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## Bioethics in the medical curriculum in Africa

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### Summary

Many new innovations and advances are introduced into life and the sciences at a pace faster than any single individual can keep up with but human beings adjust to these changes at a much slower pace. Development is at snail speed in many developing countries and supersonic in the developed world and yet these have to interrelate. The introduction of medical technology and advances into developing countries is sometimes done haphazardly and often without prior appropriate education and decision making process. This has the potential to create dilemmas among stakeholders and engender conflicts with culture, religion and societal norms. A good grounding in the study of bioethical principles and theories is relevant to addressing current and evolving issues with changing biotechnology and shifting landmarks in today's highly technical clinical medicine. The knowledge and utilization of these principles should limit the occurrence of many scandals in the form and magnitude already recorded in the history of biomedical research and practice. While the debate as to whether ethics can be taught will continue, bioethics education provides the requisite knowledge and skill that are applicable at the bedside and in biomedical research. Some evidence has shown that formal teaching of ethics impacts positively on physicians and medical students' attitudes in the care of patients. In this paper we propose that bioethics as a distinct course should be incorporated into medical curriculum in Africa. The integration of bioethics as a required subject in the medical curriculum would have a positive impact on all aspects of health care and research. Real or assumed obstacles are not justifiable reasons for further delay in implementing this initiative

### Résumé

Des nouvelles innovations et avancées sont introduit dans la vie et la science une vitesse qu'aucun individu ne peut attendre mais les etres humains s'ajustent progressivement a ces changements. Le développement est a la vitesse d'escargot dans plusieurs pays sous développés et supersonique dans les pays développés et ceux ci doivent s'interchanger. L'introduction des nouvelles technologies médicales dans les pays sous développés sont parfois fait sans ordre, souvent sans éducation appropriée et sans processus dans la prise des décisions. Ceci peut créer un dilemme entre les groupes et engendrer les conflits avec la culture, religion et les normes sociétales. Une bonne compréhension des théories et principes bioéthiques est importante pour adresser ces issues face aux changements biotechnologiques et aux avancées des techniques en médecine clinique. La connaissance et l'utilisation de ces principes devraient limités l'occurrence de plusieurs scandales sur la forme et la magnitude déjà rapporte dans l'histoire de la recherche et pratique biomédicale. Bien que le débat si l'éthique enseigné continuera, l'éducation bioéthique apporte une connaissance et des principes/techniques de base qui sont fondamentales et applicables en clinique et en recherches biomédicales. Certaines évidences ont montrées un impact positif de l'enseignement formel de l'éthique sur les attitudes des médecins et les étudiants en médecine dans les soins des patients. Dans ce papier, nous proposons que la bioéthique comme une matière distincte soit incorporée dans le curriculum médical en Afrique. L'intégration de la bioéthique dans le curriculum médicale comme une matière obligatoire aura un effet positif sur tous aspects des soins de santé et de la recherche. Les obstacles réels ne sont pas des raisons justifiables pour retarder l'implementation de cette initiative.

**Keywords:** *Bioethics, medical curriculum, Africa*

### Introduction

In the past decade in Africa, research ethics workshops and conferences have sensitized African clinicians and researchers to ethical issues in biomedical research and clinical practice. The desire by clinicians and researchers for such workshops and their attendance when organized indirectly emphasize the need for an overarching bioethics education for

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present and future African biomedical professionals. While such workshops continue to promote ethics awareness and provide short-term support for meeting present needs, formal bioethics education in medical schools is a long-term solution to address the increasing and diverse ethical and social-cultural issues of medical practice and research in Africa.

The core faculty at some of the early workshops was drawn mainly from outside Africa and tried to adapt the western tradition to African values and norms. Though foreign to African cultures and traditions, the trainers presented bioethics to Africans using the western construct of bioethical principles. Notwithstanding the universal applicability of ethical principles, regard to local norms and values should be taken into consideration in the interpretation and application of these principles. African scholars with interest and/or training in bioethics are well suited for such integration, and in any case, would be the operators of whatever decisions and guidelines are set forth. It is time for all African universities to embark on comprehensive ethics teaching programmes as is done in many western countries and some Southern African medical schools. This perhaps, is one way forward to enhancing ethically sound biomedical practice and research in Africa.

A similar call has been made in the past for undergraduate bioethics programmes in African medical schools [1,2,3,4]. The present effort becomes more imperative in the absence of any visible evidence that bioethics or medical ethics is taught formally in many medical schools in Africa. An internet search using Microsoft internet explorer Google search engine for bioethics or medical ethics curriculum in African universities returned scanty information which came mainly from South Africa. Moreover, a survey of final year medical students of College of Medicine, University of Ibadan, Nigeria was recently conducted to assess the status of medical ethics in their training and their opinions about formal introduction of bioethics in the medical curriculum. A preliminary analysis of the completed questionnaires revealed that most students thought that they did not receive adequate instructions in ethics though they had come across ethical issues for which they were ill-prepared. They reckoned that a few hours of lecture on human values and professional etiquette which they received influenced their moral reasoning. They were of the opinion that their training was incomplete without formal instructions in medical ethics and recommended incorporation of bioethics in their curriculum.

Underlying this proposal is the notion that the knowledge and utilization of bioethics principles contribute to high quality patient care and professional behaviour, and that the cognitive knowledge of ethics would allow medical trainees and other health care providers become better practitioners. No doubt, ethics is better taught and retained when students are still impressionable and malleable. Moreover, ethics is better incorporated into practice when it is taught, learned and evaluated along with the general medical knowledge. The goal of this proposal, therefore, is to reinforce the need and the call to incorporate bioethical concerns and issues into all phases of the education of medical students with a view to making them become ethically knowledgeable practitioners. Thus, such programme should focus on cognitive skills, behavioural skills and character development. This should provide them with the knowledge, skills and attitudes required to be able to make ethically informed decisions during and after medical training. Moreover it is aimed at preparing the students to reflect on and understand their own values and beliefs about ethics in the light of challenging and opposing values and beliefs.

#### **Rationale for bioethics in medical curriculum in Africa**

##### *Ethical challenges of societal changes and technological development*

In African countries, especially where there is reasonable political stability, significant technological progress is being made and the societies are becoming better informed. The increasing availability of internet connectivity in many towns and communities exposes individuals to developments outside of their own domains. Even in countries that are far from being described as politically stable, people are abreast with developments in other societies and the demand for certain rights and breakthroughs are not unusual. Traditionally held values are being scrutinized in the light of increasing knowledge and developments in other parts of the globe. Medical practices such as organ transplantation, assisted human reproduction and genetic tests are now a growing challenge in many African countries. These and other medical breakthroughs provide new choices and create diverse moral and ethical concerns. The present medical graduates are ill-equipped to face the ethical challenges posed by these developments. There is a need to establish bioethics programmes that are aimed at developing skills in ethical reasoning, improvement in medical decision making, easier recognition of ethical issues in day-to-day practice and

in handling dilemmas that are encountered in practice while in training and afterwards.

#### *A process towards professionalism and control of medical malpractice*

Though medicine is based on empirical and scientific principles, doctor-patient relationship and the practice of medicine is profoundly a human endeavour. Medical decisions have both technical and moral components [5]. Patients' views and perceptions on illness and treatment, often irrational to physicians and students have a bearing on their outcome. The technical component of medical decision making should be as correct as it is morally defensible and formal ethics teaching aims at equipping students with a common framework on which to reconcile patients' medical needs and values [6]. Hitherto, the undergraduate medical curriculum has given well-deserved prominence and importance to the technical aspect of the science of medicine leaving the student to develop his or her moral attitudes passively through observation, indirect mentoring and intuition. Through education and discussion, bioethics should impact on moral attitudes and behaviour. Critical thinking skills and analytical techniques from the humanities are known to help physicians and future physicians understand the implications and context of their actions. The health care provider is seen as a friend in deed who is available to provide care and alleviate suffering, and is, as such, given implicit trust. However, because of the low literacy level in many African countries, especially among rural dwellers, and the apparent ignorance about personal rights, some health workers betray people's trust and perpetrate practices that are unethical and sometimes illegal. When the people are unaware of their rights or are too trusting, coupled with the fact that most Africans are adherents of one religion or the other which subscribes to the idea that whatever happens is divine wish, many of these practices and their perpetrators are often difficult to track. This makes it difficult for regulatory bodies to bring them under check. Bioethics may not be the only solution to curb all of those excesses, and, in fact is not all about addressing these political and economic imbalances; however it remains all we have got for now and could be a positive step towards highlighting, addressing and curtailing such practices. Introduction of medical humanities and ethics can provide insight into such concepts as professionalism, communication, empathy and a critical evaluation of biomedical research and policy.

#### *Requirement for externally funded biomedical research*

Developing countries urgently need research to help address the enormous burden of disease that they carry [7]. There is the need for external resources as local funding (where and when available) would not suffice for such projects and for the necessary infrastructure. Compliance with the ethics of biomedical research is now a pre-requisite for researchers to receive funding from the west. Research ethics committees are being established in major hospitals and research institutes all over Africa. Formal teaching of ethics lays the background for inter-disciplinary collaboration often needed for result-oriented biomedical research. It is logical that the local medical scientists and clinicians, who will be required to formulate research protocols, sit on ethics committees and conduct biomedical research in the near future, be given necessary bioethics training while in the medical school. Such training would, in addition, equip them with the moral framework that would position them to be able to resist unethical external influences no matter how enticing the inducement.

#### **Opposition to bioethics in medical curriculum in Africa**

##### *Doesn't bioethics serve a western colonialist agenda?*

One persuasive argument against teaching of bioethics is that bioethics is a western creation, the pursuit of which is to advance bioethics colonialism. Globalization of bioethics is seen as nothing more than an attempt to further westernize the world and carry out a western research agenda in developing countries. It is also seen as programmed to accustom health care professionals, who influx to the west, to the ethical peculiarities of the western health care systems. Indeed, bioethics in its present form is rooted in western culture and the tempo and the content of bioethics discourse are largely influenced by the technological creations of the developed world [4]. However, ethics is not exclusively the domain of the west. Core ethical values are essentially the same for all human communities barring each community's customs and preferences [8]. What is required of communities is for each society to identify and articulate its norms and values and make them and the ensuing challenges available, amenable and responsive to scientific developments and the scrutiny of the global community. This process is scholarly

and requires deliberate efforts and commitments of the community's intelligentsia.

Though bioethics as a discipline originated in the west, unethical practices are not limited to the west whether in the past or in the present [9,10,11]. Ethics spotlights on past and present activities of other societies might reveal worse events and behaviours than have been recorded in the history of medical research and practice in the west. It can be arguably stated that even the west got their moral and ethics reasoning from the Middle East. The majority of health and moral laws are based on or are outgrowths from the major religions of the world and they are known to have their cradle in the Middle East. The developments in the western health care system call for nations that have adopted the same system to critically re-assess its usefulness and initiate processes that could enhance better health care delivery to their people.

#### *What is new about Bioethics anyway?*

Another argument is that bioethics as a separate course is not necessary since ethics is already being taught to medical students, though in an informal and less structured way. While this is true, the call of this paper is for an organized and expanded curriculum that has relevance and impact at the bedside, the benchside and beyond. Beyond the micro-ethical issues arising from the interaction between the physician and his patient, bioethics encompasses broader issues of health care policy, health economics, resource allocation, intra- and extra-organizational networks and medico-legal concerns among others. Those activities and decisions that occur at macro levels have far-reaching effects that trickle down to the clinician-patient level.

Though health care delivery is led for most parts by physicians, medicine is a team work and the whole of biomedical enterprise has grown over decades to include a complex network of inter-related disciplines and professionals. Biomedical research which is the lifeline of modern medicine, especially in these days of evidence based practice, now brings together many professionals that were traditionally not pure science or medicine based from the social sciences, law and the arts. A global and comprehensive view of ethics is that which provides training in professional etiquettes, blends professional and scientific knowledge with socio-cultural values and norms, produces ethically informed and skillful practitioners and enhances organizational ethics that lubricates the relationship among the different professional groups within the network

*But, where are the teachers, the already overburdened staff?*

A valid question might be about who should teach bioethics in the medical schools. The interest of many faculty staff and clinicians has been stimulated by the ethics conferences and some of them are participating in bioethics training programmes at different academic levels in and outside Africa. For example a number of NIH and EDCTP funded programmes exist at the University of Ibadan, Nigeria and many other African institutions that are aimed at building or strengthening capacity for research ethics committees in Africa. Specialists who have interests in medical ethics could also become a vital rallying point for developing an expanded bioethics programme in their institutions. Moreover, there are many bioethics training programmes in many institutions in the west, in South Africa and now in Nigeria that provide postgraduate training opportunities to scholars from developing countries who would in turn be pioneers for developing bioethics manpower in their institutions [12,13,14]. Some of these positions are reserved specifically for Africans who are interested in pursuing training in bioethics.

#### **Practical suggestions on implementing the bioethics curriculum**

##### *The teaching format*

For would-be medical doctors and others, the teaching of bioethics should be integrated into all stages of their training including postgraduate studies and residency programmes. Both the cognitive and behavioural aspects of ethics should be given prominence in the medical curriculum. While the well known traditional methods of teaching may suffice to impart cognitive skills, instructions in behavioural skill involves both formal teaching and role modeling by experienced teachers/clinicians who can demonstrate the skills in practice. The teaching format should take into cognizance the existing methods of knowledge transfer in our medical schools, how the existing medical curriculum is likely to accommodate new additions, and the fact that this is just the beginning of a process that will require fine-tuning by and by. As awareness increases, as the number of bioethics staff increases and as the bioethics structure becomes properly established, periodic review of this proposal will be necessary. To coordinate and operationalize the arrangement, a unit or department should be created and given necessary resources and due support.

### *The teaching method*

Taking into account the diversity of programmes in Africa's medical schools, introducing formal training in bioethics would highlight principles for general discussion. Curriculum formats that are country or region specific and are based on peculiar norms and values can be used for the multiplicity of medical curricula in Africa's diverse medical schools. Formal training in bioethics should be undertaken throughout the period of study in the medical school from the pre-clinical years till graduation and further for those who would be involved in postgraduate programmes. For practicing physicians and other health care workers, a system should be provided for regular update point-scoring refresher courses necessary for certification and for practicing. The training formats should include didactic lectures, seminar presentations, case presentations, critical appraisal of issues and attendance at ethics review committee meetings. These formal teachings should be re-emphasized and reinforced during clinical clerkship through a combination of different approaches depending on availability of staff, space and time. Such approaches include integration of unique bioethics issues into routine clinical teaching and case discussions, departmental and inter-departmental grand rounds, and small or focus group discussions. Clinical ethics teaching should be started from the first year right through to the graduating years.

Non-medical students who undertake research with human subjects should be required to participate in the programme. Students groups should be given advisors drawn from a multidisciplinary pool of appropriately trained staff members from Law, Social sciences, Medicine, Medical Humanities, Nursing, and other related faculties. Provision should be made for those who would ultimately specialize in bioethics by a gradual build up of facilities and faculty members capable of imparting training at postgraduate levels.

### *Impact assessment*

One of the skepticisms about teaching bioethics is whether virtue and character can be taught [5]. Equally controversial is how one can predict that a student who has received instruction in ethics and has participated actively in ethics sessions and discussions will himself be ethical in his clinical duties and decisions. In other words, will the teaching of ethics make any difference in improving the moral judgments and ethical standards of physicians? A plausible response to that is that time coupled with hawk-eyed monitoring system and creation of rooms and protection for whistle blowers would ultimately

improve ethical standards in research and practice. The fear of misuse of such a channel cannot be ruled out. Ultimately the integrity of any system established would depend on its operators. While the cognitive aspect of ethics education is amenable to evaluation using well known standard methods of students' assessment, this can not be said about the behavioural aspect. However, since courses without student assessment result in lower student attendance, less student preparation for class, and greater ambivalence towards the course topics [12], some form of evaluation is necessary. The well-known formats of assessment-multiple choice questions, written essays, objective structured clinical examination (OSCE), oral examination, etc- are applicable in bioethics and can be utilized to test different aspects of bioethical knowledge and skills. To ensure that courses are taken seriously, there must be compulsory, elective and required courses which should have their examinations and scores that count towards graduation. Individual or group projects should be part of graduation requirements. Online web courses and examinations should be developed for the students in a way that certificates can be issued upon completion.

### *Course evaluation and accreditation*

Yearly evaluation of courses by students is not yet a routine culture in many schools in Africa. The need for periodic review of any new course such as bioethics by both the teacher and the taught becomes obvious in that information from such assessment is necessary to re-appraise and re-define goals, re-assess means of achieving those goals, and perhaps re-draft the curriculum. This process should be carried out with generations of students and staff and findings should be incorporated into reviewing the curriculum and the methods of training from time to time. In the same vein, accreditation of bioethics programmes and training should follow the same pattern as is being done for other established programmes in the curriculum by the respective commissions charged with such duties. This is one area in which newer programmes can tap from the expertise and experience of the older ones from both within and outside Africa through continuing collaborations.

Additional facilities needed for appropriate establishment of this programme in medical schools include on-going staff development in bioethics, establishment of centres for bioethics and provision of resource materials in form of journals, books and virtual libraries. Moreover, the possibility of a

combined degree in medicine and bioethics for interested students and collaboration with other establishments within and outside Africa for such should be explored. Depending on the mission and goals of each university, postgraduate programmes in bioethics should be a future possibility.

It is imperative to note that the paradigm of ethics has shifted from being a hidden to an open component of medical training, and from the periphery to a more central position in health sciences. It is fundamental that Africa, being part of the global community, recognizes and appropriates the change.

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