A two-decade Review of Medical Ethics in Iran

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Abstract
The growing developments in science and technology have raised ethical challenges which should practically be addressed by scientists, regulatory bodies and policy makers. Likewise, challenging issues of medical ethics have also drawn a great deal of academic attention in Iran. In other words, recent decades have been an occasion of considerable development for contemporary bioethics in Iran. At first, the ongoing initiatives to arrange the national and regional research ethics committees and to compile the national strategic plan for medical ethics is worth mentioning. Currently, research ethics committees are actively established in the universities and research centers across the country. Furthermore, the subject of ethics in different fields of science, which was followed in a traditional approach previously, is an important object of discussion currently. Much research is now being undertaken in various areas of bioethics nationwide. Consequently, during the period under review, considerable articles and books have been published in the emerging subjects of bioethics. Several educational workshops and courses have been frequently taken place in the universities and research centers. Foundation of academic courses and fellowship in bioethics are also among the recent activities in the realm of medical ethics education in Iran. Likewise, considering several areas of bioethics that need legislation or reconsideration of previous regulations; the authorities, policy-makers, and scientists have carried out some endeavors to prepare appropriate law, codes, and guidelines. This report summarizes the bioethical activities and achievements in different fields of policy-making, organizing, teaching, and putting ethics into practice in our country during two recent decades.

Keywords: Bioethics, Medical ethics, Strategic plan, Ethics committee, Iran

Introduction
Even from the ancient era, Iranian physicians have paid special attention to ethics in their practices, teachings and manuscripts. In medieval, Persians have attempted to regulate medicine and to protect patients' rights (1). The most famous Mesopotamian law code is Hammurabi of Babylon (1728-1646 BC) (2, 3). The code is engraved on a slate which is kept at the Louvre museum in Paris. In Persian history, also, the Dinkard (the Sassanian Persian's encyclopedic) and the part entitled "Vendidad" of "the Avesta" (Zoroastrians' holy book) have mentioned the characteristics of a good physician (1, 4-6). Islam put a great emphasis on moral virtues, and the completion and perfection of moral ethics was stated as the main goal of the prophet of Islam, Mohammad (PUH). Consequently, Muslim physicians paid special attention to ethics in their personal and professional practice. Some Books related to medical ethics have been written in the era of Islamic Empire, including "Spiritual Medicine" (Teb e Rohani) by Zakariyya Razi, "Ethics of a physician" (Adab al-Tabib) by Ishag ibn Ali al-Ruhawi (a Christian who embraced Islam), the Paradise of Wisdom" (Ferdous al Hekmat) by Ali ibn-e Raban Tabari (807-861 AD), "The Perfect Art of Medicine" (Kamel al-sanaat al-Tibbia) and "Ahwazi Advises" by Ali ibn Abbas Ahwazi (Haly Abbas) (1).

Likewise, religion has had a pivotal role in bioethical activities in Iran during recent decades. No doubt religious background and socio-cultural tradition of different communities should be taken into account for ethical analysis in practice. According to the religious background, Islam has played a significant role in interpretation and practical application of bioethics in Iran. Eternity of life (immortal soul), association of a human being with God and universe, life

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after death, seeking perfection and eternal salvation, altruism, and benevolence to fellow human beings are the main concepts of Islamic teachings. Islamic scholars have proposed some well-known Islamic principles to consider for ethical decision making; namely, the principle of “the Public Interest” (Maslaha), the principle of “Do no Harm” (La Darar wa la Derar), the principle of “Necessity” (Darura), and the principle of “No Hardship” (La Haradj) (7). These Islamic principles, which ordinary are considered for issuing decrees and approving laws in regards to newly emerged subjects, can be used for decision-making in contemporary clinical bioethics.

Material and Methods
As the main resource, we have used the people who have been engaged in the national medical ethics activities to compile the paper. The published articles are also searched via Iran Medex, Google, and Medline. The purpose of this report is to summarize the bioethical activities and main accomplishments in Iran during two recent decades.

It is noteworthy that many scientists, universities and other organizations have had considerable attempts to promote ethics in science and technology in Iran in recent years. Many books and articles have been published that we are not able to include in this brief report. However, we are going to review major plans and achievements in different fields of policy-making, legislation, education and putting ethics into practice.

Results
Contemporary Medical Ethics in Iran
Taking into account the emerged issues of contemporary medical ethics, the book entitled “Medical Ethics and Customs” (Akhlagh va Adab e Pezeshki) by Dr. Mahmoud Naser-aldin Etemadian (Faculty of Tehran university) was published in 1963 (8, 9). In this comprehensive book, medical oaths, doctor-patient relationship, confidentiality, issue of consent, ethics in research, abortion, euthanasia and ethical codes and charters in medicine have been discussed by the author. Some sporadic manuscripts about various subjects of medical ethics have been published afterward.

Not surprisingly, there has been a resurgence of interest in medical ethics in Iran over the last two decades. In fact, the decade of 1990s was the commencement of a series of continuous activities in the field of medical ethics in our country. “Medical Ethics with a Brief Overview of Medical History” was one of the first books which were published by the Ministry of Health and Medical Education (MOHME) in collaboration with the faculties of the Tehran University of Medical Sciences (TUMS) in 1991 (10).

In that moment in time, the Education Deputy of MOHME was encouraged to establish the Center for Medical Ethics Studies and Research (1993). In the same year, 14th to 16th July, the first International Congress of Medical Ethics was held in Tehran. This occasion brought together the physicians, religious scholars, lawyers and philosophers to discuss challenging issues of contemporary medical ethics and the current and future program in Iran. Along with some leading scientists from other countries, a wide range of Iranian intellectuals participated in this congress. One of key aims was to increase the awareness and understanding of professionals and the public to bioethical issues and to raise the sensitization of policy makers.

This event enabled the executive committee to publish a series of books containing the elected articles which had been presented during the congress. These books are used as a frame of reference thereafter by many researchers in Iran. The meeting was followed by regular meetings and workshops in which were discussed the overarching issues (9, 11).

Consequently, the International Congress of Bioethics, in collaboration with the UNESCO, was held by the Ministry of Science, Research and Technology and the National Research Center for Genetic Engineering and Biotechnology (NRCGB) in Tehran in 2005 (12).
In 2004, the Medical Ethics and Medical History Research Center (MEHR) was established in TUMS. Inspired by MEHR, empowerment of education, research and information in the field of medical ethics has been followed by researchers across the country. Main activities will be reviewed in this paper. As an important achievement, the 2nd International Congress of medical ethics in Iran (http://icme.tums.ac.ir/) was held in Tehran on April 16-18, 2008. Through this three-day congress, in which well-known Iranian and International scientists attended, different subjects in the realm of bioethics were discussed from ethical, religious and legal perspectives.

**Strategic Plan for Medical Ethics**

In 2002, to bring more attention to medical ethics and to enhance the quality of health care in Iran, MOHME introduced the ongoing initiative to arrange the national strategic plan for medical ethics. Compiling the strategic plan for medical ethics carried out by MEHR in collaboration with the Deputy of Research and Technology. This plan was developed through concise workshops in which experts addressed important goals and future activities (13). Discussions covered some shortcomings and challenges in the field of bioethics in Iran, and the ways to address them in a relatively short period of time. Main ethical shortcomings and challenges consisted of: insufficient familiarity of medical practitioners with the contemporary medical ethics and national and international codes, scarcity of qualified individuals as bioethics experts for strengthening bioethics education, need to clarified researches and reliable data about local bioethical issues, necessity of providing culturally-adapted educational guidelines and educational packages, inadequate knowledge of patients and other health care system’s stakeholders about ethical issues and their rights, inefficiency of ethics committees, a relative lack of continual ethical performance appraisal in the public and private clinics, hospitals, and other health care centers, and unsatisfactory relationships and contribution with regional and international bioethics centers and organizations. During the two workshops and some Focus Group Discussions, the vision, mission, goals, objectives, activities and indices were defined. Following more than three months of efforts, on October 2002, the working group prepared the final version of the plan. The plan covers major areas of management, regulations, communications, research, education, training, the public announcement, monitoring and assessment of medical ethics activities at national level. Accordingly, it was decided that official codes and guidelines in various fields of bioethics would be compiled quickly to utilize as mutual frameworks for professional ethical conduct. As another main goal, it was approved to develop special educational courses and academic degrees in order to provide necessary human resources for putting ethics into practice nationwide. Moreover, establishing a portal to act as a comprehensive database was considered among the goals. It was agreed that there should be a more effective national and international affairs in the field of medical ethics. In addition, setting up appropriate mechanisms for ethical appraisal of performance was emphasized. For the ethics to be more valued in the society, popularizing initiators and nominating them for national prizes was included in the plan. In order to accomplish the goals and objectives, substantial activities have been undertaken in recent years.

**Main Medical Ethics Activities**

Development of National Research Ethics Committees (1997) and establishment of Research Ethics Committees in universities and research centers nationwide, implementation of the National Codes of ethics in Biomedical Research (general and specific guidelines), maintain and strengthen national bioethics network in collaboration with religious scholars, physicians, philosophers, legal experts, sociologists, and other intellectuals are some particular efforts are being carried out by the authorities to address the problems, before and after the national strategic plan (9,10).
Authoring and translation of books on the issues of medical ethics has been increased considerably in recent years. In order to provide an important infra-structure for medical ethics empowerment, the National Medical Ethics Information Center and Library is also established in the Medical History Museum by MEHR of TUMS in collaboration with MOHME. The database (http://museum.tums.ac.ir/) has been established since 1998 as a comprehensive central reference for medical ethics researchers and all Iranians interested in bioethics. Considering the rich history of medicine and importance of traditional medicine in Iran, the database has included Iranian old published and unpublished Manuscripts (books and other documents).

Over recent decades, considerable articles have been published in Iran about the emerging subjects of bioethics. Also, frequent educational workshops and courses have been taking place in the universities and research centers. After the first International Congress of Medical Ethics in 1993, the articles, which were presented in the Congress, were published in a series of books. The journal entitled ‘Teb & Tazkyeh’ (medicine and purification) (1993-current) was the first professional journal in which the issues of contemporary medical ethics were discussed.

Thanks to the authorities’ attempts, the first volume of Iranian Journal of Medical Ethics and History of Medicine (IJMEHM), as a professional journal, is published from 2008 (http://digilib.tums.ac.ir/pub/). The IJMEHM is an online bilingual (Farsi & English) journal, which has a qualified online submission and peer review system.

Active bioethical groups have been organized in Iran in recent years, of which are the Iranian Association of Ethics in Science and Technology (http://iranethics.irost.org/) and the Iranian Association for Medical Ethics. Since 2006, a quarterly scientific journal titled "Ethics in Science and Technology" has been published by the Iranian Association of Ethics in Science and Technology.

As innovative technologies progress to the clinical setting, health care systems will be challenging the various concerns that need legislation or reconsideration of previous regulations. Consequently, the policy-makers and legislators have carried out some endeavors to prepare appropriate law, codes, and guidelines in Iran. Considering the interrelationship between ethics and religion in our religious society, the authorities have taken Islamic principles into account in legislation. One of the intriguing aspects about Islam is that it has a dynamic jurisprudence. This quality has paved the way for the approval in Iran of some laws in the field of medical ethics that address emerging issues in biomedical sciences and technologies. The Act of Organ Transplantation and Brain Death (2000) (14, 15), the Embryo Donation to Infertile Spouses Act (2003) (16, 17), and the Act of Therapeutic Abortion (2005) (18) have been approved by the parliament of the Islamic Republic of Iran in recent years.

As mentioned, wide-ranging ethical issues have been raised by innovative sciences like biotechnology, nanotechnology, Assisted Reproductive Technologies (ART), and stem cell research (16, 19, 20). As these advancements could lead to irreversible disasters if not limited by ethical guidelines, taken into account the international ethical guidelines and regulations, the culturally-adapted ethical guidelines in biomedical research was compiled by means of task force activities in which the experts of religion, law, ethics, medicine and related fields of science had been invited. The National Codes of Ethics for Biomedical Research, including 26 ethical guidelines, was prepared by MOHME in 2000. Likewise, the Specific National Ethical Guidelines for Biomedical Research, which cover the ethical guidelines for clinical trial, research on minors, genetic research, gamete and embryo research, transplantation research, and research on animals, were compiled in 2005 (9). With respect to the endeavors of scientists and physicians in the field of medical ethics, the authorities have set a prize on medical ethics in the Avicenna Festival, sponsored by TUMS, from two years ago. Dr. Shams Shariat Torbaghan and Dr. Abolghasem Abasahl have been...
selected and admired as heroes in 2007 and 2008, respectively. This has been carried out in accordance with the goal of the national strategic plan in order to pay special attention to morality and ethics in medical practice. Currently, some Iranian scientists are active at the international level and have had much invaluable collaboration with International organizations (21-23).

**Medical Ethics Education**

Reform in medical ethics course for undergraduate medical students, establishment of MPH course (with a medical ethics focus) since 2004, and foundation of MS courses and fellowship in bioethics are among the recent activities in the realm of medical ethics education in Iran (9).

Medical ethics course for undergraduate students of medicine, which was taught as a two-credit course through the fifth year (clinical year) of their major, has been restructured by TUMS faculties in recent years. Educational method is changed from lecturing to small group discussion with case consultation and clinical ethics round. Despite the insufficiency of bioethics specialists in the country, the faculties, interested in medical ethics, are familiar with the contemporary bioethics, clinical medical ethics, new methods of education, and case analysis. The main outlines of the course are consisted of philosophical principles of bioethics, ethical theories and decision-making frameworks, professionalism, physician-patient relationship, autonomy and informed consent, research ethics, confidentiality and truth telling, end of life issues, resource allocation and justice, maternal-fetal conflicts, medical errors, conflict of interests, competency and surrogate decision making. There are also some cessions of clinical ethics rounds.

The book entitled “Healthcare Professional and Ethical Issues” (2 volumes) has been published in 2004 as a reference for students. Case-based approach for teaching medical ethics has been used in this book.

In the recent 3 yr, some MPH students has been admitted to pass the specific courses on clinical ethics, philosophy of ethics, principles of jurisprudence and law, and sociology, and to accomplish the ability of case analysis and ethical decision-making in practice. As the students had been from different universities all over the country, they have played an effective role in national strengthening of medical ethics after graduation.

The MS in Medical ethics is also going to be begun in coming semester of 2008-2009 educational year. The core themes and credits would be principles of jurisprudence, philosophy of ethics, schools of ethics, comparative religious ethics, Islamic ethics, principles of law and legal medicine, general medical ethics, professionalism, ethics in health care, research ethics, English for ethics professionals, methods of research and scientific writing, contemporary methods of ethics education, and clinical courses of ethics.

Institution of doctoral course (PhD) in bioethics is also one of the future plans of TUMS authorities.

**Conclusion**

There has been a great resurgence of interests in bioethics worldwide and also in Iran in recent decades. Substantial activities are being carried out by the authorities to address the different aspects of policy-making, education, and putting ethics into practice across the country. National strategic plan has clarified priorities and has also described the stakeholders, visions, missions, goals, strengths, weaknesses, opportunities and threats. In addition, it has set indices and some deadlines for achieving goals. Notwithstanding the considerable accomplishments, all the goals have not attained yet due in part to not predicting some pitfalls. However, it seems that necessary infra-structures have been provided to strengthen medical ethics in our country. Fortunately, holding two international congresses, which has brought together scientists, religious
scholars, lawyers, ethicists in Iran to interchange their ideas and to discuss about the issues in depth, have provided the authorities with the opportunity to recognize virtues and shortcomings, and to design a more inclusive future plan.

Along with the extensive attempts, the authorities should seek out the appropriate ways for putting the ethical principles into practice. Actually, the ultimate goals would be accomplished through changing the practitioners’ attitude and improvement of patient-physician relationships.

One of the main achievements over the reporting period has been the foundation of a new system of medical ethics education in different levels and making a comprehensive database available for ethics researchers. No doubt these approaches would pave the way for ever-increasing numbers of people who are conversant with the medical ethics in our society. Organizing and coordinating the interested people under the auspices of well-organized bodies could also address the need to examine ethical issues raised by new developments in biology and medicine in keeping with cultural beliefs and Islamic principles.

Bioethics as a highly multidisciplinary subject needs to be taught in the academic courses, so foundation of the doctorate degree in bioethics is a real necessity in Iran in the current era. In all societies, the ethics legs behind the science currently; however, bringing specialists of different fields of philosophy, law, jurisprudence and science together will offer a special chance to Iranian intellectuals to deepen contemporary medical ethics by virtue of invaluable divine teachings and Islamic principles.


In the age of global science, differences in moral values and cultural attitudes could have an impact on the practice of global science. Therefore, better understanding and analysis of medical ethics issues and the provision of culturally adapted solutions are essential. Also, the importance of establishing or extending regional and global networks for strengthening communications within bioethical organizations at the regional and international level should be emphasized. Compiling and strengthening culturally-adapted national guidelines is also strongly recommended.

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An Overview of Current Medical Biotechnology in Iran. Biotechnology is one of the seven key technologies to achieve economy, food and public hygiene security [16]. Amongst Eastern Mediterranean regions, Iran is currently one of the most contributing countries to biotechnology [18]. Furthermore, other permanent members are involved in the committee, including two philosophy and ethics experts, two lawyers, two biotechnology specialists, two biologists and one expert at each field of immunology, genetics, pharmacology, biochemistry, psychology and epidemiology [31]. Conclusion. Biotechnology has a proud history in Iran. Iranian students had been sent to Europe for medical studies for several decades before the founding of the medical school at Dār-ul-Funūn. Two of these works are especially significant: Akhlâq-i pizishkī (Medical Ethics), prepared and published under the supervision of the Ministry of Health in 1991, and a book with the same title, written by Mansûr Ashrafī and published by the Medical Faculty of the Open University of Tabriz in 1988. Muslim jurists in Iran have not yet formulated relevant responses to some of the most complex ethical issues those that arise because of human endeavors to improve health and extend life. The highly cherished religious value of compassion has been overshadowed by the language of condemnation for moral failure of humanity. During the past two decades, Iran has experienced a noteworthy growth in its biomedical research sector. At the same time, ethical concerns and debates resulting from this burgeoning enterprise has led to increasing attention paid to biomedical ethics. In Iran, Biomedical research ethics and research oversight passed through major periods during the past decades, separated by a paradigm shift. Period 1, starting from the early 1970s, is characterized by research paternalism and complete reliance on researchers as virtuous and caring physicians. (...) This approach was in concordance with the p