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FROM THE EDITOR

Apples and Zebras

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As children, all of us were taught that 2 plus 2 equals 4. None of us questioned the simple truth of this mathematical equivalence. The concept that one thing is equal to another, whether that thing is a number, an action, or a group of people, is appealing in its simplicity, but can go disturbingly awry. For example, this country was founded on the principle that "all men are created equal." But at the time of the signing of the Declaration of Independence, slaves were not considered by most to be equal to their masters; they were, in fact, equated more with livestock than with humans. Nor were women considered to be the equal of men; they were denied many of the fundamental rights and opportunities enjoyed in contemporary America. Currently debate rages about the nature of certain acts of violence and destruction. Some argue vehemently that suicide bombings and other acts of violence are the moral equivalent of actions by yesterday's revolutionary colonists or today's freedom fighters. Others take offense when these violent acts are equated with political martyrdom. In the minds of these observers, they are simply acts of terror and barbarism. Judging moral equivalency is not as easy as comparing 2 plus 2 with 4.

In medicine, the concept of equivalence manifests in various forms and circumstances. Many scientific advances in medicine have emerged from our increasing ability to assess the relative efficacy of medical treatments. Randomized clinical trials are designed to compare the efficacy of a new drug against that of a conventional therapy. Rarely, however, do published reports on industry-funded studies find the new drug equivalent to the conventional treatment in all respects.[1-4] Published reports of industry-funded studies are more likely to find that the newer (more expensive) drug is better than the older (cheaper) medication. Given that the market for a new drug that is "equivalent" to an old drug would be small, the lack of peer-reviewed articles attesting to such equivalence is not all that surprising, but raises serious concerns about the integrity of the biomedical research and reporting enterprise.

The concept of equivalence has also been used to analyze vexing ethical dilemmas in medicine including the issue of physician-assisted suicide (PAS). Going back as far as the Hippocratic Oath ("I will give no deadly medicine to anyone if asked, nor suggest any such counsel"), the idea that a physician would act with the intent of ending a patient's life has been considered antithetical to the role of a physician-healer. While the ethical prohibition of PAS is not universally shared (Oregon, for

example, permits assisted suicide), most physicians and professional organizations do not support PAS. At the same time, driven largely by respect for patient autonomy, withholding or withdrawing potentially life-sustaining treatment is considered by most to be acceptable professional conduct.

For those uninitiated in the longstanding PAS debate, the general rejection of PAS, on the one hand, and acceptance of withholding/withdrawing life-sustaining treatment, on the other, appears inconsistent. Some argue that if withholding/withdrawing treatment is deemed ethical, then, under the moral equivalence hypothesis, PAS (active euthanasia in which a physician administers the lethal drug) should be considered no less ethical because both lead to the death of the patient.[5] Others reason that the 2 acts are not equivalent because in withholding/withdrawing treatment, the intent is to remove painful interventions and relieve prolonged suffering, even if the action has the unintended, yet foreseeable, effect of causing a patient's death. Is intent sufficient to render these 2 acts morally unequal? Put another way, can a physician's intended end justify the means even when he or she is aware of the possibility of unintended ends? In medicine (as in law and life in general), intent does matter and, for many physicians, serves to distinguish between ethical and unethical actions taken in the course of caring for patients.

Finally, patients are not created equal. Some have family histories that predispose them to heart disease; others do not. Some are genetically predisposed to develop cancer; others are not. That patient health burdens are unequal, however, does not justify disparities in health associated with race and ethnicity that persist even when clinical factors are equal. Some elements that contribute to such disparities are not modifiable by the medical care system. But, one modifiable contributing factor to racial and ethnic disparities in care may be physician bias. As physicians, we have a professional responsibility to treat like patients equally, basing treatment on relevant clinical considerations. Which brings up the case of so-called "zebras"—patients who present with rare and interesting diseases. While these patient presentations are clinically fascinating to physicians, we should remember that, though patients are not created equal, they are never as different as apples and zebras.

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