**Ethics, Medical Malpractices and Islamic solution**

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**ABSTRACT**

Ethics serves as fundamental unit for medical practices. The social sciences frequently attempt to determine the relation of particular ethical principles to social behaviour and to investigate the cultural conditions that contribute to the formation of such principles. Ethics plays an important role in fashioning the human Psyche which has direct relation with human society and leads to human respect. For a sound society health consciousness is important and interrelationships between biomedical ethics and the law are core of medical practices. In this regard a system of education need to be developed that awakens, envision and develops innate human capacities under the light of Divine guidance. In addition to the straight facet of information and Islam has an education system in which the upright dimension is the primary alliance of development, leading to a state of being characterized by spiritual awareness and human excellence.

Key words: **Ethics, Medical Profession, Islamic Law, ethical code, Faqhi views**

**Methodology:**

An attempt is made to analysis produced through ages and build the thought process that Islam is having appeal and relevance at present in order to bring human society in general and corpse of knowledge under divine values in order to safe guard the human future.

**Literature survey**

The stock of material related to the topic is in abundance and need to be revisited to reintroduce ethical value in human life in general but medical practices in particular. Human being is valuable and need to alleviate on priority basis. In this regard following books along with others helped to write down this paper and bring human attention towards this issue which many a times due slight negligence took many lives.

Rahbar, Daud, God of Justice. A Study in the Ethical Doctrine of the Qur’an, Leiden 1960; G.F. Schuler. Review of ‘May, Larry; Friedman, Marilyn; and Clark, Andy, eds. Mind and Morals: Essays on Ethics and Cognitive Science, 1995; Sayyid Mujtaba Musavi Lari, *God and His Attributes: Lessons on Islamic Doctrine,* trans. Hamid Algar; Potomac, MD: Islamic Education Centre, 1989; Abdul-Aziz Sachedina, Islamic Biomedical Ethics: *Principles and Application,* Oxford University Press, New York, 2009; Omar Hasan Kasule, Islamic Medical Ethics with Special Reference to Maqasid al Shari'at. Paper presented by Dr Omar Hasan Kasule Sr. MB ChB (MUK), MPH (Harvard) DrPH (Harvard) Professor of Epidemiology and Islamic Medicine at Universiti Brunei, 2007; George Hourani, *Islamic Rationalism: The Ethics of ‘Abd al-Jabbar* Oxford: Clarendon Press, 1971; Jarrahi, *Kashf al-Khafa*, Maktabat al-Turath, Syria, vol. 1; Malik, *al-Muwatta,*’ (ed.), Saad, 1983; Alamgir, *Al-Fatawa al-Hindiya*, Bulaq, (1310 AH), vol. 6

Ethics, as a branch of philosophy, is a normative science concerned with norms of human conduct, as distinguished from the formal sciences and the empirical sciences. (G.F. Schuler, 1960) Shari’ah is all-inclusive in nature and serves as a blend of ethical and progressive laws. (Rahbar Daud, 1960) It has power to resolve all problems existing in medical field. Any law lacking ethical guidelines or having antagonistic forms of ethical laws cannot solve modern day problems because of having human dominance in view. Many present-day ethical issues in medicine are moral in nature and entail moral guidance that can be delivered from Islam. The Law is the expression and practical manifestation of morality. It automatically bans all immoral actions as *illegitimate* and permits all what is moral. The approach to ethics is a mixture of the fixed absolute and the flexible. The fixed and absolute sets parameters of what is moral. Within these parameters, consensus can be reached on specific moral issues. Ethical theories and principles are derived from the basic Law but the detailed applications require further *ijtihad* by physicians. Islam has a defined ethical theory of Islam based on the purposes of the Law, *maqasid al shari’at*. (Jasser Auda, 2007) The purposes are preservation of *deen*, life, progeny, intellect, and wealth. Any medical action must fulfil one of the above purposes if it is to be considered ethical. All the ethical values are divine in nature which fulfils the purpose of God. Moral design plays important role in the medical practices because this profession to related with life of a being. The German philosopher Immanuel Kant. Kant maintained that the highest good includes moral virtue, with happiness as the appropriate reward for this virtue. He held it is humanity’s duty to seek this highest good and that it must therefore be possible to realize it. Kant claimed that this highest good cannot be realized unless there is “a supreme cause of nature,” one that has the power to bring about harmony between happiness and virtue. Such a cause could only be God.

Philosophers have attempted to determine goodness in conduct according to two chief principles, and have considered certain types of conduct either good in themselves or good because they conform to a particular moral standard. The former implies a final value, or Summum bonum, which is desirable in itself and not merely as a means to an end. In the history of ethics there are three principal standards of conduct, each of which has been proposed as the highest good: happiness or pleasure; duty, virtue, or obligation; and perfection, the fullest harmonious development of human potential.

Depending on the social setting, the authority invoked for good conduct is the will of God, the pattern of nature, or the rule of reason. When the will of God is the authority, obedience to the divine commandments in scriptural texts is the accepted standard of conduct. If the pattern of nature is the authority, conformity to the qualities attributed to human nature is the standard. When reason rules, behaviour is expected to result from rational thought. Islam as a civilization and its influence as a culture throughout the regions of the world spread as a religious tradition founded upon justice (Sayyid Mujtaba Musavi Lari, 1989), and inclusive-egalitarian spirituality. As a world-embracing tradition, Islam in this sense inspires and sustains a public theology based on concern for others. (Abdul-Aziz Sachedina, 2009)

Medical Ethics or Bioethics, study and application of moral values, rights, and duties in the fields of medical treatment and research are integral part of the medical profession. (Abdul-Aziz Sachedina, 2009) Medical decisions involve moral issues in relationship between patient and physician, the treatment of human subjects in biomedical experimentation, the allocation of scarce medical resources, and the complex questions that surround the beginning and the end of a human life. (Edward William Lane, 1968) Many of the current issues in medical ethics are the product of advances in scientific knowledge and biomedical technology. These advances have presented humanity not only with great progress in treating and preventing disease but also with new questions and uncertainties about the basic nature of life and death. As people have grappled with issues on the frontier of medical science and research, medical ethics has grown into a separate profession and field of study. Professional medical ethicists bring expertise from fields such as philosophy, social sciences, medicine, research science, law, and theology. Many medical schools include ethics courses that examine topics such as theories of moral decision-making and the responsible conduct of medical research. (Jones, J. H., 1993)

The Principle of intention comprises several sub principles. The sub principle ‘each action is judged by the intention behind it’ calls upon the physician to consult his inner conscience and make sure that his actions, seen or not seen, are based on good intentions. The sub principle ‘what matters is the intention and not the letter of the law’ rejects the wrong use of data to justify wrong or immoral actions. The sub principle ‘means are judged with the same criteria as the intentions’ implies that no useful medical purpose should be achieved by using immoral methods. (Omar Hasan Kasule, 2007)

 Medical diagnosis cannot reach the legal standard of absolute certainty, *yaqeen*. Treatment decisions are based on a balance of probabilities which involves high level of morality. (George Hourani, 1971) The most probable diagnosis is treated as the working while those with lower probabilities are kept in mind as alternatives. Each diagnosis is treated as a working diagnosis that is changed and refined as new information emerges. This provides for stability and a situation of quasi-certainty without which practical procedures will be taken reluctantly and inefficiently. The principle of certainty asserts that uncertainty cannot abrogate an existing certainty. Existing assertions should continue in force until there is compelling evidence to change them. (George Hourani, 1971) All medical procedures are considered permissible unless there is evidence to prove their prohibition.The standard of medical care is defined by custom. The basic principle is that custom or guide has legal force which is uniform, widespread, and predominant and not rare.

Criminologists who apply moral development theories build on the pioneering work done by Swiss psychologist Jean Piaget. According to Piaget, children evolve through four stages of cognitive development. (Santrock, John, 1998) From birth to age two, children experience the world only through their senses and motor abilities and have a very immediate, experience-based knowledge of the world. Malpractice, a wrongful act by a physician, lawyer, or other professional that injures a patient or client. The patient or client may file a civil lawsuit to recover damages (money) to compensate for the injury. The professions in which malpractice can occur require specialized training and study, and professionals in these fields must exercise a high degree of judgment in performing tasks generally beyond the skill of laypeople. In addition to law and medicine, these professions include dentistry, accounting, engineering, and architecture. Medical or legal malpractice lawsuits are far more common than those involving other professions.

**Misconduct in medical occupation**

Malpractice is a special type of offence. A tort is a civil wrong that permits an injured party to sue for compensation for damages caused by the harmful conduct of another person. (Iranian Penal Code, Article 14) Malpractice and other torts have these three features in common: they involve a person who has a duty of care toward others, a failure to exercise due care, and an injury or other monetary damages caused by that failure. The plaintiff in a malpractice case must prove that the injury would not have occurred in the absence of the allegedly improper conduct. Because malpractice cases involve members of a profession, many of the issues that arise are more complex than the issues in other tort cases.

Medical malpractice is the most common type of malpractice lawsuit. It typically involves the negligence of a physician while diagnosing or treating a patient. (Mirza Husain, 1964) In the past, courts decided whether a physician’s conduct was negligent by comparing that conduct with the practices in the locality where the doctor worked or with the practices of his or her field of medicine. (Muhammad Kazem, 1964) These evaluations made it difficult for injured patients to win malpractice lawsuits. Other doctors who could describe the practices in the locality were often reluctant to testify against their colleagues. (Shilkret v Annapolis 1975)

More recently, courts have applied a national standard for professional conduct when determining whether malpractice occurred. A small proportion of medical malpractice cases result from the intentional misconduct of the physician, such as improperly touching a patient who is unconscious. However, plaintiffs who are harmed in such a manner typically charge that the physician committed battery, an intentional tort, rather than alleging malpractice. A physician may also commit malpractice by doing something without obtaining the patient’s informed consent. For example, a doctor may commit malpractice by giving a patient an experimental drug without first informing the patient about potential risks or side effects, and then obtaining the patient’s consent to use the drug.(Al-Iraqi, Sharh Ihya Ulum Al-Deen 5/216).

Most physicians purchase insurance to protect themselves from the high cost of malpractice lawsuits. According to Islamic Law such practitioners are liable to punishment. (Ibn Qudama, 1982, vol. 4) In the mid-1970s and again in the mid-1980s, insurance companies sharply increased the cost of medical malpractice insurance. Many reasons for the rising costs were suggested.(Kendall & Haldi,1973)

Some people blamed the insurance industry, claiming that insurance companies charged excessive amounts. Others claimed that lawyers were to blame because they brought far too many medical malpractice actions, including many that had no merit. (James R. Posner, 1986) Still others charged that the rise in litigation was the result of increasingly complex and specialized medical practices associated with the development of new medical procedures, equipment, and medications.

In response to the rapid rise in insurance costs (and the resulting increase in the cost of health care), many states passed legislation designed to reform tort law. These reforms provided various restrictions on medical malpractice suits, including limitations on the amount of damages that could be awarded or the fees that an attorney could receive. Some states adopted procedural restrictions, such as shortening the time period in which a plaintiff is permitted to file a claim or requiring plaintiffs to submit their claims to screening panels that review the claims and attempt to resolve disputes prior to litigation.

These reform statutes have generated controversy. A number of state supreme courts have found various measures to be in violation of state constitutional protections. For example, courts have invalidated laws that seriously limit the rights of plaintiffs to file suit or that severely limit damage awards. As the rise in medical insurance costs tapered off at the end of the 1980s, the pressure to reduce malpractice actions also diminished.

Un-ethical research on patients is abuse of professional privileges. Abuse of treatment privileges consists of unnecessary treatment, iatrogenic infection, and allowing or abetting an unlicensed practitioner. Abuse of prescription privileges is manufacturing, possessing, and supplying a controlled drug without a license, prescription of controlled drugs not following procedures, diverting or giving away controlled substances, dispensing harmful drugs, sale of poisons, and writing prescriptions using secret formulas.

Financial fraud may be pharmacy fraud (billing for medicine not supplied), billing fraud (billing for services not performed), equipment fraud (using equipment that is really not needed or using equipment of poorer quality), or supplies fraud. It is also illegal to get financial advantage from prescriptions to be filled by pharmacies owned by the physician. Kick-backs are unethical and illegal. False or inaccurate documentation is a breach of the law and includes issuing a false medical certificate of illness, false death certification, and false injury reports. (Al-Quran; AI-Mutaffifeen: 1-6, Hadith: At- Tirmidhi)

Criminal liability for patient death; induced non-therapeutic abortion; abusive therapy involving torture; intimate therapy; rape and child molestation; and sexual advances to patients or sexual involvement. (Seyed Hossein Serajzadeh, 2001–2002) The physician-patient relation requires that the physician keeps all information about the patient confidential. Breach of confidentiality can be done only in the following situations: court order, statutory duty to report notifiable diseases, statutory duty to report drug use, abortions, births, deaths, accidents at work, disclosure to relatives in the interest of the patient, disclosure in the public interest, sharing information with other health professionals, disclosure for the purposes of teaching and research and disclosure for the purposes of health management.

Breach of trust is a cause for censure because a physician must be a respected and trusted member of the community. (Laughran & Bakken, 1984) Sexual misbehaviour such as *zina* and *liwaat* are condemned. Fraudulent procurement of a medical license, sale of medical licenses, and covering an unqualified practitioner indicate bad character. Physicians can abuse their position by abuse of trust (e.g. harmful or inappropriate personal and sexual relations with patients and their families), abuse of confidence (e.g. disclosure of secrets), abuse of power/influence (e.g. undue influence on patients for personal gain), and conflict of interest (when the physician puts personal selfish interests before the interests of the patient). Other forms of misconduct are in-humane behaviour such as participation in torture or cruel punishment, abuse of alcohol and drugs, behaviour unbecoming, indecent behaviour, violence, and conviction for a felony.

Muslim *fuqaha’s* classification of liability of medical practitioners

Four classes of medical practitioners are recognised by Muslim *fuqaha*:

(1) The authorised and competent practitioner who performs his duty according to the accepted methods of the profession.

(2) The authorised and competent practitioner who erred, or was mistaken, or was involved in a situation of misadventure or accident.

(3) The negligent practitioner.

(4) The criminally negligent practitioner.

The competent practitioner who performs his duty according to the accepted methods of the profession and is authorised

The issue at hand in this subsection is a presumption by Muslim fuqaha of the existence of a category of medical practice, which may be attended by *sirayah*: complications or even death without there being any question of transgression *(ta‘adi)*, incompetence, or negligence. Thus there is no liability attached to the action, even if the patient is harmed, and no compensation is due *(la Daman)*.

The Islamic aphorism is: “performing one’s duty *(wajib)* does not necessitate a guarantee of protection nor accomplishment.” Medical cure is a *requirement*, only if it is a *duty* of the society and individuals. “The compromise is that there is no responsibility involved to the anxieties of carrying out one’s duty *(wajib)*.” (Ibn al-Qayyim, 1979) So the medical specialist in charge may not be accountable, “by agreement of all fuqaha.” (Sarakhsi, 1958)

Any kind of incompetence and turning down universally recognized procedures, if go to by harm, make the practitioner accountable. Lack of consent, even when not attended by harm, is cordless and makes the practitioner in the overwhelming majority of cases liable. Some specifics from the different schools are given below:

A renowned scholar of Hanafi school Sarakhsi is of the view that; “If a barber-surgeon *(hajam)* lets out blood, or incises an abscess, for a consideration; or if a veterinary worker *(bazagh)* treats an animal, for a fee; then if that person or animal dies, the performer is not liable. The contract of *mu’awada* (exchange) is not applicable where there can be unforeseeable results to the intervention. So in this situation the performer is not liable, if he did what he was asked to do, unless he transgresses or performs without consent”. (Sarakhsi, 1958)

Medical practitioner who circumcise a child and due to negligence cuts off the glans is liable, because it is a very sensitive case and needs full care from the practitioner during circumcision *(khatan)* should be restricted to the prepuce only. According to fuqaha competence and consent are a defence against liability. Competence is a quality control procedure by the authorities, resulting in the recognition of the professional standard of the treating practitioner. Islam requires one to do one’s job well. The Prophet (saas) said, “Allah likes it when one does his job well *(inn’Allah yuhibbu min al-‘amil idha ‘amila an yuhsin)*.” (Jarrahi, 2012)

The Prophet (saas) also laid the ground for the requirement of levels of skill, or specialised competence, when he asked, “Which of you is better at medicine?” (Malik, 1983)

Ash-Shafi’i said:

“If the medical practitioner’s actions are similar to that of those in the trade whose actions are known to be beneficial then, he is not liable; but if his actions are not similar to those who are well versed in the trade then he is accountable.” (Ash-Shafii, 1993)

Ash-Sharawani said:

“A medical practitioner is not liable, at the pain of ignorance, if two just and qualified men in the field consider him knowledgeable. They certify that his competence is well known to them, and that he had cured many people according to their knowledge.” (Sharawani, 2013)

The stand of the Medical Act is fair and practical, and it is, undoubtedly, commendable to have controls, registers, and licensing bodies to administer the profession. Muslim fuqaha are agreed that, “The competent practitioner, who performs his duty within the prescribed professional code, and is duly authorised, is not liable; because he is required to perform a duty.” (Kandhloy,1989)

Authorised and Competent practitioners

Medical issues or cases of liability during the era of great fuqaha mostly revolved around circumcision or suggesting a drug inclosing poison. Circumcision was the commonest surgical procedure, hence the richest source of complications and litigation. (Tanya Gulevich, 2004) Circumcision involves physical intervention on the part of the practitioner, and expects him to be in control of the situation all the time. Muslim fuqaha separated error from negligence. There is provision for that in the Qur’an and Sunnah*.* You are not to blame for any honest mistake you make but only for what your hearts premeditate:

And, Our Lord, do not take us to task if we forget or make a mistake! (Quran. 33:5, 2:285) The Prophet said, My people were excused: error, forgetting things, and what they were forced or compelled to do. (*Muhammad* bin Yazid Ibn Majah, 1952)

But loss due to error is subject to restitution. Restitution is borne by the *‘aqila*. Islamic fiqh puts a cap on compensation for loss due to error or mistake *(khatta’)*, Q.4: 92 *(wa diyatun musallamatun)*. In cases of intentional transgression, although it is the right of the aggrieved party to insist on a similar hurt to be inflicted upon the offender to ensure justice, forgiveness is recommended, even for a consideration.

Criminal Negligence

Gross negligence or criminal negligence, is considered an intentional crime in Islamic fiqh. Generally the majority of fuqaha are of the opinion that criminal negligence should be penalised by retaliation *(qisas)*.

So if a case involves the death of a patient then the practitioner will lose his life, unless the relatives forgive him for free or for a settlement. (*Fatawa* Alamgir (1310 AH), (Ibn Farhun*,* 1958) (Ramli, 1938), (Ibn Qudama, 1981)

**Conclusion**

Life is precious and Islam advocates for its safety in all situations. It is possible only when medical practitioners their duties under the guidance of Islamic moral principles. Islam has strong moral and ethical principles for biomedical practitioners so as to overcome moral degradations. Islam does not allow neither a doctor nor a pharmaceutical company to deal in unlawful goods. It is an act of injustice with high criminal liability to act against Allah’s Ordinances. So under all type of circumstances, unlawful goods, unlawful business, unlawful medical practices and dealings have been prohibited because they contain elements, which are harmful to individuals and to the whole society. Any sort of malpractice, Black marketing, prescriptions by doctors and hoarding of duplicate medical goods are also prohibited and liable to punishment.

**Bibliography**

1. Abdul-Aziz Sachedina(2009), Islamic Biomedical Ethics: *Principles and Application,* Oxford University Press, New York, p.14

Abdullah bin Bayah (2007), Amali al Dilalat wa Majali al-Ikhtilafat, 1st ed. (Jeddah: Dar al-Minhaj, 361, and Al-Turabi, Qadaya alTajdÏd, p.157

1. Akhoned Khorasani, Mohammd Kazem (1964), Kefayat Alosul, Tehran, vol2, p.265
2. Alamgir(1310 AH), *Al-Fatawa al-Hindiya*, Bulaq, vol. 6:34
3. Ajluni al-Jarrahi, Isma'il ibn Muhammad (2012) *, Kashf al-Khafa*, Risalah Publishing, Beirut, vol. 1:285, analysis of *hadith* No. p.747
4. Ash-Shafi’i (1993), *al-Umm*, vol. 6: pp.239-240
5. Edward William Lane (1968), *An Arabic-English Lexicon*, offprint ed. (Beirut: Librairie du Liban, 5 p.1775.
6. G.F. Schuler (1997), Review of ‘May, Larry; Friedman, Marilyn; and Clark, Andy, eds. Mind and Morals: Essays on Ethics and Cognitive Science. Cambridge, Mass.: MIT Press, 1996, pp. 315’ in Ethics, Vol.107, No. 2, (January, pp.349-351
7. George Hourani (1971), *Islamic Rationalism: The Ethics of ‘Abd al-Jabba¯r* (Oxford: Clarendon Press,p.10
8. Hadith Book: Tirmidhi, Sahih Muslim, Shaih Bukhari
9. Ibn Farhun (1958), *Tabsirat al-Hukkam,* vol. 2, p.243

Ibn al-Qayyim (1979), *Zad al-Ma‘ad*, vol. 4, p.139

1. Ibn Qudama, *al-Mughni (*1981), vol. 7, p.706, (Hanbali)
2. Ibn Qudama (1982), al-Kafi, vol. 4, p.121.
3. Imam Muhammad bin Yazid Ibn Majah al-Qazvini (1952)*, Sunan Ibn Majah*, vol.1, pp.658-659.
4. Iranian Penal Code, Article 14
5. Jasser Auda(2007), Maqasid al-Shariah as Philosophy of Islamic Law A Systems Approach, the international institute of islamic thought London, p.185
6. James R. Posner (1986), Trends In Medical Malpractice Insurance, 1970-1985, Law and Contemporary Problems, Vol. 49: No. 2, pp.37-38

Jones, J. H. (1993). Bad blood: The Tuskegee. Syphilis experiment. New York: Free Press. Joynson, R. B. (1994). Fallible judgments. Society, 31(3), pp.45-52.

1. Kandhloy (1989), *Awjaz al-Masalik…Muwatta’ Malik,* vol. 13, p.27
2. Kendall & Haldi (1973), the medical malpractice insurance market, in dep't of health, educ., & welfare, report of the secretary's commission on medical malpractice & appendix p.494.
3. Laughran, W., & Bakken, G. M. (1984). The psychotherapist’s responsibility toward third parties under current California law. Western State University Law Review, 12(1), pp.1-33
4. Malik 91983), *al-Muwatta,*’ (ed.), Saad,812, *hadith, (ayokuma atab?)*
5. Maliki Ramli (1938,), *Nihayat al-Muhtaj*, vol. 7, pp.262 and 276,
6. Naeni, Mirza Husain (1964), Moniyat Altaleb, Qum, Iran, vol1, p47,

Omar Hasan Kasule 2007, Islamic Medical Ethics with Special Reference to Maqasid al Shari'at. Paper presented by Dr Omar Hasan Kasule Sr. MB ChB (MUK), MPH (Harvard) DrPH (Harvard) Professor of Epidemiology and Islamic Medicine at Universiti Brunei, on Saturday January 13, p.3

Potomac, MD(1989),: Islamic Education Centre, pp.139–49.

1. Quran. 33:5, and Quran. 2:285; (both verses tr. Bewley)
2. Rahbar, Daud (1960), God of Justice. A Study in the Ethical Doctrine of the Qur’an, Leiden, 5-6, 25, pp.179-180
3. Sarakhsi, *al-Mabsut*, (1958), vol. 16, pp.10-11; and vol. 26, p.147

Santrock, John W(1998),. Children. 9. New York, NY: McGraw-Hill, p.4

1. Sayyid Mujtaba Musavi Lari, *God and His Attributes: Lessons on Islamic Doctrine,* trans. Hamid Algar, p.33
2. Seyed Hossein Serajzadeh, (2001–2002), Islam and Crime the Moral Community of Muslims, Journal of Arabic and Islamic Studies 4 , p.120

Sharawani(2013), *Hawashi ash-Sharawani.‘ala Tuhfat al-Muhtaj Sharh al-Minhaj,* Dar al-Minhaj, ,vol. 9, p.197

1. Shaykh Hafiz al-Iraqi (1311 A.H) Takhreej Maa Fi'l Ihya' Minal Akhbaar, Dar ul Kutub ... Ithaf al-sadat al-muttaqin bi-sharh asraar Ihya' 'Ulum al-deen, Cairo,
2. Shilkret v Annapolis (1975) Emergency Hosp. Ass'n, p.245.
3. Tanya Gulevich, (2004) Understanding ISLAM and Muslim Traditions, Omnigraphics, Inc, Michigan, p.214