Moving Health Care Ethics into the Future

In this issue of *Health Care Ethics USA*, Rachelle Barina and Emily Trancik call for more work on ethical issues arising in the outpatient setting and greater efforts to move ethics into that context. Much the same could be said about ACOs, the emphasis on population health and employed physicians and physician groups. There is a paucity of literature in these areas that deals with ethical concerns as well as how ethics can be integrated into these newer realities. These alternative structures for health care delivery are ripe for new initiatives.

Another emerging area in health care ethics is "green bioethics." At this year's Theology and Ethics Colloquium, the winner of the graduate student essay contest, Christina Richie from Boston College, delivered her essay titled "Building a Framework for Green Bioethics: Integrating Ecology into the Medical Industry." Richie states that the telos of green bioethics is "to promote green medical developments, techniques and procedures and reduce or eliminate ecologically harmful medical developments, techniques and procedures."1 She proposes four priorities to achieve this goal. The first is to place human needs before wants in order to reduce resources. The second is simplicity before complexity. "I suggest that approaches to treating and healing disease rely on simple measures before complex, expensive, or multi-step procedures are

undertaken." The third priority expands our health care system's scope of concern, that is, how it affects the weak and disadvantaged in this country and beyond. A green bioethics calls for global medical justice. Finally, a green bioethics promotes compassion and justice above marketing medical developments, techniques, and procedures for monetary gain. Such an approach would allow the medical industry "to focus less on production and more on conservation." Obviously, much more could be said about each of these priorities as well as the theological and ethical grounding of green bioethics. All that is intended here is to signal another developing area in health care ethics that is ripe for further work.

Another emerging area that is fertile for further exploration is nanomedicine. "Nanomedicine' is a field comprising medical applications of nanotechnology, while 'nanomedicines' are pharmaceutical products that comprise an enabling nanotechnological component, often a carrier, or vector, for the drug itself."2 And "nanotechnology" is understood "to refer to the manufacturing, characterization, and use of man-made devices with dimensions on the order of 1-100 nanometers(1nanometer [nm] = 1 billionth of a meter)."3 Nanotechnology is likely to become of considerable importance in personalized medicine where there is a desire to provide a particular therapy to a particular location in a patient's body at a particular time in the course of a disease. "In such a detailed situation, it becomes necessary to have

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tools that are very specific, controllable in time and space, and responsive to therapeutic needs as the patient progresses through therapy."⁴ This is especially true of cancer therapy. "For example, nanoparticle vectors can enable siteselective delivery of therapeutics. Nanochannel systems can be used to produce 'nanoglands' that release drugs from implants to enable timed-release and triggering of beneficial responses. ... The engagement of the body's healing processes and the ability to enhance these processes is at the very heart of regenerative medicine, and nanotechnology and nanomaterials have an essential role in providing stimulatory and protective scaffolds where stem cells can rebuild, repair, and regenerate dysfunctional and damaged tissue."5

Nanomedicine is not without its ethical issues, though, as the authors point out, the vast majority are similar to if not identical with ethical concerns raised by other advances in medicine. "[I]n all respects explored in the field, the ethical questions posed by nanomedicine are the identical counterparts of questions that have arisen in multiple other domains of medicine and medical research: no new categories of bioethical thoughts have emerged to date."⁶ This is not to say, however, that there are no ethical issues that have to be surfaced and addressed. They range from risks and benefits to patients, to the use of the extensive information gained by molecular profiling of individuals enabled by nanotechnology, to equitable access, especially in poor areas and developing countries and much else in between.⁷

Obviously, there are other developing areas in medicine and science that require ethical analysis, neuroscience, for example. All of these and other areas call for attention. They call us beyond the confines of our usual issues. Neglecting them will once again mean that science and medicine outpace ethics, by leaps and bounds. And we will inadequately serve those who look to us for assistance.

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¹ Christina Richie, "Building a Framework for Green Bioethics: Integrating Ecology into the Medical Industry," unpublished manuscript, 2013.
² Rebecca Hall, Tong Sun, and Mauro Ferrari, "A Portrait of Nanomedicine and Its Bioethical Implications," *Journal of Law, Medicine, & Ethics* (Winter 2012): 764.
³ Ibid., p. 763.

⁷ Ibid., pp. 767-776. See also Dresser, Rebecca, "Building an Ethical Foundation for First-in-Human Nanotrials," *Journal of Law, Medicine, & Ethics* (Winter 2012): 802-808.

⁴ Ibid., p. 766.

⁵ Ibid., p. 767.

⁶ Ibid., p. 776.