constitute a definitive fulfillment of the *mitzvah* in the absence of coital activity. The issue regarding the fulfillment of the Biblical mitzvah of procreation through ART is subject to an extensive debate.[11] While many authorities maintain that one cannot fulfill the *mitzvah* through artificial means, many other

authorities contend that a child born from ART is viewed as the couple's child, and that the couple is fully credited with the *mitzvah*. It should be noted that our discussion is limited to a married couple engaging in either IUI (intrauterine insemination) using the husband's sperm, or IVF using the husband's sperm to fertilize the wife's oocytes (eggs). Utilizing donor eggs and/or sperm are more complex situations, and beyond the scope of this article.

In conclusion, Judaism does not entirely equate ART to natural procreation, at least in terms of personal obligation. Whether the two are equivalent in accomplishing the same religious *mitzvah* and goal is subject to dispute. It is clear that ART is not mandatory itself but a right in appropriate circumstances. With these principles established, further discussion is necessary to extrapolate what obligations/rights exist for health care professionals in providing ART to individuals/couples in various situations.

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