

Medical Ethics in Undergraduate Medical Education in Pakistan: Towards a Curricular Change

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1. Introduction

Curriculum is the skeleton of a subject, without which the muscles and organs will leave their place demolishing the structure. A well thought, well planned and a well written curriculum is the key to success for any subject. Curriculum of a subject, reflect the state of intellectual development of that population. Globalization has led to free availability of new ideas and information, which pours in continuously. It is, therefore, essential to update curricula by utilizing the recent developments and research evidence in the different fields of knowledge. Curriculum is defined as, "An educational plan that spells out which goals and objectives should be achieved, which topics should be covered and which methods are to be used for learning, teaching and evaluation" (Wojtczak, 2002). A more comprehensive definition states, "A curriculum is first of all a policy statement about a piece of education, and secondly an indication as to the ways in which that policy is to be realized through a program of action." It is added that, "it is the sum of all the activities, experiences and learning opportunities for which an institution or a teacher takes responsibility. He includes the formal and the informal, the overt and the covert, the recognized and the overlooked, the intentional and the unintentional education" (Coles, 2003).

"The curriculum is a complex network of physical, social and intellectual conditions that shape and reinforce the behavior of individual, and takes into consideration the individual's perceptions and interpretations of the environment in order to reinforce the learning objectives and to facilitate the evaluation procedures" (EduQnA.com, 2007). The first textbook on the subject of curriculum was published in early 20th century (Bobbitt, 1918).

In the 32nd UNESCO General Conference (UNESCO, 2003), the need to initiate and support teaching programs in ethics, bioethics and in all scientific and professional education was stressed by Member States, because of this, UNESCO initiated the ethics education program in 2004. Bioethics education for medical practice is essential because of continuous change; in medical policies and legislation on patient rights, complexity of health care systems and decision-making about emerging issues in clinical practice (McCrary, 2001). Research based arguments for the development and introduction of integrative medical humanities courses

into the core curriculum were used. Ethics in contemporary medicine, is growing since the 1970's as shown by the increasing use of Institutional Review Boards for protection of human subjects, the establishment of hospital ethics committees, the demand of clinician ethicists and the integration of ethics into many medical education curricula (Evans & Macnaughton, 2001).

Pakistan is one of the underdeveloped capitalist countries, where the health care is curative and for the elite class. Literacy levels are low, medicine is taught in English, and nearly all prescribed textbooks are in English and for the West. The systems of health care and medical education are not in line with the real needs of the community and of the country (Zaidi, 1987). This is still the problem with our medical education that we focus on what others do rather than developing our own curriculum in the light of local needs.

The government of Pakistan approved the constitution of the National Bioethics Committee (NBC) in 2004. The purpose is to "promote and facilitate ethical health services delivery and health research" (Harvard School of Public Health, n.d.). The main role of the National Bioethics Committee (NBC) is of an advisory body dealing with all aspects of bioethics in the health sector of Pakistan. It also promotes and facilitates ethical health services delivery and health research. It has a supervisory and advisory role by linking with the ethical review bodies in organizations and institutions like the Pakistan Medical and Dental Council (PMDC), the Medical Training and Teaching Institutions and the recently constituted Good Clinical Practices (GCP) committee of the Ministry of Health's Drug Division. The committee has two sub-committees, the research ethics committee and medical ethics committee. NBC's medical ethics committee is responsible for the Bioethics teaching and training in medical education (Pakistan Medical and Dental Council, n.d.). Code of ethics for the doctors is given by PMDC (Pakistan Medical and Dental Council, n.d.).

Pakistan is a developing country aiming to provide excellence in Medical Education but still striving for achieving minimum standards of medical education. Undergraduate Medical education has given more attention during the first decade of twenty first century, which led to increased number of medical colleges all over Pakistan. The Pakistan Medical and Dental Council is the regulatory authority responsible for the recognition of medical colleges, setting and revising the medical education standards, developing and revising curriculum and registering the faculty.

The Pakistan Medical & Dental Council is a statutory body (Pakistan Medical and Dental Council, n.d.) constituted by the Federal Government under the Pakistan Medical & Dental Council Ordinance (Pakistan Medical and Dental Council, 1962). The Council is controlling it. One of the main objectives of the Council is to lay down the minimum standard of basic and higher qualifications in Medicine & Dentistry. "The Council has been empowered to prescribe; a uniform minimum standard of courses of training for obtaining graduate and post-graduate qualification, a minimum requirements for the content and duration of courses, admission criteria to the courses of training, the standards of examinations and method of conducting the examination for medical and dental studies" (Pakistan Medical and Dental Council, n.d.)

Curriculum Development, Review and Revision at Graduate and Postgraduate level is one of the major on-going activities of Higher Education Commission as provided under Section

(10) Sub-Section (V) of its Ordinance No.LIII, Government of Pakistan (Higher Education Commission, 2002). The Standard Operating Procedures for curriculum revision are followed by HEC in which the National Curriculum Revision Committee is responsible for the revision of the curriculum (HEC). HEC has developed procedures and guidelines for quality assurance and its enhancement for the university administration, quality enhancement cells and faculties for easier implementation (Batool & Qureshi n.d).

Human communities and professional organizations need to uphold values that are respected by the group as a whole, but there is a great concern about questions of “right” and “wrong” conduct. Same is the case with medical professionals. UNESCO mentioned the need to revise and update existing educational curricula as multifaceted, as a result large number of changes is occurring in the world. It provides a guide for managing curriculum changes with an objective to enhance educational quality and relevance. Six of the values that commonly apply to medical ethics discussions are;

- Autonomy means the patient has the right to refuse or choose their treatment.
- Beneficence means a practitioner should act in the best interest of the patient.
- Non-maleficence means "first, do no harm".
- Justice concerns the distribution of scarce health resources and it also deals with treating people with fairness and equality.
- Dignity means the patient (and the person treating the patient) has the right to be treated with respect and honor.
- Truthfulness and honesty - the concept of informed consent has increased in importance.

These values do not give answers as to how to handle a particular situation, but provide a useful framework for understanding conflicts. When conflict arises, the result is an ethical dilemma or crisis (UNESCO, n.d.). There are various ethical guidelines formulating the foundation of regulations regarding medical ethics; the Declaration of Helsinki (Kimmelman, Weijer & Meslin, 2009), ten points of Nuremberg code (U.S. National Institutes of Health, n.d.).

There are still deficiencies and gaps in the knowledge regarding ethics and code of conduct in different spheres of life. In Judeo-Christian and specially the Islamic teachings, one can get the acceptable conduct drive; explaining the right and wrong with cut-off points and flexibility range. These standards of morality along with normative and deviant behaviors are universal, because Islamic teachings are meant for whole world (Soskolne & Last, 2008).

In general, human beings regard laws as a way of upholding the values of society, but these laws must be based on religion.

The curriculum is formulated at a national level so it has the policy role for the medical education in Pakistan. Contemporary curriculum development is in place, but still a continuous revision process need to be effectively in place. The National Bioethics curriculum for undergraduate medical students is reviewed using the document review technique by the researcher. The curriculum is the part of MBBS curriculum developed by HEC and PMDC, Pakistan. The main sections of the curriculum involve the guiding principles, scheme of studies and details of courses for MBBS.

The curriculum specifies overlapping areas in more than one discipline like, genetics, bio-statistics, infectious diseases, diabetes mellitus, and ethics. But in the section of guiding

principles 'Ethics' is specified as an additional subject to be taught, which is not made compulsory. The choice is to be made by the universities, implementing the curriculum. As the 'Ethics' curriculum is not specified as a separate subject, rather it is integrated in different disciplines. The curriculum aims at the application of knowledge and problem solving rather than only recall.

This curriculum available on the official web link of PMDC states, that the current curriculum is the first step towards developing a more comprehensive and detailed curriculum. The curriculum describes the need for integration between disciplines, but the decision of integration, how and to what extent, is mentioned as the responsibility of the university faculty. The curriculum stresses the need for developing desired humanistic attributes in a doctor with effective communication skills and good patient-doctor relationship. It is advised to the universities faculty, to devise methods that build these attributes among the students and test them. Yet the core curriculum for medical ethics varies from country to country and institution to institution. Core curricula on medical ethics are available (Doyal & Gillon, 1998).

The PMDC curriculum specifies the list of topics in bioethics in the Forensic Medicine discipline under the topic of "Laws in relation to medical men". In the document, the ethical and professional obligations of registered medical practitioner, towards Law and the PMDC are specified. The objectives of teaching ethics in Forensic Medicine includes; the development of doctor-patient relationship in the context of highest ethical standards, to understand and refrain from any temptations to professional misconduct, to guard professional secrets and privileged communication, to maintain highest ethical principles in medical examination and when obtaining consent and to define what constitutes medical negligence. In addition, to debate the pros and cons of organ transplantation in each individual case, to develop and defend a personal moral view on artificial insemination, therapeutic abortions, euthanasia, biomedical research etc. These learning outcomes are to be achieved, in keeping with the norms of society and highest ethical principles. The course content specified by PMDC curriculum, which is to be taught by Forensic Medicine needs to be elaborated giving the key competencies to be developed and the methodologies to be used for developing them, otherwise a lot of implementation issues will arise, as we currently experience in different medical colleges.

Medical Ethics core content, specified in the Community Medicine subject includes; background, concepts and components of medical ethics, along with national recommended guidelines and code of Medical Ethics. Medical Ethics content to be taught in clinical disciplines includes; effective communication with the patient, the family and the community regarding disease and its relevant issues, understand medical ethics and its application pertaining to surgery and maintain the confidentiality of the patient and provision of the opportunity to apply medical ethics' knowledge related to that field.

The PMDC curriculum mentions the Behavioral Sciences, as to be taught in Psychiatry. The curriculum document explains the desired outcome in a fresh medical graduate as; to have the knowledge and understanding of mechanism of body in health and disease along with knowledge of relevant behavior he has to show with patients, families and society; to have professional and communication skills to diagnose and manage diseases, to develop excellent communication skills with colleagues, doctors, nurses, paramedical staff and

public and to have developed conditioned sympathetic attitude towards ailing humanity; Clinical Skills should have acquired by achieving a desired theoretical and practical level of competence according to the goals set up by the medical college. These outcomes can be achieved in Pakistani medical graduates, once the undergraduate students acquire the desired competence in medical ethics, by using core curriculum specified in the document under study, as well as, through hidden curriculum, which means the transmission of norms, values, and beliefs conveyed in both the formal educational content and the social interactions within these colleges. The role of "hidden curriculum" cannot be overlooked in medical ethics. A comprehensive ethics curriculum needs the understanding of broader cultural context, in the light of which the curriculum should be developed (Hafferty & Franks, 1994).

The medical ethics covers the practice ethics as well as the research ethics. A code of ethics is always there, to justify actions by individuals within a specific environment. The training of ethics, at undergraduate and post graduate level should be consistent and standardized, with unified depth and applying the principles which have reached a consensus of importance, using a consistent curriculum (Lakhan, Hamlat, McNamee & Laird, 2009). Community practices and processes are important as they are used to develop and critique learning and teaching approaches, policies and administration so the students and faculty develop ethical practices and professionalism.

The methodology generally mentioned in the PMDC curriculum includes many options, out of which a suitable methodology producing maximum output can be used. Problem-based Learning, Tutorials/Practical sessions/Essential Skills or Lab practice, clinical rotations and ward visits, Lectures/Seminars/CPC's - using modern audio-visual techniques, distant learning using electronic devices and current Information Technology facilities. Journal Club, Community -based learning and acquisition of Competencies through any other method can be used.

The PMDC curriculum contains only the objectives and course outline, but linking syllabus to the teaching or instructional and assessment methodology is inadequately explained. The suitable learning resources for undergraduates need to be specified. In addition, the time allocation for medical ethics training, strategies for implementation of the training in medical ethics and desired competencies development activities are not effectively addressed in the curriculum under review. The periodic or continuous assessment or examination of medical ethics course is not adequately mentioned. It is very difficult to assess students' competencies in medical ethics without examining them and displaying their performance. The need for compulsory examination at undergraduate level to assess the ability of medical students to reason critically and logically on ethical issues cannot be denied (Boyd, 1987). If there is no formal assessment in ethics, this downgrade the course and leads to its being classified as optional, either officially or at least in the perception of students. This results in poor attendance and uncertain acquisition of ethical skills (Calman & Downie, 1987).

The detailed content required for medical ethics competency development should be developed by involving local stakeholders like, medical educationists, ethicists and experienced faculty in medical schools, colleges and universities. A strong forum can be used,

as in Pakistan's case the Higher Education Commission of Pakistan is the umbrella body and Pakistan Medical and Dental Council is the platform for; policy formulation, curricular planning, designing, implementing, evaluating and reviewing the curricula in medical ethics education. The policy transfer concept can also be utilized as a curricular transfer from medical universities and schools; where continuous, meticulous research has been done developing the curricula. The transfer or adaptation is conditioned with the incorporation of and modifications according to context specific needs, demands, priorities, and resources along with considering the socio-cultural, economic, religious and political forces in Pakistan.

The use of developed and tested curricula for teaching at undergraduate level; has been practiced but the efforts fail when it is not context specific. The environment where the young medical graduate is going to work and practice is the defining and determining force for ethical practice. In Pakistan, the society and community, where the young doctors practice, consist of divergent healthcare setups including, allopath, homeopath, Hikmat, Chinese medicine and other indigenous health practices like Unani- medicine etc. In addition to these the "Quacks/traditional healers" play their role by practicing medicine in our streets. Majority of our population is dependent on these practitioners and have a good faith in them.

The curriculum change through review and context specific insight is needed for the medical ethics curriculum used at national level in Pakistan. An unethical practice, by untrained physicians, non-physician practitioners, indigenous health care practitioners and quacks (An untrained person who pretends to be a physician and dispenses medical advice and treatment) is a threat for medical professionalism. The document on Human Resources for Health (Joint Learning Initiative, 2004) and World Health Report (World Health Organization, 2006) estimated a huge gap in availability and demand of trained health human resource. It means major portion of Pakistani population is depending on health care providers, which are inadequately trained in ethical practices and professionalism as the curriculum used at national level inadequately addresses the competencies in medical ethics.

In Pakistan, the current curriculum needs change by incorporating more structured, ethics based, integrated training of medical undergraduates. We need to produce 'community friendly health care providers', which will work at grass root level, in the community in a more friendly and professional way. The responsibilities of medical universities and the medical colleges in Pakistan are much more in the implementation of the curriculum in its full spirit. As there are private sector medical colleges, emerging in medical education in Pakistan, it is becoming difficult and tedious task to bring them in the streamline, where they can implement bioethics education for medical students uniformly and produce graduates with same competency level in medical ethics.

After the review of the medical ethics curriculum used at national level, the next objective was to assess the need for change in the curriculum and to determine the nature of change required, through in-depth interviews, author's insight and analysis. Analysis identifies the areas and nature of change required, as; making the curriculum of medical ethics compulsory for undergraduate medical teaching and training, bridging the gaps in ethics core content written in curriculum, elaborating and specifying the resources required for ethics teaching in the curriculum, specifying teaching, training and assessment

methodologies in the curriculum. Other important points emerged from the analysis are; to create awareness among the stakeholders, about the need for inculcating medical ethics in medical students and training of the faculty in medical ethics.

Medical Ethics is not considered as a separate subject in PMDC curriculum which creates difficulty in sensitizing the faculty, about the changing trends in medical ethics education. The implementation of curricular change demands the establishment of Medical Ethics & Behavioral Sciences Department in every medical college. To make curriculum ethics friendly, we need to incorporate more comprehensive and structured training component on medical ethics. Medical ethics teaching and training should be done throughout the five year medical program and it should be mandatory for the affiliated medical universities to design comprehensive plan for the implementation of medical ethics curriculum. Throughout the teaching program of undergraduate studies the formative and summative assessment of knowledge and competencies need to be done. All these changes require structured reforms in undergraduate medical ethics curriculum, focusing on developing more integrated and learner-centered curriculum.

Focusing on the curricular reforms in Medical Ethics, we need to understand the context of Pakistan, where it is to be implemented. Contemporary curriculum change process must be based on principles, like; ensuring quality, relevance to the need and context, and involving a range of stakeholders. Common topics that need to be incorporated in the content of medical ethics curriculum are; professionalism, ethics codes and oaths, paternalism, competency, truthfulness, confidentiality, informed consent, abortion, maternal-fetal issues, end-of-life decisions, decisions on death and dying, physician-assisted suicide, research on human subjects, treatment for incompetent patients, objectivity and bias in medical research, issues in protection of human subjects, animal research issues, genetic testing, managed care, health care reform, social justice and health care, organ donation and procurement, health care regulation, ethics committees, medical futility, unfair aspects of the health care system, and pain control etc. In later years of training in medical colleges additional teaching and training about moral, professional, and legal obligations of physicians, physicians' traditions and responsibilities in developing and implementing health care delivery etc. must be incorporated.

These topics must be discussed, analyzed and students should be encouraged to give their opinions and reasoning. Curriculum must have the option of electives in Medical Ethics and Humanities. The competencies required to be addressed in Medical Ethics curriculum are; to develop skills for critical evaluation and articulation of moral and philosophical claims, arguments, and goals in medical practice and medical literature, to formulate, present, and defend a particular position on a moral or policy issue in health care, to be able to communicate these ideas and conclusions effectively, to patients, patients' families, colleagues and other decision makers in society, both orally and in writing, and to reflect on the relationships in moral, professional, and legal obligations of physicians, including those involving honesty, and respect for patient well-being, autonomy, dignity and confidentiality (Department of Medical Humanities, n.d.).

Grading in these courses should be based on written and oral exams, class participation, short papers, and case presentations. Ethics learning among students occur passively, by apprenticeship mode of medical education. We can mention in the curriculum about the use

didactic lectures, small group discussions, standardized patients, ethics rounds etc. to improve students' learning. It is general consensus by most bio-ethicists that realistic case based discussions are the best methodology of imparting bioethics education (Christakis & Feudtner, 1993). Now-a-days, content of core competencies are developing as a part of the subject curriculum.

Teachers, who are in contact with medical students from pre-clinical days onwards, to the time of internships, electives and house jobs, impart their ethical views by creating an example, becoming a role model and by precept, but such passive learning by 'osmosis' is insufficient. Knowledge base must be imparted in order to enrich the student with in depth understanding of ethical judgments on clinical problems during the undergraduate years. The learning process continues even after graduation and it evolves with maturity and experience. The willingness of the teacher to debate and discuss ethical issues is very important for student learning (Bicknell, 1985).

Development of medical ethics education is spread over history (Goldie, 2000). The content of undergraduate medical ethics education is the area on which consensus develops easily, but selection and development of appropriate teaching and assessment methods are difficult areas. Barriers to the successful implementation of the core curriculum in medical ethics in Pakistan are; unavailability of appropriate resources and academic expertise, poor curriculum integration both horizontally as well as vertically and poor consolidation of learning, the choice and use of inappropriate assessment methods. One important aspect is the human resource for teaching and training in medical ethics. For this purpose research showed that an interdisciplinary group of teachers is much effective (Fox, Arnold & Brody, 1995). Variation in the content of teaching of medical ethics exists from institution to institution and region to region (DuBois & Burkemper, 2000). The need to have a uniform curriculum is growing very fast.

In Pakistan, medical ethics curriculum for undergraduates needs to be revised and rebuilt by developing frameworks for the change process and using them for successful implementation of the change. Content of core competencies can be developed by utilizing services of Ethicists and educationists or can be adopted from institutions serving in medical ethics. Frameworks showing curriculum change process are given as, Figure 1 and 2. These frameworks show the pathway towards change and the areas of change in medical ethics curriculum in Pakistan. Curriculum change is a dynamic process aimed at ensuring the relevance of learning (UNESCO, n.d.). Due to the changing demands of patients, practice, and society the Medical Education is continually facing problems in student learning especially in medical ethics. Reforms are required to bring a real productive change. Strategic management literature shows that content is one of the three elements essential for successful change, which are content, context, and the change process. The relationship between them is very important. (Savage, 2011).

In Canada, a shared curriculum framework was developed which support the design, delivery and evaluation of global health curriculum. (Redwood-Campbell, Pakes, Rouleau, MacDonald, Arya, Purkey, et al. 2011). The frameworks developed show the need for a context specific but unified core curriculum for the globe. There is growing demand of medical ethicists to teach. They will be best suited to teach medical students. They have first hand experience of common ethical issues and a good knowledge base of ethics, to be able

to deal with the real problems faced in the clinical environment by the students. The need for improving the medical ethics curriculum in Pakistani medical schools is unquestionable. Trained human resource is required, which can develop and implement a culturally and regionally relevant medical ethics curriculum at national level and get it included in medical education curriculum of Pakistan (Jafarey, 2003). Fostering, developing and managing curriculum change is dynamic process. Context specific instructional and assessment methodology shift is required.

A paper by Hyder, Merritt, Ali, Tran, Subramaniamb & Akhtar (2008) seeks to describe the ethics processes in play when public-health mechanisms are established in low- and middle-income countries. This shows the importance of ethics education for practitioners and at an institutional level. The assessment methodologies should be inline with the objectives of the program or the learning outcomes developed, primarily aimed at determining the quality of the students' ethics knowledge base. This paper by Mitchell, Myser & Kerridge, (1993) describes the strengths and limitations of a purely knowledge based method of evaluation and also the redefining the assessment in ethics. The term, 'clinical ethical competency' is used for the actual application of knowledge by the students in a controlled clinical context.

The framework for the change in curriculum is developed using the contextual information of Pakistani undergraduate medical education curriculum (Figure 1). Pakistan's cultural, religious, ethical, social, economic and geo-political context is unique, having its own ethical issues, taboos, myths, lifestyle and mind set. In such diverse situation; the need for context specific curriculum for medical ethics teaching and training of undergraduate medical students is of crucial importance. Written and hidden curriculum, both are important and must be addressed while implementing the ethics curriculum. The medical professional ethics also include the ethics while dealing with patients, their relatives and attendants, along with ethical issues in their professional relationship with their colleagues or the health care team members (including doctors, nurses, paramedics and support staff). The curriculum should address how to discuss and manage those issues? The other area in medical ethics is the health research ethics which need to be given much attention in this curriculum, as it has not been addressed formally for the undergraduates.

In the curricular change framework, health research ethics are incorporated, so the students are trained using real research studies in which they can identify major and minor ethical issues, address them and also understand the role of Institutional Review Boards and the need for their ethical clearance for protection of each and every human subject's right. They can get a better understanding of plagiarism and other ethical issues in research.

The framework also covers the ethics in Public Health, targeting individuals in families and communities. Ethical issues in Public Health practice are important to teach as the students are going to work at grass root level in primary health care centers, where they have to deal with real world ethical cases, issues and situations. Sound knowledge base along with training using ethical case studies can help improve the ethical practices of doctors.

The ethical principles are the foundation of a personality so the medical ethics teaching should start from first year, spreading up to final year and even more practical training for interns and post graduates. Development of curricular content in specific contextual environment is required. A range of instructional and appropriate assessment

methodologies should be given, so the universities can make their own choice; achieving maximum learning outcomes. The competencies must be developed in medical ethics and the disciplines involved in accomplishing the objectives of achieving these competencies must be clearly specified. Assessment should be scheduled throughout the five years study duration, which will make medical ethics a cross-cutting discipline. Ethicists or faculty trained in medical ethics should run the department of medical ethics and run the teaching programs.

Contextual Environment

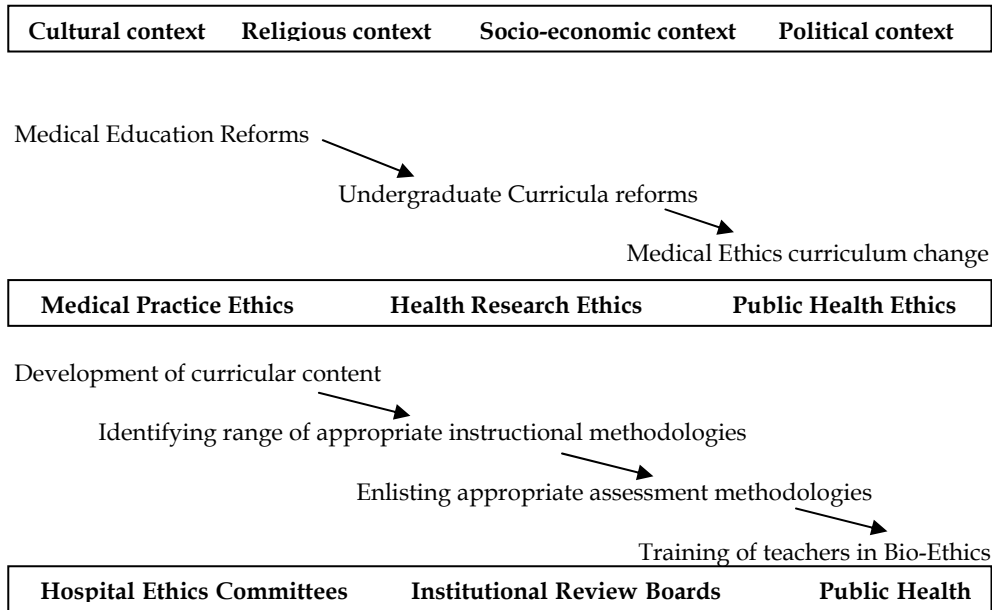


Fig. 1. Framework for Curricular change process

Curricular change will be more sustainable and productive if based on reforms in medical education, including more structured training in medical ethics throughout the medical training at undergraduate as well as post graduate levels. The change process will be slow and requiring more professional attitude of policy makers, medical educationists, ethicists and teachers. The ethics teaching starts from the cradle in form of moral values shapes under the influence of religion, culture, social, economic and political environment. The teachers play a very crucial role in teaching basic and professional ethics after parents. Teachers acting as mentors facilitate the learning of students by acting as role models for them.

Medical ethicists face more responsibility than other teachers to become mentors and developing their mentoring skills for improving and facilitating student learning in medical ethics. Teaching medical ethics is not to create Medical Ethicists but to equip the medical

doctors with competency to identify ethical issues and dilemmas which they can come across in their medical practice, perform ethical analysis and make judicious decisions; using the knowledge and experience gained from their training at undergraduate level.

Medical Education Curricular reforms for undergraduates will cover the area of medical ethics. The need for reforms can be assessed by reviewing the curriculum available and comparing it with the globally adapted curricula, the expected qualities of a medical graduate, through survey based assessment of the quality of ethics teaching in medical schools and students' satisfaction with the current teaching program on medical ethics. Reforms will bring uniformity in the curricula and their implementation and evaluation strategies in Pakistan. The Curricular change process will involve, specifying the areas of change, duration of change process, time frame for change, feed back on change, strategies for implementation of change and monitoring of change process in medical universities and schools. The principles for the change will be, the adult learning (Pedagogy), educational context and knowledge base. The change should be learner centered, integrated into other disciplines, competency based and assessment oriented.

The change process should be working strategically not randomly and under the umbrella of reforms. Curriculum is every thing we do and use of emerging technology, and diversity in it can make curricular change a continuous process. The entire curricular change will be meaningless without the feed back system, so it should be in-built. Informed decision making is essential for deciding reforms and implementing change. The depth, horizontal integration and vertical spreading of the curriculum need to be focused while developing it.

Figure 2, shows the framework for the implementation of curricular change. It explains the type of curriculum which could be used, the course for which it is applied, the areas covered, target population, disciplines involved, outcome desired/ qualities in a graduate, appropriate instructional methodologies and assessment of competencies and knowledge. The framework will help the medical educationists in curriculum planning and development in Pakistan's context.

The instructional methods used world over are tested and proven to be effective in promoting students' learning. Still more research is required on developing and testing instructional and assessment methodologies. Case scenarios and real case studies along with mock case discussions help a lot in students' learning. The students are made ethically sensitive, with motivation for solving ethical dilemmas. Their mind set is positively changed through mentorship for enhancing their skills and competencies for ethical analysis, reasoning and judicial judgments in real situations especially in doctor-patient and doctor-doctor relationships.

Teaching methods traditionally used for promoting ethical thinking and 'moral reasoning' for undergraduates and postgraduates have included lectures, ethics case conferences, discussions of films and other techniques (Strong, Connelly & Forrow, 1992). Many studies are available to share the experience of appropriate methodology use in medical ethics education. Small group discussions help the learning through detailed discussion on managing the ethical dilemma by facilitating the capabilities of students for ethical reasoning and analyzing the situation through empathy.

Curriculum	Target course	Ethics areas	Whom to deal with	Disciplines involved	Desired outcomes	Appropriate instructional methodology	Assessment of ethical knowledge and competence
Written curriculum	Under graduate medical students	-Professional Ethics/Medical Practice Ethics -Health Research Ethics	-Patients relatives -Health care team members (Doctors, nurses, paramedics) -Human subjects	Teaching and training by; -Forensic Medicine -Community Medicine -Behavioral sciences -Every clinical specialty involved	-Positive attitude -Effective communication -Empathy -Taking informed consent -Keeping confidentiality -Keeping privacy -Respect for patients' rights -Doing no harm -Working in interest of the subject/ patient -Doing fairness and equality (justice) -Truthfulness and honesty -Ability to conduct Ethical analysis of cases -Ability to give ethical reasoning.	-Assigning and discussing Case studies -Using Mock Case scenarios -Lectures -Seminars -Problem based learning	-Multiple choice questions -Ethical analysis and reasoning on given cases in oral examination -Objectively Structured Clinical Examination
Hidden curriculum		-Public Health Ethics	-Individuals in the families and communities				

Fig. 2. Frame work for curricular change implementation

In Pakistan's context, the curriculum used uniformly throughout the public and private sector medical education institutions, is given by PMDC which is responsible for laying down the guidelines for medical education and curricula development. Our misfortune is that our curricula are not flexible to adapt changes occurring globally. The change or review process is slow and leading to 'educational obsolescence'. We are not moving at the same pace as of the world renowned medical education institutions. Due to globalization it is dire need of today, that Pakistan make medical education reforms and use more comprehensive, integrated and learner centered curricula and implement it throughout the medical institutions.

A high degree of faculty motivation is required and must be achieved before initiating the curricular change process. The motivated faculty will participate in informed decision making, for the curricular change process; in addition, they will enable transition from the current curriculum to the integrated, learner centered curriculum much smooth and easier during the implementation process. Faculty training is very essential in Pakistan's context. The in-service training of faculty about the changing demands of undergraduate medical education in the field of bioethics is essential.

Bioethics education has gained its importance in Pakistan. A large number of organizations are working for it, at postgraduate level and for practicing health care providers, including doctors, nurses, paramedics etc. Many organizations are providing recognized training in Bioethics. At the undergraduate level as PMDC is the only authority to develop curricula so what ever is given in it is implemented with exceptions in few medical teaching institute in private sector. It is a tedious process but if we start right now, we can enter the main stream of changing medical education trends. The political will and commitment at national level will be the determining and driving force for curricular reforms in medical education. This will bring our graduates at power with the developed world professionals.

The summary of all the discussions done in this chapter, by using the document review technique, in-depth interviews, literature review and author's analysis; highlights the need for curricular change in the field of medical ethics. The proposed frameworks show, the areas in medical ethics curriculum that need context specific change and modification, using state of the art methodologies.

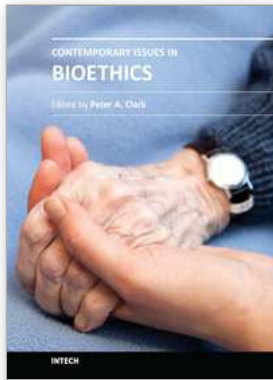
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