



Teaching bioethics to medical technology students in Pakistan

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Abstract

Incorporating ethics education in curriculum of medical technology students and highlighting the importance of teaching the subject to this particular population in this part of world are our aims. At SIUT we have a school with name of "Zain ul Abidin" school of Biomedical Technology, which is supposed to award B.S. degree in 5 sub-specialties that is hemodialysis, radiology, laboratory sciences, operation theater technology and intensive care technology. This school is affiliated by Karachi University. The students entering in school have done fellow in science (F.Sc.) with pre-medical group, thus have background knowledge of biology, physics, chemistry, languages, religion and Pakistan studies.

Here for B.S. included in their curriculum are the subjects of anatomy, physiology, biochemistry, microbiology, pharmacology, pathology, Islamiat and English for all and then related sub-specialty topics to each group for example student in hemodialysis group more exposed to nephrology topics etc.

I planned to add ethics with subjects, which are common to all specialties and designed curriculum. Curriculum was approved (after minor changes), from Karachi University and I started teaching ethics to these students. This paper highlights methods and tools of teaching and evaluation and results observed. This will be the first examination in bioethics from medical technologists, at university level in the history of country.

This is a great achievement in country to start teaching bioethics to medical technologists. Karachi University has implemented the same curriculum to other medical technology schools affiliated with University.

Keywords: *Bioethics, Curriculum, Medical technology, Pakistan.*

Introduction

Bioethics includes ethical issues related to all branches of knowledge. It has been defined as Love of Life by some (1). It has evolved over last four decades, predominantly in western world and then spreading its web worldwide. In Pakistan, it took off from Agha Khan Medical University in 1997

but remained confined to a group of people. Later in 2004, a center was established with name of Center of Biomedical Ethics and Culture (CBEC) (2). This center is based in Sindh Institute of Urology and Transplantation (SIUT), which is a large institution providing wide variety of urology, nephrology and renal transplant services. SIUT is largest public hospital doing live related donor

renal transplants, this institution runs largest hemodialysis center of Asia. Besides clinical services, this institution has a school of nursing, a school of medical technology and postgraduate programs for doctors. All facilities at this institution provided free of cost.

The Medical Technology School, Zain ul Abiden (ZA) School of Medical Technology, is named after a senior (late) operation theater technologist and is registered with largest university in town, the Karachi University. This school awards degree of BS in five specialties that include Hemodialysis, Operation Theater, Clinical Laboratory, Clinical Radiology and Intensive Care Technology.

CBEC after its emergence started a Post Graduate Diploma (PGD) Program in Biomedical Ethics and registered the first group in January 2006, with the diplomas awarded by Karachi University. PGD is of one-year duration and to get the diploma as part of the final examination, every student must develop and present an "ethics project" to class and examiners, which he/she must initiate in the parent institution. As a PGD holder of the first batch, I chose to design and implement a bioethics curriculum for medical technology students of the ZA School. This paper is an account of my experience of designing and then teaching this curriculum to this particular group of students. So far, I have finished with one batch; these students will be appearing in university exam for bioethics next month (June 2009).

Bioethics and the need for teaching it to medical technology students

As these students deal with human subjects and body fluids on day-to-day basis, it is of immense importance to educate them on ethical issues within our own cultural and religious environment.

There are many tools for decision-making, but few guides to indicate when situations might have an ethical implication. Yet this awareness is a crucial first step before decisions are made. Recognizing the moral context of a situation must precede any attempt to resolve it. Ethical dilemmas rarely present themselves as such. They usually pass us by before we know it.

There are no absolute rules or values for teaching bioethics; these are more like a rough measurement where an exact one is not possible. They often conflict with each other in practice, and some will rank above others under certain circumstances. However, there are certain principles that need to be considered which appear constant.

These principles are compatible with the argument that we should simply follow our intuition and rely on the 'inner voice'. However,

that voice is not always audible, and today's society presents a wide range of complex circumstances that require more guidance than simply 'concern for others' or 'does it feel right?'

Personal ethics might also be called morality, since it reflects general expectations of any person in any society, acting in any capacity. It includes the principles we try to instill in our younger generation, and expect of one another without needing to articulate the expectation or formalize it in any way. Principles like concern for well-being of others, respect for the autonomy of others, trustworthiness and honesty, basic justice, being fair, refusing to take unfair advantage, doing good and preventing harm to others.

Individuals acting in a professional capacity take on an additional burden of ethical responsibility. For example, professional associations have codes of ethics that prescribe required behavior within the context of a professional practice. These written codes provide rules of conduct and standards of behavior based on the principles of Professional Ethics, which include impartiality, confidentiality and disclosure issues, duty of care and avoiding potential conflict of interest.

Even when not written into a code (which is true so far for medical technologists), principles of professional ethics are usually expected of people in health care profession, of which medical technologist is a part.

Each of us influences the world by simply existing; and it is always wise to 'think globally'. Can a person, nation or institution truly be 'successful' while causing human suffering? A more modern and complete model of success should also consider impact on humanity.

Contents of curriculum and teaching tools

The Karachi University allocates one semester time, at level of 3rd year, to teach bioethics to technologists. One semester has a spread of 4 months, which was divided in 16 sessions of one hour each.

I conducted an extensive search on internet before designing curriculum and a few useful sites were found (3-7). The curriculum then designed was divided in 4 disciplines, which included: introduction to philosophy, introduction to great religions of world, introduction to literature (English and Urdu), and introduction to contemporary bioethics.

During the session on introduction to philosophy, I introduced the students to ancient philosophers like Socrates, Aristotle and Plato, and emphasized the theory of "Golden Means" from Aristotle. From modern philosophers I selected to introduce them to Karl Marx, Bertrand Russell and Rabindranath Tagore (selected poem-"where the

mind is without fear..."). Among Muslim philosophers, I selected to introduce them to Al-Ghazali, Allama Iqbal, Moulana Jalal uddin Rumi and Dr. Ali Shariati.

In the session on introduction to religion, I introduced the students to Judaism, Christianity, Islam, Hinduism, Sikhism and Buddhism. I discussed different scenarios where health care providers can be held back from taking right decisions (in benefit of patient) due to patient's religious beliefs.

For the session in literature, students were given the task to select poetry, short stories, news items and articles addressing ethical issues. These selected pieces of literature were then discussed among large group of class.

The contents of contemporary bioethics taught to these students covered issues in the emergency room, Operation Theater, Radiology Department, Intensive Care Department and hemodialysis. These included:

- Introduction to the importance, contents and process of taking informed consent
- Physician and pharmaceutical interactions – where to draw a line
- Ethical issues in clinical trials
- Patient's rights and health care workers rights/ obligations
- Issues of privacy and confidentiality
- Issues related to transplantation
- Issues related to contraception and abortion
- Ethics of dealing with psychiatric patients
- End of life issues

Most of topics were covered during lectures, while for some role-plays were designed and some were addressed through movie clips. Other PGD alumni colleagues helped me in teaching this extensive curriculum over a semester.

Evaluation

The students were evaluated at midterm with examination held at institutional level, whereas their final exam will be taken at Karachi University. The format of paper includes multiple-choice questions, scenario based problem solving

and open ended questions. This will be the first time in the history of country that bioethics will be included in exam for medical technology students at university level. Students have performed exceptionally well during the midterm exam considering that this was the first opportunity they have ever had of exposure to bioethics. They come up with ideas and arguments with open-ended questions and majority of them recognized major issues in scenario based.

For example they were given a scenario "You are responsible for purchasing syringes for a hospital. Three companies manufacture equally good quality syringes. The owner of one of these companies offers to pay you Rs.10 per packet if this company gets the contract. What is the ethical issue involved in this case? Explain why would you accept or decline the offer?"

One student writes "ethical issue involved here is conflict of interest, as primary interest here is purchasing good quality syringes for the hospital, which can be unduly influenced by secondary interest of getting benefit of ten rupee. In favor of accepting this offer student writes that as all three companies are making equally good quality syringes, thus without harming the patient, benefit for individual or for institution can be achieved. Whereas, as argument for declining the offer this student writes there is kind of bribery involved here, the company which is providing a monetary favor may ask or expect some other favor, and then institution has trusted this person for purchase which will be shaken."

Conclusion

It is important to understand that the framework of this curriculum was intended to be acceptable to school administration and university and with minor modification; the framework has so far stood the test. As this was not only taught at this school but also provided by Karachi University to be included in curriculum for another medical technology school which is associated with another medical college and hospital in city. At this stage I can say "I can see the light at the end of the Road".

References

1. Macer DR. Moral Games for Teaching Bioethics. Haifa: UNESCO Chair in Bioethics; 2008.
2. Moazam F, Jafarey AM. Pakistan and biomedical ethics: report from a Muslim country. *Camb Q Health Ethics* 2005; 14(3): 249-55.
3. Anonymous. Curriculum initiatives: Bentley. www.bentley.edu/teaching-learning/curriculum (accessed on 29sept 2006)
4. Anonymous. Carlson School of Management, University of Minnesota, Medical Industry Curriculum. www.csom.umn.edu (accessed on 29Sept 2006)
5. Anonymous. Curriculum Integration Lessons. www.cnets.iste.org/student/sintegration.html (accessed on 29 Sept 2006)
6. Anonymous. Jacksonville, University of Florida, School of Medical Technology, Clinical Curriculum. <http://jax.shands.org/education/medtech/> (accessed on 29 Sept 2006)
7. Anonymous. Austin's Atheism Blog, Why Beliefs Matter. <http://atheism.about.com/library>(accessed on 5May 2009)