

## The role of global biomedical ethics in medical pedagogy

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### Abstract

The study of global biomedical ethics warrants the attention, scholarship, and commitment afforded to the study of general medical ethics. While it is difficult to precisely define the field, it basically comprises the ethical provision of healthcare and investigation across borders, which takes into account disparate societal and individual normative values. Medical ethics is primarily patient-centric; global biomedical ethics is focused on patients insofar as they comprise communities. Global biomedical ethics eschews imperialist approaches. Instead, the field seeks to promote approaches that comport with relevant principled approaches.

Ultimately, the field of global biomedical ethics orients the integrity of the medical profession within society. Global biomedical ethics is important for all clinicians and investigators, and should not be relegated to those who address disease that affects people in a region where the physician does not reside. The field contextualizes the practice of medicine and research within the world community. Global biomedical ethics inexorably enhances the doctor's own propioperception of his profession and his place within the world.

### Keywords

global; biomedical; ethics; pedagogy; education; curriculum

### Introduction

As medical pedagogy undergoes ongoing assessment and critique, it also undergoes change. In part, this reflects the recognition that "[t]he physician workforce of the 21<sup>st</sup> century faces a radically different health care environment than did physicians caring for patients or doing research in the previous century."<sup>1</sup> For example, at Weill Cornell Medicine (with which I am affiliated), a recently-implemented revised curriculum incorporates three themes throughout the student's tenure: the scientific basis of medicine, patient care, and "physicianship."<sup>2</sup> The last prong conceptualizes "the special skill set needed by physicians, such as communication, medical ethics, and professionalism."<sup>2</sup>

That component has had a deservedly entrenched mandatory curriculum, often grounded in case study analysis. The ethical duties of the physician are explored based on fundamental tenets:

- **Autonomy:** The duty to protect and foster a patient's free, non-coerced choices,
- **Beneficence:** The duty to promote and act in the best interest of the patient and the health of society,

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- Non-maleficence: The duty to do no harm to patients, and
- Justice: The duty to equitably allocate and distribute resources.<sup>3</sup>

I submit that the study of global biomedical ethics likewise warrants the attention, scholarship, and commitment afforded the study of general medical ethics. Yet the former field is scarcely recognized as a field, let alone adequately integrated into medicine's curriculum. As discussed below, for far too long, the criticality of its study has been academically neglected, perhaps due to misapprehension about the nature of the field or because the field was eclipsed by unintentional provincialism.

## Defining the field

The study of global biomedical ethics presupposes the initial task of defining the nature and scope of the subject. The field has always existed, as the need for an internationalized approach to the ethical administration of medicine is not new. But paradoxically, there has been only a relatively nascent recognition that the field even exists. Unlike many other aspects of ethics, philosophy, and medicine, global biomedical ethics is not readily susceptible to a uniform or precise definition. This renders pedagogy in the field as critical as it is challenging.

### Inapposite concepts of the field

It may be helpful at the outset to explain how global biomedical ethics should *not* be defined. At first blush, the field may appear to be a sub-specialization for those interested in medical ethics. The field has been perceived as a subset of medical ethics, a particularized field for those primarily guiding ethical approaches in cross-border or in non-domestic contexts. Other educational initiatives comprise a taxonomy of disparate ethical approaches across cultures, religions, ethnicities, or regions.

There are several laudable examples. For instance, a global review of medical futility spurs important discussion about its criteria and its eligible decision-makers.<sup>4</sup> The Global Bioethics Initiative (in which I

participated) included amongst its general ethics courses a session on whether there are global bioethical ethical standards in clinical care and research.<sup>5</sup> Curricula have also focused on ethical issues in short-term global health training from the perspective of U.S. medical students and residents pursuing training electives abroad.<sup>6</sup> The Working Group on Ethics Guidelines for Global Health Training developed ethical guidelines for institutions, trainees, and sponsors of field-based health training.<sup>7</sup>

But equating these with the field of global biomedical ethics does not fully appreciate the modern physician's role in medicine. Nor does it adequately account for the interplay between clinical practice and investigational inquiry in medicine, and the inevitable transcendence of borders in medicine. And perhaps most provincially, some approaches explore issues abroad nearly exclusively from the perspective of physicians in a single jurisdiction – which is somewhat akin to being in a diverse international group and believing that you're the only one speaking without an accent.

### A working definitional construct

Although predicate or nascent examples of aspects of global biomedical ethics courses exist, the field warrants a more universal and focused curriculum. While I, too, find it challenging to define the field, I offer an initial construct from which further discussion may ensue: global biomedical ethics is the study of the ethical provision of healthcare and the ethical investigation into the prevention and treatment of disease across borders, predicated upon, and taking into account the interests of, disparate societal and individual normative values.

Essentially, medical ethics examines the problem from the individual's perspective; global biomedical ethics works at the macro, or societal, levels. Medical ethics education in the U.S. prepares medical students to identify, analyze, and resolve ethical dilemmas in clinical practice and investigational research. Pedagogical approaches are grounded in balancing and integrating principles of autonomy, beneficence, non-maleficence, and justice. Global biomedical ethics comprises the study of disparate normative values amongst cultures, religions, ethnicities, and regions to ethically resolve dilemmas consistent with fundamental humanitarian principles

that do not disrupt individual values. While medical ethics is patient-focused, global biomedical ethics is community-focused, with the scope and nature of the community delineated as is warranted by the ethical query.

## The need for the discipline of study

### Global populations

In today's era, the doctor's patients and research subjects are not necessarily born or raised locally, within the same geographic and cultural communities as was the doctor. The demographic landscape has been shifting, spurred by ease of international mobility, refuge from domestic conflict, actual or perceived economic and other prospects elsewhere, and a variety of other motivations. To illustrate with but one demographic, in 2013, there were approximately 41.3 million immigrants in the United States,

an all-time high [even] for a nation historically built on immigration. The United States remains a popular destination attracting about 20 percent of the world's international migrants, even as it represents less than 5 percent of the global population. Immigrants accounted for 13 percent of the total 316 million U.S. residents; adding the U.S.-born children (of all ages) of immigrants means that approximately 80 million people, or one-quarter of the overall U.S. population, is either of the first or second generation.<sup>8</sup>

According to the United States Census Bureau, in 2007, the country's minority population comprised 100.7 million; a year earlier, the minority population totaled 98.3 million.<sup>9</sup> This means that approximately one in three U.S. residents is a minority. "To put this into perspective, there are more minorities in this country today than there were people in the United States in 1910. In fact, the minority population in the U.S. is larger than the total population of all but 11 countries." (quoting Census Bureau Chief Louis Kincannon).<sup>9</sup> By 2050, non-Hispanic Caucasians will comprise a majority of the U.S. population.<sup>10</sup>

Just as a treating physician must recognize symptoms of a foreign-born pathogen, so, too, must she competently communicate across social and cultural norms to elicit a comprehensive case

history and to discern the propensities for standard of care remedies – that is to say, those therapies that are standard of care within the physician's training and expertise, and those with which the patient may be familiar and perhaps expect or prefer. From the initial clinical encounter with the patient throughout the course of treatment, the physician must be aware of disparate approaches to, and understandings of, disease and treatment, and must be respectfully receptive to approaches and understandings that differ from her own or from those more conventionally implemented in the physician's current clinical setting.

Indeed, the failure to navigate such differences can lead to dire results. For instance,

decisions by ill individuals to refuse particular kinds of treatment or insist upon specific forms of care can raise questions about reasoning abilities and decision-making capacity. To assess the rationality of decisions made by patients, physicians and nurses need to understand how patients interpret their illnesses and comprehend the diagnostic, prognostic, and treatment-related information provided by members of the health care team. ... In settings where patients' understandings of "reasonable" conduct diverge from the judgment of health care providers, members of the health care team need to consider whether they have adequately explored their patients' cultural models of health, illness, and moral deliberation. These background understandings play an important role in contributing to how patients respond to particular recommendations.<sup>11</sup>

Issues that ethicists encounter often implicate cultural diversity. Advanced care directives may be subject to disparate religious beliefs, such as a belief in reincarnation. As well, the therapeutic misconception may be especially pronounced when familiarity with medical investigation has had direct or ancillary health benefits.

Another notable example is the doctrine of informed consent and whether accurate information is relayed directly to the patient, the patient's family in lieu of the patient, a tribal chief or community elder,<sup>12,13</sup> the female patient's father or husband,<sup>12</sup> some combination of these, or not at all. As well, the

degree to which a patient may expect to participate in autonomous decision-making about a course of treatment may be influenced by cultural or other normative reliance on educated specialists in whom vesting unquestioning trust is a sign of respect. One investigator observed that patients in Vietnam do not participate in decision-making, contending that subjects in a “clinical trial should not receive any information that would convey the treating doctor’s uncertainty – specifically, information about alternative therapies and the use of randomization to determine the subject’s proposed treatment.”<sup>12,14</sup> And requests to sign an informed consent document, a practice routine in the U.S. to memorialize the agreement of the patient or subject, may be viewed with skepticism by those who have been subjected to oppressive regimes and coerced to sign confessional or other inculpatory documents.<sup>12</sup> Further confounding certain normative approaches, national guidelines for research may specifically prohibit an investigator from relying on a community leader’s authorization, such as those adopted in Uganda following its experience with targeted population elimination.<sup>15</sup>

Differences in approaches apply in the research context as well. In one study, the protocol used by Nigerian researchers included a consent form that identified potential risks to study participants, a standard – and laudable – practice in the U.S. In a relatively litigious environment, the practice also helps insulate the investigator and the sponsoring institution from liability in the event specified risks materialize and the subject contests the adequacy of information that had been provided to her. But in Nigeria, investigators were concerned that potential participants might deem the litany of risks “extraneous, irrelevant, or culturally inappropriate. ... One physician noted that, given Nigerian cultural norms, disclosing all possible risks would unnecessarily alarm potential research participants associated with the research.”<sup>12</sup>

Moreover, scientific concepts differ amongst cultures. Some societies do not believe in the germ theory of disease, but rather understand illness or death as a consequence of sorcery. Investigators have sometimes tried to bridge belief systems through the application of analogies, such as by explaining to a Senegalese group unfamiliar with Western notions of immunology that immune cells are like guards that reside in one’s blood.<sup>12</sup>

Another illustrated the principle of randomization in a vaccination trial through agricultural analogies in the evaluation of fertilizers of seed varieties on randomized plots, concepts with which local farmers were familiar.<sup>13</sup>

Adequately trained physicians also need language capabilities. Of course, fluency in the patient or subject’s language is necessary in order to communicate effectively, something which trained interpreters can facilitate. But language reflects our cultures in ways that go far beyond sophisticated vocabularies or scientific jargon. For instance, “[i]n many African languages, there is no word for ‘research’ or ‘science.’ The word used is generally the same as the word for ‘medicine.’ There is no concept of an experiment, placebos, etc.”<sup>16</sup> Thus, different concepts about etiologies and even science itself may further complicate the role of informed consent in the practice of medicine.

### **Technological advancement**

Furthermore, the internationalization of medicine belies the presumptive geographic proximity of physician and patient that was the case in centuries past. Technology has enabled medical practitioners to opine about patient care based on the transmission of digital scans and photographic images. This means that the qualified doctor’s sphere of knowledge can no longer reasonably be confined to pathologies likely to occur within the climate, locale, and community demographics in which he is located.

### **Cultural competency and global medical ethics**

The physician who fails to attend different belief and cultural systems compromises the delivery of healthcare services and imperils the patient or subject, despite presumed good intentions. Sensitivity to disparate cultural norms – and sensitivity even to the prospect that beliefs, concepts, and understandings different from those of the physician exist – is an essential component of patient care and investigational integrity. Facility with such disparities, and at the least openness to inquiring about the possibility of such disparities, should be as much a part of the medical student’s training and qualification as her facility with diagnostic and therapeutic paradigms.

Yet cultural competency is by no means synonymous with global biomedical ethics. One way to understand why cultural competency should not be conflated with global biomedical ethics is by conceptualizing diversity as propelling the need for global biomedical ethics. Consider, for example, the position of the National Institute of Health (NIH) in 2005 with respect to post-trial provision of antiretrovirals to participants in trials of those drugs; the NIH cautioned that the supported research should not extend to providing treatment following the completion of that research.<sup>17</sup> The NIH expressly recommended that “NIH-supported/ funded investigators engage in a dialogue with host countries’ authorities and other stakeholders in order to facilitate the inclusion of these populations in available in-country and antiretroviral treatment programs and when applications are made for treatment programs through outside agencies.”<sup>18</sup>

A principled framework to address the ethical responsibility of investigators with respect to ancillary care – that is, obligations to arrange for or provide care for participants beyond the scope of study safety – must take into account existing laws, regulatory paradigms, market forces, and cultural expectations about available medical care in disparate settings. This is especially important in resource poor settings, and in areas where healthcare is not provided as of right.

Thus, cultural, religious, linguistic, and other disparities illustrate reasons the field of global biomedical ethics is needed. Sensitivity to demographic differences and ideologies also corroborate the benefits of inculcation in the field of global biomedical ethics. And shifting demographics within the physician’s country, technological capabilities, and multi-cultural sensitivity further support the need for global biomedical pedagogy irrespective of cross-border practices.

### **Pedagogical approaches**

The study of medical ethics inculcates through case studies examined through the four overriding principles, while recognizing that all ethical dilemmas cannot possibly be prospectively identified.

Accordingly, pedagogy promotes reasoned and best practices within this framework.

Analogously, global biomedical ethics takes into account a community’s needs, risks, and benefits, balanced with individual values, goals of care, and preferences and predicated upon informed and sensitive consideration of disparate cultural, ethnic, and religious norms. Likewise in this broader context, all ethical conundrums cannot possibly be prospectively identified. Thus, pedagogy similarly inculcates analytical approaches grounded in humanitarian principles to identify and resolve ethical dilemmas in the best interests of the patient within society.

The informed consent doctrine illustrates the contrast between the two inter-related fields. In the U.S., the medico-legal ethics approach requires that a capacitated person of majority age voluntarily and knowingly consent to treatment in non-emergent circumstances.<sup>19, 20</sup> The doctrine is conspicuously aligned with values in patient autonomy; it also alleviates some of the physician’s burden of decision-making by enlisting the patient’s determination, and it induces the patient’s complicity in the agreed treatment plan.<sup>21</sup>

The global biomedical ethical approach would not endeavor to impose the doctrine when it would contravene normative values; the goal is not homogeneity with Western values. Accordingly, the global approach might well seek consent from a tribal chief, at least absent effectively solicited evidence of coercion, an inability to appreciate the risks and benefits, the individual’s dissent, or a decision for the community that is not in the best interests of the individual.

While the American Medical Association cautions U.S. doctors that “[t]he patient should make his or her own determination on treatment,”<sup>19</sup> the global ethicist may in some circumstances seek the chief’s consent, rather than envisage the tribal chief as an inappropriate decision-maker or an additional hurdle to acquiring consent. The chief’s participation merits deliberative consideration of the risk-benefit ratio of a proposed treatment, conventional treatments available to the patient relative to the risks and benefits of the proposed treatment, and the availability of ancillary care of each treatment if there are no adverse events. The chief may insulate his constituency from individual coercion, disproportionate incentives to consent,



or presumptions that a treatment's proponent has superior medical knowledge.

When, such as in parts of Ghana, a chief and patient or prospective subject must both consent,<sup>22</sup> disparate approaches may be reconciled and the consent process redundantly assured. Ultimately, both the villagers' norms are respected and the U.S.-trained physician's professional integrity is preserved. And rather than viewing the chief as usurping the patient's prerogative, the physician may welcome the opportunity to supplement her dialogue with the patient to inform, collaborate, and articulate goals of care in order to confirm that consent is informed and consistent with the medical ethics principle of autonomy.

### **The utility of global biomedical ethics**

The array of maladies confronting the world's population is seemingly infinite. Openness to scientific theories, different treatment modalities, and ethical approaches humbles and enriches the medical student, which, once instilled, humbles and enriches the physician. Such recognition of the worldwide community in which we all live drives an exchange of medical practices which, appropriately indoctrinated, perpetuates collaboration. The inevitable result is incremental scientific and medical advances. And duplicative investigational inquiry is curtailed, negative results are considered, quizzical results are analyzed from multiple perspectives, and promising theories and therapies are built upon.

Global biomedical ethics thereby supports the doctor's ultimate regard for the patient, as it implicitly acknowledges the potential of other avenues of therapeutic approach. The field promotes a collaborative exchange of knowledge amongst healers worldwide and portends a shared commitment to health notwithstanding disparate, and even disputed, approaches.

These benefits can reverberate throughout the profession. Global biomedical ethics competency helps render the physician receptive to theories and practices developed by healthcare providers across borders and across cultures. Shared learnings broaden perspectives and offer options to consider, which gathers scientific information from which medicine can advance.

And it helps diminish possible arrogant propensities of omniscience and paternalism, presumptive foes of a shared therapeutic endeavor. Exposure to other theories and modalities diminishes tendencies to assume that any particular practitioner, investigator, or institution monopolizes an area of knowledge.

Exposure to ideas and approaches with which one is unfamiliar also promotes consideration of the rationales for entrenched concepts and procedures, which may have inadvertently become obsolete or even pernicious. To illustrate, reflexive diagnoses of patients who suffered traumatic brain injuries as beyond prognostic capacity for consciousness have evolved over time. The diagnosis of a "minimally conscious state" (MCS), characterized as a "condition of severely altered consciousness in which minimal but definite behavioral evidence of environmental awareness is demonstrated," was developed in 2002.<sup>23</sup> This significant refinement has profound effects for the traumatic brain injury patient, as there is a clear need "for more diagnostic precision because diagnostic clarity [has] a bearing on ultimate outcome."<sup>24</sup>

One physician who helped develop the MCS diagnosis was Bryan Jennett, a neurosurgeon based in Glasgow, who had previously described the persistent vegetative state (PVS) in collaboration with Fred Plum, a neurologist based in New York.<sup>25</sup> This cross-border collaboration led not only to critical understandings of brain states in traumatic injury sequelae, but also to keenly sensitive appreciation of the ethical issues surrounding such patients. Jennett noted that

[t]here have been many declarations that survival in a permanent vegetative state is not a benefit to the patient, some regarding it as a fate worse than death. Numerous surveys of the attitudes of patients, doctors, nurses, and ethicists have confirmed that this is a widespread view, with many respondents indicating that they would not want life prolonging treatment if in this state. At the same time there is increasing concern in medical ethics for respecting patient autonomy when making decisions about treatment. Competent patients have an absolute right to refuse the initiation or continuation of any treatment, even when this is life prolonging, if they regard it as bringing more burdens than benefits. The problem is that vegetative patients are not

competent to refuse continued treatment, and there is concern about how best to protect them from treatment that they would probably refuse if they could.<sup>25</sup>

The two physicians combined their respective perspectives in different neurological specialties, different nationalities, and different patient experiences. And they collaborated to ask questions about ethical approaches for patients who had suffered grievous cognitive insult – not only by asking how best to protect them, but also by asking whether long-held beliefs about the patients' diagnoses remained accurate.

Ultimately, global biomedical ethics helps diffuse a sense of righteousness by rote. The implicit demand for articulated rationales promotes reflection and deliberation about approaches that otherwise could be routinely implemented.

Moreover, ethical conundrums transcend not only cultures and borders, but other disciplines as well. Rigorous global biomedical ethics training facilitates accessibility to increased knowledge by basic scientists, engineers, anthropologists, philosophers, theologians, government health officials, lawyers, journalists, diplomats, humanitarian aid workers, military personnel, community leaders, and others -- by all who can contribute to the shared objective of conducting oneself ethically and treating others honorably and with dignity. Which, after all, pervades the physician's commitment to health and healing.

At its core, global biomedical ethics *orients* the practitioner and investigator and the medical institution in which they operate within the broad international community. Consideration of disparate ethical constructs, regulatory paradigms, and cultural considerations help ensure that the individual physician and the medical profession at large retain the proprioception critical to maintaining a sense of the physician's position within the broader world in which she operates. So understood, it becomes clear that this is not a question of comity or tolerance of other views. Nor is it a question of reciprocity, in which there is a bartering of putatively commoditized goods such as a swap of investigational findings or an exchange of approaches to promote an understanding of other ways of looking at ethical quandaries.

Rather, it is a synergistic, incremental sharing towards the goal of enriching scientific knowledge and benefitting patients worldwide. It is a collaboration that recognizes, with pragmatism and with humility, that resources are scarce, that the state of knowledge is never absolute, and that ethical constructs must be adequately malleable to take into account evolving situations, emergent circumstances, advancing scientific knowledge, disparate cultures, and both overt and latent biases.

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