
HEALTH CARE ETHICS

University of Maryland Medical System

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A Newsletter Examining Contemporary Ethical Issues in Health Care

Ethics in the News

Global Ethics

Nobel Peace Prize Winner Warns of Dangers of Globalization and Emphasizes a More Humanistic Approach: The Bangladeshi Banker Muhammad Yunus, who invented the practice of making small, unsecured loans to the poor, warned the audience that attended his award ceremony that the globalized economy was becoming a dangerous "free-for-all highway." He went on to say that while international companies motivated by profit may be crucial in addressing global poverty, nations must also cultivate grassroots enterprises and the human impulse to do good.

Challenging economic theories that he learned as a doctorate student at Vanderbilt University in the 1970s, Yunus said that glorification of the entrepreneurial spirit has led to "one-dimensional human beings" motivated only by profit. He called for legal recognition of a new category of corporation that would be neither profit-maximizing nor nonprofit. It would be a "social business," similar to the Grameen Bank he started 30 years ago that has lent nearly \$6 billion to help some of the poorest people on earth to start businesses, build shelters and go to school. Essentially, his mission with such a social business is to maximize social gains and get people out of poverty, which contrasts with a profit-maximizing business that is merely concerned with how much money one can make.

Editor's Comment: Dr. Yunus' ideas parallel those of commentators who have written about the self-defeating goals of poverty aid programs that are tied to short-term numerical targets. Essentially, these programs represent a one-time fix that does nothing for enhancing the local infrastructure and the development of sustainable health care systems. Such views include: Garrett Laurie. *The Challenge of Global Health*. Foreign Affairs. Jan/Feb 2007; 14-38.

Medical Humanities Hour Spring Schedule - 2007

Feb 8: **Mary Simmerling, PhD**
Director, Social Behavioral IRB
MacLean Center for Clinical
Medical Ethics
The University of Chicago

Topic: ***The Ethics of Social
Behavioral Research***

*Presentations are held @ 4:00 pm
Shock Trauma Auditorium*

Focus on Global Ethics

Globalization activities are reshaping social life everywhere. Such global development efforts, however, have raised difficult questions of responsibility, morality, and equity.

With this issue of the Health Care Ethics Newsletter, we begin to focus on Globalization issues that impact on public health. More information can be obtained from visiting the website: <http://medschool.umaryland.edu/GEEI/>

End-of-Life

Italian in Euthanasia Debate Dies: Piergiorgio Welby, a paralyzed man who touched off an intense debate on euthanasia in Italy died in December 2006 just days after a court refused his request to let doctors remove his breathing machine.

Welby, 60, who had been diagnosed with muscular dystrophy as a teenager, was confined to a bed, attached to a ventilator and communicated through a voice synthesizer. He was receiving nourishment through a feeding tube. In the past few months, Welby had made a plea to Italy's president, and appealed to Italian courts to have his ventilator taken away. Only days before he died, an Italian court ruled that while Welby had a constitutional right to refuse treatment, Italian law does not permit the denial of lifesaving care. Essentially, the court noted that Italy's penal code contains punishment for "homicide of a consenting person and helping (someone) to commit suicide. Therefore, Welby's request for the ventilator's removal could not be granted, because his constitutional right is not protected by legal provisions. The court also stated that "Only political and legislative efforts, taking up the task of interpreting the growing social and cultural sensibility about the care of the terminally ill, of giving answers to the solitude and desperation of the ill...can fill the legislative void."

In another setback, a panel of Italian medical experts stated that a ventilator does not constitute "extraordinary means" of keeping a gravely or terminally ill person alive and so need not be removed. But the panel of medical experts also decided that precise guidelines for doctors were needed urgently to clarify what the law allows and what it does not.

Editor's Comment: Welby's case divided doctors and politicians, and gripped the public's attention in a country where the Catholic Church wields much moral and political influence in Italy. The Catholic Church forbids euthanasia and insists

that life reach its "natural end." However, others have written that previously, Pope Pius XII had stated that treatments are extraordinary if they might impose a grave burden for oneself or another. U.S. law generally permits patients to ask that medical treatment be withheld or withdrawn, even if it raises their risk of dying.

Research Ethics

FDA Panel Votes Against Blood-Substitute Study: A federal advisory panel recommended against proceeding with a controversial study of Biopure's blood substitute, Hemopure. The panel's concern was that the blood substitute carries significant safety risks and often would have been administered to human trauma victims in an emergency setting and hence, without their consent. Hemopure is currently only approved for limited human use in South Africa.

This recommendation runs counter to the views of the Navy, whose medics treat wounded Marines in battle zones, and contends that Hemopure may lower the death rate among severely injured trauma patients by possibly 15% from what it believes will be about a 58% death rate among patients getting saline solution, which represents standard therapy. While Saline raises blood pressure, Hemopure is an oxygen-carrying resuscitative fluid that can be carried onto the battlefield and doesn't require matching blood types, as would real human blood.

However, Biopure's Hemopure has been linked to "serious adverse events" such as pneumonia, stroke, heart failure, cardiac arrest, and ventricular fibrillation. In a large study of the blood substitute in orthopedic-surgery patients, Hemopure subjects had 25 deaths versus 14 in the blood group; there were 54 cases of heart failure and fluid overload compared with 22 who got blood; and there were 14 myocardial infarctions against four in the donated-blood group.

Editor's comment: The FDA has acted with apparent inconsistency on the blood-substitute issue, because it has allowed a

competing trauma study by Biopure competitor Northfield Laboratories Inc. to proceed. The Northfield trial finished enrolling patients this summer and is expected to release some results this month.

FDA Probe Finds Violations in Study Of Heart Device: Government investigators from the FDA found serious violations of federal research regulations in the work of a University of Cincinnati heart surgeon whose previous studies were instrumental in promoting the experimental use of a device in heart patients. The device in question, the AtriCure Bipolar Ablation System, is currently approved for use in general surgery, but not for heart surgery. In the trial, the device is used in a surgical procedure to treat atrial fibrillation, an irregular heart flutter, by using radio waves to burn heart tissue in an effort to block electrical impulses.

In reviewing two clinical trials overseen by Randall K. Wolf, the FDA found a failure to obtain proper consent from patients and a failure to follow study protocols. The agency ordered Dr. Wolf to take corrective action to prevent future violations. The FDA also found that Dr. Wolf failed to fully disclose his numerous financial ties to AtriCure, including a royalty agreement that guarantees him at least \$200,000 a year, stock options and monthly consulting payments.

The University of Cincinnati College of Medicine has stopped research work involving AtriCure, and Dr. Wolf has been removed as principal investigator of an AtriCure clinical trial that is aimed at gaining FDA approval of the company's device in heart surgery. AtriCure says five patients underwent its procedure at the University of Cincinnati, and although it doesn't believe that data for any of those patients are inaccurate, it doesn't plan to submit data from those patients to the FDA.

Editor's Comment: The Office for Human Research Protections (OHRP) has issued final guidance regarding Conflicts of Interests in research involving human subjects: see: <http://www.hhs.gov/ohrp/humansubjects/finreltn/fguid.pdf>

Physician-Investigator Seeks to Conduct Controversial Spinal-Therapy Trials in China: In the past few years, hundreds of foreigners with spinal-cord injuries have spent millions of dollars to undergo risky surgeries, which usually involve implanting cells obtained from aborted fetuses into the spine. Some claim the procedures have helped them regain limited movement. But scientists remain doubtful, because there have been few, if any, rigorous clinical trials assessing the efficacy of the intervention.

Now, Dr. Wise Young, a Rutgers University professor and well known researcher in the field, is planning a vast clinical trial in China to bring China's research into the medical mainstream. Over the past three years, he has established a network of about 20 Chinese hospitals to conduct scientific trials that he hopes will be regarded highly by those in the West.

The advantage of doing such trials in China is that there is a vast pool of patients, an estimated 60,000 people suffer spinal-cord injuries each year, compared with about 11,000 new injuries in the U.S. The numbers reflect a dark underside of China's rush to modernization; many are construction workers, coal miners and victims of the world's highest number of auto accidents.

With so many patients coupled with China's relatively loose regulatory guidelines on therapies such as fetal-cell use have allowed Chinese surgeons to try treatments that have largely been performed on laboratory animals elsewhere. A number of prominent scientists have challenged the ethics of selling the unproven therapies to patients desperate for a cure to paralysis.

Several ethical concerns have been raised regarding the planned studies. First, some worry that Dr. Young's bid to tap into China's enormous patient pool could rekindle fears that the Chinese are being used as guinea pigs. Second, there are no hard data that the stem cells that will be

used in the study actually work. Another concern is that it will be hard to provide oversight to the clinical trial due to the size of the Chinese network of hospitals, the distance between the hospitals, and researchers' unfamiliarity with Western clinical practices. Finally, there is a concern with obtaining valid informed consent, because desperate patients will participate in the trial based on false hopes that cures are just a step away.

Dr. Young plans to conduct four clinical trials each year over a five-year period at a cost of less than \$10 million. His China Spinal Cord Network has already received approval for its first set of trials. The trials will use umbilical-cord blood cells thereby avoiding the problematic bioethical issues using fetal cells. Cells obtained from umbilical cords have been used to treat disease, but their use in spinal-cord patients has been limited.

Before coming to Rutgers, Young was director of neurosurgery research at New York University and part of the team that discovered high-dose methylprednisolone as the first effective therapy for spinal cord injuries. That 1990 work upended conventional wisdom that such injuries led to permanent damage and opened new vistas of hope for the quarter-million Americans paralyzed by an injury to the spinal cord. Young sees stem cell research as an important pursuit that holds tremendous promise for treatment of diseases and disorders, including spinal cord injury, and Alzheimer's and Parkinson's diseases.

Stem Cell Research

Procedure Could Create Stem Cells Without Using Fertilized Embryo: A procedure that encourages an egg to begin embryo development without being fertilized could suggest a new way to produce stem cells, at least for certain patients. As reported in the journal *Science*, researchers used a procedure known as parthenogenesis in which a series of chemical treatments are used to encourage an unfertilized mouse egg to begin embryonic development.

The stem cells produced in the process are a genetic match for the egg donor, and thus won't be rejected by the immune system. But using eggs also means the cells are limited to use in females. There are different procedures to produce stem cells from male sperm, but the researchers said that is technically challenging and inefficient.

A concern with parthenogenesis is that the stem cells obtained from this process have duplicate copies of some mutant genes that have been linked to cancer and abnormal tissue growth. Hence, the safety and durability of cells derived from parthenogenetic embryonic stem cells needs to be demonstrated before any clinical use.

Editor's Comment: Stem cells can develop into many different types of tissue, making them basic building blocks of the developing body and hence, they hold the promise of curing many different diseases. But current methods of producing stem cells require a fertilized embryo, which is killed by removal of the cells. Accordingly, President Bush has imposed strict limits on federal funding for such research.

Reproductive Medicine

Couples Select Embryos to Avoid a Heritage of Cancer: Prospective parents have been using a procedure known as preimplantation genetic diagnosis, or PGD, for more than a decade to screen for genes certain to cause childhood diseases that are severe and largely untreatable.

Now a growing number of couples are crossing a new threshold for parental intervention in the genetic makeup of their offspring by using PGD to detect a predisposition to cancers that may or may not develop later in life, and are often treatable if they do occur. Such couples must weigh whether their desire to prevent suffering that is not certain to occur justifies the conscious selection of an embryo and the implicit rejection that carry the defective gene. Also, the process

is difficult, involving in vitro fertilization that can cost tens of thousands of dollars, which insurance companies might not cover. However, as doctors and genetic counselors increasingly start to suggest the possibility of PGD, more and more parents who carry cancer-risk genes are trading natural conception for the degree of scientific control offered by PGD.

Several ethical concerns are raised by the use of PGD to screen out embryos that carry genes that have merely a predisposition for the development of cancers. First, there is a concern with the prospects of genetic engineering. If the growing interest in screening for cancer risk signals an expanded tolerance for genetic selection, geneticists and fertility experts say it may well be accompanied by the greater use of PGD to select for characteristics that range from less serious diseases to purely matters of preference. Already it is possible to test embryos for an inherited form of deafness or a mild skin condition, or for a predisposition to arthritis or obesity. Some clinics test for gender.

As scientists learn more about the genetic basis for inherited traits, and as people learn more about their genetic makeup, the embryo screening menu and its array of ethical dilemmas are only expected to grow. The issue becomes what is

considered serious enough to warrant such testing and who are allowed to make such decisions.

Others fear that PGD could be used to select against homosexuals, women or people with disabilities. It paves the way for the pursuit of children designed to suit parental ideals and for discrimination against those born with perceived imperfections.

Another issue involves the expensive nature of the procedure, which could make PGD a first significant step toward a genetic class divide in which the wealthy will become more genetically pure than the poor. Finally, there are safety concerns. Indeed, despite the birth of thousands of apparently healthy babies after PGD, there is still concern that the long-term effects of removing a cell from an eight-cell embryo have not been studied enough.

In contrast to these ethical concerns, PGD represents an appealing option because it does not require terminating a pregnancy, a step that is common after an amniocentesis reveals that a fetus has a severe genetic disease but is essentially unheard of for predisposition to common cancers. To be sure, for people who believe that life begins with conception, PGD and subsequent destruction of embryo is as unethical as abortion.

Proponents of the technology say that confusing the concept of "designer babies" with people trying to avoid deadly illnesses is misleading. No one, they say, would endure the substantial physical and emotional difficulty posed by the process to make a baby with blue eyes and a wicked curveball.

To be sure, the previously mentioned concerns have not stemmed the rising demand to screen embryos for cancer-risk genes. There would even be more interest if oncologists were to begin informing prospective patients of the option of PGD. Indeed, some patients have faulted doctors for not letting them know of the PGD option and have expressed resentment and anger that in some cases, doctors are dictating recommendations based on their set of values that run counter to the concept of preimplantation gene selection. Such patients feel that a choice to use PGD was taken away from them.

Editor's Comment: The most interesting aspect of PGD is that the technology is not regulated and as such, decisions about when it is appropriate are left largely to fertility specialists and their patients. Whether or not PGD should be subject to regulation, one thing is sure, in the future, most in vitro fertilizations will be performed for fertile couples seeking genetic diagnosis, not as a treatment for infertility.

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