

## Short Communication

# Bioethics Training: Report on the Experience of a Medical Bioethics' Scholar in a Tertiary Referral Hospital in a Low- and Middle-Income Country

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### ABSTRACT

Skills in biomedical ethics are limited in the African health care systems. This significantly affects the bioethics discourse in the medical practice. The main reason for the paucity in knowledge and skills in bioethics is minimal or no training at all imparted to healthcare professionals. Where there is training, it is not well-structured like other courses in the training institutions. This report summarizes the status of bioethics training and outlines the implementation, processes, outcome and future outlook of a bioethics teaching project for masters in medicine residents (students) in a tertiary referral hospital in Africa. This project was part of postgraduate studies in biomedical ethics by a practicing physician. It entailed teaching bioethics to first year master's in medicine residents (students). The teachings occurred in the author's affiliated institution monthly for six-months. The topics covered were: general introduction to bioethics, ethical issues at end-of-life (EoL), informed consent, basics of research ethics, plagiarism and doctor-pharma interaction. These topics were selected due to their relevance to the residents in their practice and because they needed to undertake research studies to graduate from the masters training program. In addition, these basic bioethics training provided the residents with the foundation to develop knowledge geared towards improving skills in analyzing diverse areas in the contemporary bioethics' environment such as end-of-life care (EoLC), human research ethics, doctor-pharmaceutical relationships while looking at them within the context of political, cultural, socio-economic, and environmental determinants.

### Keywords

Bioethics; Training; Kenya; Africa.

### INTRODUCTION

The discourse of bioethics as a branch of philosophy dates to the beginning of western philosophy in the 6<sup>th</sup> century Before Christ (BC) in ancient Greece. However, it is Hippocrates who introduced the Hippocratic Oath in 400 BC as a code of ethics in the medical profession arguing that doctors needed not just to have knowledge about their craft but also needed to have that knowledge guided by ethical principles. After all, anyone who has the power to heal also has the power to inflict harm.<sup>1</sup>

Thus, was born the still influential Hippocratic Oath and at the same time, the field of bioethics. However, contemporary bioethics was born out of atrocities committed during human experimentation by those with authority or power against the minorities in the society. There was the abuse by German Physicians of

Jews during World War II and after the war, the doctors were tried, and the Nuremberg Code formulated. It was a ten points code of ethics outlining the rights of research subjects.<sup>2</sup>

During the trial, Justice Robert Jackson so eloquently declared:

*"The wrongs which we seek to condemn and punish have been so calculated, so malignant, and so devastating, that civilization cannot tolerate their being ignored, because it cannot survive their being repeated".<sup>3</sup>*

Ethical approach to patients become even more challenging to practitioners in a teaching hospital where patients serve as participants in research activities and their doctors are the researchers in these endeavors. As these interactions change from time-to-time clinical to research, it is imperative that doctors understand the various ethical issues that might arise and therefore

put mitigation measures in place.

In addition, as medicine become more and more technologized and death extremely medicalized, doctors need to understand their biases and limitations and make ethical and justifiable decisions on what interventions suit each given patient. This is more so at end-of-life (EoL). Thus, one of the main aspects of knowledge that healthcare professional must have in order to make patient-oriented decisions and thus provide patient centered care is bioethics.<sup>4</sup> This requires formal training.

Formal training in bioethics commenced a few decades ago and globally, bioethics training programs have grown since the trainings were introduced in the United States (US) in the 1970s. Medical schools in the US are required to include bioethics in their curricula in order to be accredited. Other countries have followed suit with bioethics teaching being offered in the undergraduate, postgraduate and specialized clinical settings. Though this is the case in most developed countries, it is not the same in developing countries.<sup>5</sup>

### Bioethics Training in Africa

There is paucity of bioethics training and experience in Africa. The current model of interactions between doctors and patients is strongly guided by the principles of medical ethics. However, the knowledge and skills on how to implement the same given a particular patient's situation are limited. As patients and families become more aware of their rights and obligations, well thought out ethical approach to their care is critical. Understanding how well to interact with the patient given their particular context is important. Most bioethics trainings in Africa are supported by the Fogarty Bioethics Training Programs (FBTPs) that has involved individuals from across the continent. The FBTPs aims at research ethics trainings.<sup>6</sup> Apart from a few universities in East and Southern Africa, there is no formal ethics education in most of Africa's medical schools.<sup>7</sup> Apart from South Africa, most countries lack the required bioethics work force to conduct trainings in medical schools.<sup>8</sup>

### Bioethics Training in East Africa

Makerere University in Uganda offers a Master of Health Sciences in Bioethics (MHSc Bioethics) degree. The International Health Research Ethics Training (IHRET) program at Makerere University College of Health Sciences offers Masters, Post-Graduate Diplomas and certificates in research ethics.<sup>9</sup> In Tanzania, the Muhimbili University of Health and Allied Sciences (MUHAS) offers bioethics courses to undergraduate and postgraduate students. These are cross-cutting core courses coordinated by the Department of Bioethics and Health Professionalism in the University. On top of this, MUHAS offers training in Masters of Bioethics (MBE), which is a four-semester program.<sup>10</sup>

### Bioethics Training in Kenya

The Kenya Medical Research Institute (KEMRI) conducts certificate trainings in bioethics (clinical and research) and will soon be

introducing a Postgraduate Diploma in Bioethics program with the aim of eventually offering a Masters in Bioethics (MBE) Course. This is in partnership with the Centre of Bioethics and Culture (CBEC) at Sindh Institute of Urological Transplantation (SIUT) in Karachi.<sup>11,12</sup> The MOI University in Eldoret offers certificates in bioethics training and a master's in international research Ethics.<sup>13</sup> Kabarak University in the Rift Valley region in partnership with Trinity International University has introduced a Masters in Bioethics training in the country.<sup>14</sup>

### Status of Bioethics discourse at Aga Khan University Hospital, Nairobi, Kenya

In this section, Aga Khan University Hospital, Nairobi (AKUHN) is introduced as a teaching institution, the ethics committees at AKUHN are described and the bioethics training offered before this project outlined.

### The Institution

The Aga Khan Hospital, Nairobi, Kenya was established in 1958 and was accredited, to train doctors, by the Kenya Commission for University Education (CUE) in 2002. In 2005, it was designated AKUHN a tertiary referral and teaching hospital serving the East African region. It was accredited by the Joint Commission International (JCI) in 2013 and re-accredited in 2016 and again in 2019. It has a capacity of 280 beds and runs more than 20 specialized clinics. The university arm of the hospital is headed by a dean under whom the postgraduate Medical Education (PGME) department falls. The PGME is headed by a director and decides on the content of trainings in the University. It is this department, which was instrumental in implementing the bioethics training project described in this writeup.

AKUHN trains residents in 7 distinct fields: internal medicine, family medicine, surgery, pediatrics, obstetrics and gynecology, pathology and radiology. The residency training is over 4 calendar years for completion after which the resident is awarded a master's in medicine (MMED) degree by the Aga Khan University. The academic year commences in January and there are 20-25 students per intake across the disciplines. The target trainees for the biomedical course were all the residents at AKUHN who were in their first year of study in 2019. In year 1 and 3 of the 4 years master's program, the residents sit for Observed Structured Clinical Examinations (OSCE). The OSCE is aimed at evaluating critical areas in the residents 'interaction with patients such as establishing rapport, communication and approach to ethical dilemmas and common ethical issues in health care provision.

### Ethics Committees

AKUHN has two ethics committees: Research Ethics Committee (REC) and the Hospital Ethics Committee (HEC). The former ensures that research in the institution or in which the institution's personnel are collaborating meets set out standards. The HEC is charged with clinical ethical cases review, education of the hospital staff, patients and families, and the community on aspects of clinical ethical issues and in assisting the hospital in reviewing and for-

mulating policies that meet ethical standards in patient care. Each of these committee comprise of 12 members.

### Ethics Training

In the first year of postgraduate studies, the residents from the various programs listed above were trained on the principles of medical ethics. A facilitator met the residents in an initial contact lecture in the month of March where course outline and objectives were discussed. The introductory lecture took 3-hours in a didactic model. Afterwards, the training was through Moodle, an online platform where residents read on various topics and were expected to complete this process by February of the following year.

The residents also completed the Collaborative Institutional Training Initiative (CITI) online course. It is notable that the ethics training was not given enough attention like other modules. All other teaching modules had regular facilitator-student interaction with student presentations as well as didactic lectures. There were regular Continuous Assessment Tests (CATs) in other modules but not in the ethics training.

The writer was a scholar at the Centre of Biomedical Ethics and Culture, SIUT, Sindh Institute of Medical Sciences (SIMS) where he studied a Postgraduate Diploma in Biomedical Ethics. One of the requirements for qualification was a teaching project in the scholar's affiliated institution.

### METHODOLOGY

Evaluation forms completed by the residents at the start and end of the academic year were compared. The attendance sheets completed during every session were reviewed for number of attendees.

### Objectives of the Project

- To make first year residents aware of the discipline of bioethics

- To raise awareness about a doctor's ethical duty and role
- To introduce the basic concepts of research ethics
- To introduce the basics of clinical ethics

### Course and Training Methodology

The identified residents attended all the sessions. The project covered the following six topics (Table 1), which ran in the outlined order. Each session lasted two hours on the first Wednesday of every month. The teaching methodologies varied per topic and included video vignettes, didactic lectures, role play, case summaries and group discussions. The Table 1 outline the 6 sessions, the concepts covered, and the specific methodologies used.

### RESULT

All the 25 residents attended all classes. By the time of completing the project there was noted interest in bioethics as a field of study and 2 residents chose dissertation topics from cases discussed during the training. There was improved performance on the common OSCE examination comparing the performance in 2018 and 2019. Evaluation done before and after the training showed improvement of self-reported confidence among the residents.

Residents were asked how confident they were at performing/understanding the following critical skills as they pursued their residency training: communication, breaking bad news, taking informed consent either for research or health care, and knowledge on plagiarism. Confidence was recorded on a 4-point Likert scale as follows: 1= very confident 2= fairly confident; 3= not confident; and 4= cannot perform. At the start of the trainings, only 20% (5/25) of the residents scored 1 or 2 of all the 4 assessed skills. However, at the end of the 6<sup>th</sup> session of the project, 100% (25/25) of the residents scored all the 4 skills at 1 or 2.

### Lessons Learned

Several lessons were learned throughout the journey of this train-

**Table 1.** Session Titles, Concepts for the Sessions and Methodologies Used During the Teaching

Session	Concepts	Teaching Methodology
General introduction to bio-ethics	Morality, ethics, bioethics, ethical dilemma Important historical events Contemporary bioethics and modern challenges	CBEC video: "Walking a tight rope" PowerPoint presentation
Ethical issues at end-of-life	Palliative and end of life care Advance directives and Do not resuscitate (DNR) Decision making process at end of life and futile care	CBEC video: "More than meets the eye" Case discussion and summary of the concepts
Informed consent	Informed consent definition Process of informed consent Full disclosure Adequate comprehension Voluntary participation	CBEC Video- "Sounds of Silence" PowerPoint presentation summarizing the concepts
Basics of research ethics	Human research Vulnerable populations Ethical approval process	CBEC Video: "Testing times" Power point presentation
Plagiarism	Principles of scientific writing How to avoid plagiarism Types of authorship	CBEC video: "Publish or Perish" Didactic summary
Doctor-pharma interaction	Conflict of interest Therapeutic misconception	CBEC video: "A matter of Trust Debate session on doctor pharma interaction". Group A supported while B opposed

ing project. The author realized the glaring gap of knowledge and skills on the bioethics by our trainees. The author did pick the paucity of teachings on issues on bioethics both in undergraduate and postgraduate medical trainings. The lack of resources as an enabler of changed attitude and understanding of bioethics by residents was also noted. Lack of capacity with limited faculty trained in bioethics was noted as a significant contributor to the overall poor scope of bioethics teachings.

However, these gaps were associated with great interest in bioethics by residents based on the questions they asked and the discussions that emanated from these trainings. As mentioned earlier, some residents from this group picked a bioethics related field as their master's in medicine dissertation-assent as part of the consenting process in the pediatric population and another one the concept of advance directives as a critical bioethics issue in medical practice. There was significant institutional support as time was spared for the residents to attend these teaching throughout the 6-months.

## OUTCOME AND RECOMMENDATION

A critical outcome of these teachings was improved Observed Structured Common Clinical examinations (OSCE) performance with all residents passing all the examining stations. The OSCEs had bioethics questions which previously were not well-performed. The topics covered during this project were incorporated into the curriculum for master's in medicine students and are examinable and mandatory for residents in years 1 and 3 of their studies. The OSCE component of residency examination was expanded. Each topic was expanded to take 4-hours and one topic is covered every month in an afternoon and some take home activities given to the residents.

The institution of affiliation allowed the writer to commence his Masters in Bioethics training to not only improve capacity for training the residents in the institution but also to teach other hospital staff on the various aspects of bioethics.

Further, on top of training the residents in medical ethics, the program has been expanded to include skills in medical humanism and professionalism-putting patients (human beings) at the center of focus as health care is provided. This is aimed at developing all rounded doctors to be prepared to achieve the general competencies expected not only in their residency education but also in the prime ethos of doctor-patient relationship.

## OUTLOOK

The teaching of bioethics was almost completely absent, but this is an encouraging step towards improving the bioethics discourse. Although the listed bioethics topics have been fully incorporated into the mainstream curriculum at AKUHN, there is great room for great improvement in bioethics training given the interest shown coupled with the institutional support. We hope this work provides insight on the effects of investment in capacity development in bioethics not only at AKUHN but also in other medical institutions in Kenya. It is recommended that this model of teaching

bioethics be used in nursing and health auxiliary training institutions. Through this training project, the incorporation of the same in the curriculum, there will be an improved capacity of physicians interested in bioethics teaching who will become influencers of those behind them. Further, those trained in this course are being encouraged to be members of the ethics committees and further their education in bioethics. Eventually, it is expected that there will be improved ethical approach to care for patients and as Doukas et al<sup>15</sup> reported in 2010, the value of bioethics training in medical education is critical for as the physician is trained as a scientist so should he be trained to master humanistic skills through bioethics training which is essential for a professional physician. It is important that ethical evaluation for the care provided to a patient is carried out with the social context in mind. This was evident in this project when the given cases during discussions had multiple confounding factors which were based on the socio-cultural contexts as the residents understood them.

It will be critical to evaluate the educational goals and objectives, teaching methodologies and assessment strategies of this new module which encompassed the topics covered in this project. Critical analysis of the course structure, faculty development and engagement will also identify gaps and therefore improvement strategies. This could also form the basis for an agenda for future research projects.

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