



# Equipping African medical students with ethical decision-making skills: A case-based method from Burundi

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## Abstract

In addition to medical ethical issues faced in every context globally, many African contexts have the challenge of additional ethical scenarios particular to African culture, resource limitation, and more varied levels of professional expertise. In an effort to equip medical trainees with the knowledge and skills to confront these situations well and from a particularly Christian vantage point, we developed a bioethics module for African medical students in Burundi that began with a didactic ethics lecture and spent most of the time on student-led, facilitated case discussions. The cases were designed to highlight problems specifically created by the particularities of our rural, African, under-resourced context. Five rounds of implementing this module have shown a positive and interactive reception, with students critically thinking about the problems, engaging in personal application, and being willing to disagree with each other. Evaluation after each module has resulted in some cases being discarded and others modified. Facilitation of case discussions has been especially aided by structuring cases that specifically force the making of a difficult ethical decision, soliciting an articulation of any disagreements existing within the presenting group, and exploring permutations of each case in order to see if that changes opinions and to clarify the underlying ethical principles at play. In our setting, the creation of bioethical case scenarios that are specifically applicable to the context of our African learners has been helpful in making a module with useful content capable of growing the ethical decision-making capacity of the participants.

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**Key Words:** Medical ethics, medical education, East Africa, Burundi, Case-based ethics.

## Introduction

Medical ethics touch every context of our world on a daily basis. Many situations surround issues of current controversy, but many others are shrouded in everyday scenarios that are so common

as to be rendered invisible by their familiarity. It has been long recognized that case scenarios are a preferred tool for teaching bioethics, and learners from diverse backgrounds have expressed this preference.<sup>1,2</sup> East African learners, in particular,

have stated their desire for more practical case studies.<sup>3</sup> However, curricula indiscriminately applied across a broad international base risk a lack of applicability to the learners, which can lead to confusion, unusable knowledge, and even cultural imperialism.<sup>4</sup> In order for case scenarios to be effective, they must be real to the learners, which requires contextualizing the case to the real learning environment.<sup>1</sup> Though there are examples of cases developed for Western students going to East Africa on elective rotations, there is a lack of published information about cases designed for the particularities of an East African health context.<sup>5</sup>

In addition to the universal questions encountered everywhere, many African contexts have the challenge of additional ethical scenarios particular to African culture, resource limitation, and more varied level of professional expertise. To give a few examples, traditional African family cultures can be more patriarchal or (possibly at the same time) collectivist, which may create nuances in approaches to autonomy and confidentiality. The significant resource limitations in many African contexts create increased tension for questions of justice and stewardship, as Wall highlights in her discussion of medical ethics in developing countries.<sup>6</sup> Lack of sufficient professional expertise in other contexts can pose heightened questions of beneficence and non-maleficence.

These unique features may render imported ethics curricula from wealthier and/or non-African contexts either insufficient or irrelevant to African learners, thereby hindering the development of necessary ethical decision-making capacities in medical professionals. There is an ongoing need for bioethics teaching that is compatible both with the learner's worldview and their medical practice context.

## Materials and Methods

At Hope Africa University, a Burundian Christian medical school, we designed a module for teaching and practicing medical ethics based on cases inspired from the same context. The module began with a two-hour interactive, didactic lecture on ethical principles and their applications. The first four principles discussed were beneficence, non-maleficence, autonomy, and justice, as first postulated by Beauchamp and Childress in *Principles of Biomedical Ethics*.<sup>7</sup> These were described as secular principles, but the biblical support of each was also discussed. This was followed by a discussion of (and the biblical support for) several uniquely Christian principles with bioethical importance, including the sanctity of life (in association with the *imago Dei*), stewardship of creation, the fall, suffering and death, miracles, the sovereignty of God, grace and mercy, compassion, and hope. This list had been loosely adapted from *Medical Ethics and the Faith Factor* by Robert Orr.<sup>8</sup> The didactic portion of the module concluded with several case examples explored as a group that demonstrated how specific situations brought different ethical principles into tension with one another and how to define those tensions.

The subsequent majority of the bioethics module was spent in facilitated student-led discussions of case studies created for this context. Our faculty developed the cases based on our knowledge of our particular rural, African, under-resourced context, oftentimes drawing from real-life experiences. Cases were designed to highlight certain ethical principles, but also certain unique elements of our context. Four of the ten cases used are included here. (The principles and context highlighted by the cases were not given to the students who were to present them.) (Table 1)

Table 1. Case examples

Case example #1 (Highlighting beneficence and non-maleficence in the context of insufficient professional expertise)

“In Over Your Head” You are the only doctor present at a rural hospital who just admitted a pregnant woman at 38 weeks gestation with a hemorrhage, and you suspect placenta previa. Fetal heart tones are 170 per minute. You are new at this hospital and you are being trained to do C-sections. Up until now, you have only observed several times, but you have never done one alone. The patient’s BP is 70/30, and she continues to bleed despite every other intervention. It takes 3 hours to get to the next nearest hospital that can do a C-section. The ambulance is available. Do you transfer the woman or try to save her life by doing a C-section alone?

Case example #2 (Highlighting justice and stewardship in the context of severe resource limitation)

“Not Enough Oxygen” A 45-year-old woman presents in a coma and requires oxygen therapy. The next day, a head CT shows massive hemorrhage and recovery is impossible. When trying to wean her off oxygen, she rapidly becomes hypoxic and apneic. The hospital has one other oxygen concentrator, which is shared by two children with severe bronchiolitis. There is no other source of oxygen in the hospital. Do you continue oxygen therapy for the comatose woman? What if another child with severe bronchiolitis arrives?

Case example #3 (Highlighting autonomy and hope in the context of African family culture)

“Secret Terminal Cancer” A 75-year-old man presents with epigastric pain and severe anemia. He is transfused and endoscopy shows an inoperable gastric cancer. Before rounds the next day, the patient’s son comes and asks you if his father has cancer and if the problem is treatable. You explain what you found, and he asks you to tell neither his father nor his mother, saying that it will cause them to “lose hope”. What do you do? If the son refuses to inform his parents, do you inform them directly?

Case example #4 (Highlighting autonomy and beneficence in the context of resource limitation and African family culture)

“Who decides?” A mother of 8 children is hospitalized for a Cesarean for baby #9 while baby #8 is hospitalized for severe acute malnutrition due to inadequate food supply at home. The mother agrees to have a tubal ligation. However, the father refuses, not for religious reasons, but because he says that “a large family is the truest blessing.” The mother asks you secretly to do the tubal anyway and to not inform the father. What do you do?

Student groups were given a step-by-step framework to follow in developing and presenting their case. This framework was loosely adapted from Scott Rae's model for making moral decisions (from *Moral Choices*).<sup>9</sup> After several days of

preparation, each group had 15 minutes to make their presentation followed by 15 minutes to respond to questions from their colleagues and the faculty facilitator. A summary of the framework used is included in Table 2.

Table 2. Student framework for Presenting a Bioethics Case (adapted from Rae<sup>9</sup>)

1. Gather all relevant and available facts. What other information would possibly change the ethical situation, if known?
2. Identify the main ethical question of the case.
3. Identify the role of the principles of non-maleficence, beneficence, justice, and autonomy in this case if they are present.
4. Identify the distinctively Christian ethical principles that apply to this case, including biblical references if possible.
5. List the possible courses of action.
6. Evaluate the pros and cons of each option in light of the ethical principles.
7. Make a decision.

## Results

The module, as described above, has been implemented for five consecutive classes, with a total of over 170 students, usually in their final year of training. The average group size for a case presentation has been 4-5 students. Discussion has been invariably lively and interactive, with students showing a willingness to engage the scenario as applicable to their lives and to express disagreement with their colleagues when felt. Additionally, students have demonstrated an increased ability to think critically about ethical principles.

After each of the five successive modules, small alterations to the cases as well as the presentation framework were made based on difficulties with their utilization. To cite examples, a case similar to #2 above had been used involving a mechanical ventilator instead of oxygen supplementation. The absence of mechanical ventilators in our learners' context hindered them from being able to relate to the situation and thus engage the ethical principles. Another case

involving patients being required to pay in advance for services in order to improve organizational sustainability was discarded after finding that the student perspective invariably related to the patient in front of them instead of the sustainability of the system, thus rendering the case less useful for discussion purposes.

The facilitation of the discussion of these cases has yielded several themes that are worth mentioning. First, cases needed to be structured to force the necessity of a difficult decision, since the learners invariably would choose any exit that enabled them to avoid the difficult decision. So, in an example like #2 above, the option of transferring the patient to another facility needed to be explicitly excluded. This tendency to avoid facing the ethical question is as universal as it is natural, but for the purposes of learning to think critically about bioethics, it is unhelpful.

Second, though the students presented the cases in groups, we systematically asked each group if there were differences of opinion among the group members. This was to help foster

discussion and to allow for disagreement. Our particular cultural context was generally quite collectivist (at least compared to Western cultures), yet we often found learners willing to express differences of opinion that helped to delineate the ethical principles at play.

Third, we often found it useful to propose a slight permutation of the case to the presenting group in an effort to see if the permutation would change their opinion. This often helped to elucidate the driving forces in the decision-making process. For example, case #3 above involves an elderly father and the request of his son. Changing the case to a middle-aged son who has a terminal cancer and the request of his elderly father not to tell the son revealed very interesting cultural values about family, but again there were often differences of opinion (see preceding paragraph). In another case about two patients requiring blood transfusion when only one unit was available, it was useful to modify the case afterwards to where one recipient was a convicted murderer. The response of the learners to that permutation demonstrated an important distinction between simple stewardship of biological life and the sanctity of human life as marked by the image of God.

## Discussion

The willingness and ability to face difficult ethical situations and to make a wise and courageous decision is undoubtedly the process of a lifetime. The presence of conscientious and compassionate role models seems likely to play the most central role in the development of such skills in the lives of learners. However, we hope and believe that a specific content module such as the one described above can play a useful role in lending a common vocabulary and a structured thought process to this lifelong process.

Additionally, we maintain that the creation of bioethics case scenarios specifically applicable to the context of our African learners has been

instrumental in making such a content module useful in growing the ethical decision-making capacity of the participants. A similar process could be useful for contextualizing cases to other cultures, including many developed societies, which are often pluralistic and may have similar variables present.

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