CATHOLIC MEDICAL ASSOCIATION

Essay

The Moral Dangers of Technocratic Medicine

The Linacre Quarterly
2019, Vol. 86(2-3) 231-238

DOI: 10.1177/0024363919858463
journals.sagepub.com/home/lqr
SAGE

John M. Travaline, MD[1]

Abstract

Current healthcare practices are becoming increasingly threatened by technocracy, and the influence of technocratic oversight of medicine as a profession compromises good, compassionate care. A real-life case illustrating how technocratic oversight in health care threatens the practice of medicine and health care in general serves as a basis for discussing some of the common perils inherent in a technocratic model of medicine. This article suggests antidotes and concludes with alternate pathways to practice medicine amid technocratic challenges.

Summary: This article discusses technocracy in current U.S. healthcare in order to raise awareness of its potentially negative effects. It then offers an overview of remedies based on Christian anthropology.

Keywords

Health care, Human person, Medicalization of death, Technocracy

At a usual physician staff meeting, a palliative care doctor for the hospital presented a newly minted hospital administration policy for discharging patients expected to die shortly, as a result of limiting or withdrawing life-sustaining therapy, from the critical care service. The patient would then be readmitted to a hospice service in order to reduce the mortality statistics for acute care. The patient would not die in an acute care bed, but in hospice where, of course, 100 percent mortality is expected.

This sort of practice is probably common in many institutions. To some physicians, other healthcare providers, and healthcare administrators, this type of policy is not particularly problematic, and some may even argue for it on the basis of sound, ethical analyses concerning the preservation of healthcare institutions for their mission and the need to "play the game" in order to reach other laudable goals. This article takes a closer look at this example through a lens designed to detect the subtleties of institutional policies at the intersections of clinical care.

At this staff meeting, the presentation provoked a barrage of questions: why do this other than for playing a numbers game with mortality? What is the benefit? To the patient? To their family? To the hospital? To the outsourced hospice agency? These are issues that need to be addressed.

To the question regarding the benefit for the patient, there really is none. Regarding the benefit to the doctors, none. To the patient's family, they would be eligible to receive structured bereavement services for up to one year or so. What is the benefit to the hospital? For the hospital, the mortality statistics will improve, and the hospital will receive part of the reimbursement payment for the service, 15 percent of which first goes to the hospice agency and then 85 percent is given to the hospital. The benefit to the hospice agency is that they receive 15 percent of the reimbursed payment. Although the doctor presenting this policy said that its implementation was a losing proposition for the hospice agency, the

[1] Lewis Katz School of Medicine at Temple University, Philadelphia, PA, USA

Corresponding Author:
John M. Travaline, MD, Lewis Katz School of Medicine at Temple University, 7th Floor Parkinson, 3401 North Broad St., Philadelphia, PA 19140, USA.
Email: john.travaline@temple.edu

question of other arrangements was concerning. Finally, at the end of the meeting, a six-page handout was offered on which more technical details of the process were delineated, and screenshots of the electronic medical record (EMR) pathways with step-by-step instruction were provided. This story is an example of just one of the many that confront us in current US healthcare systems, an example of a technocratic paradigm.

Technocracy is a system of governance by science and/or social control through the power of technique, the power itself is inherent to the way of doing something. In the healthcare field, it manifests as an institution, or system, or governing body, comprised of "experts" in matters of using knowledge, science, and/or technology to direct, influence, operate, or control a particular group. In health care, that group includes physicians, nurses, therapists, and those seeking the services of health care: the patients.

Technology itself is not technocracy. Technology may be and often is for the most part good—it contributes to human flourishing. We know on the basis of day-to-day experience that technology is a great good; we enjoy the many benefits of harnessed energy to deliver clean air, water, and food; technology brings many comforts to our homes. In medicine, we readily see the many goods wrought by technology. The goods of technology are not the issue. Rather, it is technocracy that does not contribute ultimately to human flourishing. In order to recognize the influence of technocracy in health care, it is important to know its features; specifically, the mechanisms by which they can exert a noxious influence and produce ill effects (Table 1).

Many of the features of technocratic medicine are found in this example about discharging dying patients from the critical care service to the hospice service. What's happening in this case? What are the particular features of this policy that exemplify technocracy? Is the patient primarily a bed holder in this context or a datum point that needs to be reassigned? Notice that the proposal is derived from an administrative, institutional "authority" not from the grassroots level where the action is occurring, that is at the bedside. Is this a case of subordinating a patient to an institution's goals?

Seeing death as a failure or defeat is another feature of a technocratic model of medicine. In this example, the mortality statistic is understandably unwanted but is not seen in its proper context. There seems to be a desire to ignore the fact that critical care units will typically have higher mortality statistics. A high mortality rate is not good for a hospital or for a hospital administration that wants to project a positive image by showing a low risk of dying in their institution, which contributes to propagating a myth of immortality. Moreover, these measures are derived from the technologic apparatus itself; it is not the observation of someone at the bedside who notices that something better can be offered. Rather, the starting point is a mortality statistic deemed by "experts" as unacceptable.

Table 1. Features of Technocracy in Health Care.

Features of Technocracy in Health Care
Perpetuates a crisis of the human person
Results in domination and alienation of individuals
Involves the subordination of patient to institution
Overvalues technology
Contributes to a loss of moral reasoning and analysis
Contributes to the medicalization of death and promotes a myth of immortality
Seeks to not only improve upon nature but to control nature
Is primarily profit driven and not necessarily value driven
Is intolerant of alternate ways of doing things

Source. This table was adapted from Davis-Floyd (2001, S21).

There are two major overarching moral dangers with respect to technocratic medicine. One is a flawed anthropology that causes and perpetuates a crisis of the human person and the second concerns the medicalization of death.

Crisis of the Human Person

One feature of the technocratic model of medicine is that it views the human body as a machine and views the mind, or one's consciousness or "spirit," as separate from the body. This creates a crisis of the human person. This dualistic view of the human person stems from and is essentially rooted in Gnosticism, a philosophy that holds that matter is evil and considers that only spirit or nonbodily realities are good and true. The corollary to this, of course, is the denial of the goodness and beauty of the human person who is a bodily creature with an immortal soul.

Certainly purveyors of health care announce patient-centered focus in care and make claims for how the patient is regarded in their health systems often in how the latest and best of a particular technology has been acquired and will favorably affect one's health or medical care. Yet, on closer inspection, despite the claims and prominent announcements, there is often something less than a proper

understanding of the human person evident in modern healthcare systems. Such a less-than-proper or frankly improper understanding of the person results in an identity crisis, a crisis about who a human being really is. Pope St. John Paul II, while recovering in a hospital bed after the assassination attempt, said in essence that there is a tension between remaining a "subject of one's illness" and becoming an "object of treatment" (Weigel 2005, 415). This objectification of the person certainly counters a Christian anthropology that relies on human dignity as its core. As Bonhoeffer (1997) once simply put it, "Man does not 'have' a body; he does not 'have' a soul; rather, he 'is' body and soul" (p. 51). Not only does a technocratic view of medicine present improper view of the patient because of its dichotomous view of the person, patients can too easily fall into this misunderstanding of the body as well. From this can come the current increase in requests for assisted suicide and euthanasia, when the patient views himself or herself as primarily spirit and secondarily body, and so erroneously concludes that as the body is subordinated to the spirit, it somehow can be treated differently, especially if it burdens the "real" person (spirit).

Related to this misunderstanding of the human person, another feature of the technocratic model in medicine concerns the patient seen as an object of domination, which results in an alienation of the patient from the physician, others, and even themselves. Professor of anthropology and sociology, Joanne Finkelstein (1990), writing about technocracy in medicine, tells us that, "Power produced through technology is a form of power arising from an ability to cultivate and satisfy specific interests, values, and desires. Such power is normative, cultural, and opportunistic insofar as it privileges the needs and desires of certain groups and individuals. The consumer's need or desire for a service or product subsequently becomes the means by which those providing the services or goods gain advantage. When exclusive possession is held over a desirable commodity a situation of domination is created" (p. 13).

Technocracy promotes a context in which a patient's (seen as consumer) need or desire for a service or product becomes the means for domination. Within a technocratic paradigm, individuals are cultivated to desire certain commodities, such as in vitro fertilization (IVF), contraception, or cosmetic surgery, and in pursuing them, become themselves secondary to the powers promoting them. A moment's reflection on the business of assisted reproduction, and the technologies applied therein, the enormous financial costs, and a sometimes frenzied pursuit of this "commodity" with seeming reckless abandon, risking health and financial stability in pursuit of pregnancy raises some serious questions: who is in control and who is manipulated? Who wields power in these circumstances?

Domination or control over another leads to alienation. To the extent that one is dominated by another, a system, or an "industry," one is objectified as a mechanistic part of a greater technocratic complex and becomes alienated from others and ultimately from oneself. Patients, because of their illness alone, are many times alienated, but when technologies are in the mix, they may be even more so.

Nowhere is this more evident than in communication barriers erected between patients and healthcare providers. Computer screens or electronic tablets in the office setting or in the hospital during rounds, interposed between doctor and patient, are often barriers to the clinical gaze, which should be directed to the patient but instead is diverted to the screen where one must make entries into the EMR. Further, to the extent that some EMR algorithms force sometimes medically irrelevant questions to be answered before proceeding tend to detract empathic attention from the patient and may contribute to alienating the patient. In some ways, technology in the intensive care unit (ICU), in the form of equipment devices (dialysis machines, ventilators, ECMO, etc.) at the bedside, creates a physical barrier to getting to the patient.

Also derived from a flawed anthropology as a moral danger emanating from technocracy is the subordination of a patient to an institution and its goals. Clinical care pathways, as an example, may have benefits to both patients (as a group) and systems, but they may not be of equal benefit to both and may vary for the individual. Often it seems the conflict is resolved primarily to benefit the system, whether related to cost containment, achieving specified benchmarks or attaining efficiency goals. Such pathways tend to standardize care independent of particular concerns of individual patients. For example, evidence-based medicine (EBM) guidelines may become thinly veiled mandates of technocracy to concentrate power within an institution or some governing body taking "power" or authority from physicians. According to Brase (2005), "EBM guidelines are not guidelines at all. These so-called 'best practices' are poised to become coercive mandates imposed by government agencies and third-party payers with political and financial incentives to ration health care—and the power to do it. . . . Fully

implemented, EBM will lead to a limited list of approved healthcare services—'best practices'—as determined by the agendas and values of a small cadre of politically motivated, personally biased individuals sitting around a table making treatment decisions somewhere far from the patient's bedside" (p. 18). Other commentators note that "practice guidelines can be "a mechanism for nonclinicians to use in controlling clinicians" (Rosoff 2001, 353).

An overemphasis on data measures and metrics is another way of enabling or perpetuating the crisis of the human person, alienation, and subordination of patients in technocratic medicine. In health care today, the EMR has become an enormous tool for data collection, measurement, and generation of additional data. Note that the EMR is not necessarily problematic in itself, but to the degree that it is ensconced in a technocratic paradigm and facilitates and contributes to technocratic operations, it risks damage to the medical profession. The EMR data quantification and measures packaged for various analyses, easier and more expansive, also enhancing the reach of medical technocracy. In *Tyranny of Metrics*, author and professor of history, Jerry Muller (2018) suggests that our society's obsession with quantification threatens various societal institutions, health care among them. An underlying premise for his argument is that there appears to be a belief that a way to be successful and to be better involves quantifying performance and then publicizing the data. Muller cites surgeon report cards as an example, including studies indicating that cardiac surgeons became less willing to operate on more severely ill patients who needed surgery after the metrics became publicly available (pp. 117–18). Mortality rates following this in fact declined, but only patients operated upon were included in the statistic. This phenomenon of risk aversion means that some patients who might be helped by surgery are not because of fear of elevating mortality rates by taking on riskier patients. On the other end of the spectrum, if overly aggressive treatments are performed and if the operation is not successful, in order to preserve a good outcome metric, such as thirty-day or one-year survival, the patient may be sustained by prolonged use of costly technology and services that are of little or disproportionate benefit.

There are many examples of truly improved care and truly good outcomes that metric information can highlight. The Geisinger Health System (Muller 2018, 108–9) has been a pioneer in the use of electronic health records and early on used their system in an innovative way, aiming to lower healthcare costs and at the same time significantly improve patient outcomes. This experience as well as a few others with similarly positive results is not the norm but rather the exception. The heterogeneity among health systems across the nation certainly does not permit ready implementation of such programs even if desired. And though a well-designed EMR can contribute to better patient care, a hyperfocus on measurements that EMRs facilitate runs the risk of shifting focus to quantitative outcomes, over qualitative outcomes, even to the point of sometimes quality measures based solely on quantitative points: using time stamps, one can measure patient throughput in an emergency department; quality measures then become how quickly throughput in the emergency department, or office clinic, can be achieved, as if throughput in itself is the good to achieve rather than adequate care of the patient in a timely way.

Medicalization of Death and a Myth of Immortality

The technocratic model of medicine sees death as defeat and as an unacceptable outcome. In the technocratic paradigm, the medicalization of death refers to the apparent denial of death by a system intent on overapplication of medical technology. Within this framework, death is seen as a failure of the system (at least as internally conceived)—and to the extent that the system asserts that death can be defeated, it contains an arrogant and fantastic claim. Hastings Center cofounder, Daniel Callahan, in *The Troubled Dream of Life*, writes about "technological brinkmanship," a powerful effort in medicine to push technology as far as possible, to the point at which it starts to become harmful or futile to continue the application of technologies, at which time they are withdrawn. He notes that the problem with this sort of approach is not just that there may be an abuse of technology or its misapplication. Rather, the main problem with technological brinkmanship is "the belief that we can manage our technology and its effects with precision necessary to make brinkmanship succeed" (Callahan 1993, 41). In fact, he goes on to say,

> The result of this continuing failure is the violence of death by technological attenuation, a stretching to the limit and beyond the power of technology to extend the life of organ systems independent of the welfare of the persons to whom they belong. That violence is occasioned by otherwise well-intentioned efforts to use technology to combat death . . . brinkmanship,

> moreover, is a source of the frequently reported impersonality of hospital deaths. Because of the focus on technological intervention, the human relationships are often neglected, judged less important, more dispensable, than the necessity of high-quality technical work. Machines and lab results and scanners [and I would add the EMR] become the center of attention; they replace conversation with the patient. (Callahan 1993, 41)

This particular feature of technocracy contributes to the perpetuation of what is called "the myth of immortality." This notion is this: if medical science will develop just the right drug, just the right device, just the right system . . . , then it will master, conquer, eradicate (an illness, disease, impairment), and ultimately death. "It is just a matter of time, and better technology," proponents of the myth might say.

Technocracy promotes this myth in many ways: advertisement claims for medical centers, health plans, pharmaceuticals. Death, in a technocratic paradigm of medicine, is often construed not as an inevitable reality but rather as medical failure. As Callahan notes, "Many physicians believe that a patient is dying not because of what is happening to his body but because there are no further medical of technological strategies available to keep the patient alive." Death, he goes on, "has been moved out of nature into the realm of human responsibility" (Callahan 1993, 64).

These two features of technocracy in medicine (medicalization of death and promoting the myth of immortality) contribute to another toxic effect of technocracy, the loss of an *ars moriendi*, the loss of the art of dying. In some circumstances, dying may bring meaning and comfort to a patient, and his or her family, despite the sadness and emotional pain that is often present. In those circumstances, dying may be enriched by religious, cultural, or social practices related to the dying process. Too often in encounters with dying patients, especially in the technologically replete ICUs but also in non-ICU settings, there is little time or provisions for family and others to be present to accompany the patient. A dying patient may want others around, but somehow doesn't express that wish, even though the patient knows that death is imminent. Why patients don't express that wish for others to be present may be due to their own denial of death or fear about talking about their death or perhaps the feeling that talking about death might somehow offend, disappoint, or upset their nurse or doctor. Perhaps they feel that talking about their dying will be a seen as a sign of weakness or giving up. All of this can be a result of the subtle pressures of technocracy. Whatever the reason, there are times when not talking about death and dying, when it is appropriate to do so deprives patients of an important experience in their life.

Antidotes in Technocratic Medicine

The greatest weapon in confronting technocracy in all its forms is a proper understanding of the person created in the image and likeness of God. One basis for understanding the human person is the theology of the body and an ever-deepening understanding of this teaching about the person. Pope St. John Paul II (2006), in the *Theology of the Body*, speaks of the "spousal meaning of the body" or the body's capacity for expressing love and self-gift. While this is of course proper to marriage, the physician–patient relationship also manifests a spousal meaning of the body, a capacity for expressing love and self-gift (Seyfer and Travaline 2008, 21). In the physician–patient relationship, this self-donation may be present in at least two ways:

1. The patient in being cared for by the physician and in so doing is giving the physician both his or her vulnerability and an opportunity for service.
2. The physician makes a true gift of self through kindness, healing touch, gentle words, and the use of medical knowledge to benefit the patient.

An abiding view of the patient as person, infused with an understanding of the beautiful realities offered to us in the theology of the body, as physicians and others caring for the sick and injured, will go a long way in combating the deleterious effects of technocracy in medicine. Some of the practical ways this plays out patient care are to always see the patient as a person and not a diagnosis or condition and certainly not a room number.

Technological fixes run the risk of depersonalization and is often itself a problem for the human person. Consider the example of IVF, a "fix" to the problem of infertility. The practice of IVF is devoid of moral consideration, rich in misapplied technology, and exerts control over individuals resulting in alienation. It is hardly a "fix" or solution. Yet some "fixes" like IVF are accorded such high social value that it tramples moral considerations and offends those who see it for the evil it is. Moreover, healthcare systems and insurance programs may

coerce cooperation, at least affiliation, with such problematic fixes because of the social value they command.

Throughput measures have restricted the time that physicians can spend with patients, resisting efforts to compromise time spent with patients, and respecting patients' time by allowing adequate amounts of time for visits both recognizes and combats the unethical practice of double- or overbooking patients (Travaline 2018, 196). When we use that time in attentive listening; explicit expressions of care and concern; when appropriate, connecting on a faith or spirituality level, this is a source of great comfort and excellent care for patients.

With respect to the effects of technocracy to dominate and alienate individuals, an effective antidote has to do with connectedness to the patient and to the patient's spouse or children or family in general. Drawing again from the theology of the body, in our care for patients, we will be served well to develop and nurture a keen awareness of what Pope St. John Paul II (2006) referred to as the communion of persons rooted in our giftedness before others, recognizing that to be truly human, to find ourselves, we must make a sincere gift of ourselves (p. 168). To the extent that we reflect the image of God through our rationality and relationality, so in the physician–patient relationship, a communion of persons is formed:

> The patient makes himself vulnerable. The healer senses this and responds with gentleness and sensitivity, so as to convey both that he is grateful to the patient for allowing himself to be vulnerable, and that he is worthy of this trust. . . . With this trust, the healer is to gather information, apply bandages or medicine, and diagnose . . .
>
> The communion of persons is fruitful when doctor and patient can give to one another in this way. It is thus fruitful and helpful for both, even when the healer has perhaps been unable to cure the patient of a malady . . . they are able to fulfill the call to be gifts to one another and to form a *communio personarum* (Seyfer and Travaline 2008, 24).

Being present to and for our patients is one concrete way we may show connectedness with our patients: present at the bedside, available to them by telephone, or through the use of e-mail when that is appropriate.

To the extent that some technologies and methods of practice are becoming more firmly embedded in the practice of medicine, careful analysis ought to be conducted before adopting such technologies and methods. To the mechanistic features of technocratic medicine such as the EMR and reliance on EBM, the antidote involves a critical view of evidence, not all EBM is good science. With respect to some applications of the EMR, particularly as regarding metric acquisition for the sake of simply gathering metrics, caution is in order. An antidote to be applied here may be to push back. Respectfully decline to participate in certain aspects of the system, though doing so might entail professional risks to the physician such as income loss or loss of practice privileges with an institution.

Related to this pushback to facets of technocracy that rely on various technics and gadgets to advance particular objectives in the technocratic paradigm, the antidote is detachment. Detachment from the control or obsession with gadgets and technics uncouples the healthcare provider from a mechanistic role in the system. One example might be limiting use, certainly avoiding excessive use, for example, of smartphone apps or gadgets that may appear to serve some good but are really distracting from good patient care. It is the extent to which the attachment to some technologies is problematic by making one a "cog in the wheel" of technocratic machinery; by eroding professionalism and the patient–physician relationship; by disrespecting the patient as a person, by disrespecting their time, their concerns, and their values that these applications are problematic.

Antidotes to the medicalization of death and the myth of immortality are essential. First, physicians must find ways to resist seeing death as defeat. In part that is achieved by ensuring that our counsel with patients about diagnoses, treatments, and prognoses is transparent, honest, and balanced. It is essential to work through our discomfort with death, so that we can help our patients do the same. Patients and physicians alike must recognize the limits of the technologies we apply and have a sense of their proper order. This takes time and intent in order to recover a sense of the art of dying. Callahan (1993) puts it this way,

> "Our first task at present is to recapture our mortality, to give it once again a meaningful relation to our lives. Death must be brought to the surface, given its rightful place, brought back inside of life. The fact of its inevitable triumph—its ultimate necessity—must be built into the very definition of medicine, become once again a part of its own mission, a limit to its art that helps define

> the nature of that art. Mortality must, in turn, be built into the very definition of the self—a self that human beings once understood with some clarity, but that now lives confusedly in the presence of a medicine that can, and will, make constant advances against the cause of death, manipulating and remanipulating its temporary contingency." (p. 124)

Catholic physicians offer the witness to patients and to other professionals of an understanding of the mystery of suffering. Christians are invited by the gospel to reflect on who Jesus is and to see that who he is, is inseparable from the cross. Efforts to better understand the nature of suffering is important, and they must involve not only ourselves but a way to communicate this to our patients.

In closing, an emerging countercurrent movement among some Christians known as the Benedict option may be a mechanism for preserving Christianity in the West amid noxious secularism (Dreher 2017, 18). A corollary effect may be that it helps to restore medicine as a noble, virtuous profession. There is much to consider with this approach. To some extent, the Benedict option is a way of settling in with like-minded folks so as to strengthen and concentrate a resistance to the perils of technocracy—a sort of circling-the-wagons approach, assuming more a defensive posture to various assaults to the medical profession. An option that may seem less defensive, and perhaps more engaging of the "enemy" is that such enclaves of the faithful with Christian ideas, values, and practices reenter the world at points where they find themselves, to reevangelize, recatechize, revitalize those they encounter. Weigel (2018) calls this the "Gregorian Option," after Pope Saint Gregory the Great, who left the world of public affairs, founded a Benedictine monastery, lived as a monk, and then eventually was called back into the public square to serve (p. 146).

In health care engaging the technocratic paradigm, elements in both options are appealing. Having become stronger through living gospel values, we may seek to reenter the clinics and hospitals, giving even greater witness to Jesus Christ. On whichever path we choose to follow or whichever path we may find ourselves, the most fundamental antidote against the tyranny of technocracy that we will want to carry with us is to have a deep and abiding view of the human person as created in the image and likeness of God who pronounced humankind "very good." Through this lens, clinical care can be properly focused, revealing an understanding of the patient as person, created and loved by the Father. With this view, can we hope to resist the various threats telling us otherwise and the forces acting contrary to this reality.

In medicine, emphasis must be placed on the primacy of the patient as a person, not the health system, not the institution, not even the goal to eradicate disease and certainly not on quest to conquer death. As a reflection on technology in health care, consider the question asked by one sociologist commenting on technocracy: "Do we want to improve Africa's water resources or to produce people who have no need of water? Do we want more effective disease prevention or people with livers and lungs modified so that they can drink and smoke as much as they want?" (Bucchi 2009, 96).

The hubris that accompanies a technocratic regime is countered only by humility, not only accepting but embracing our humanity and our proper disposition before God. Humility is the main, active ingredient in all the antidotes to technocracy in medicine. In fact, it is the only way evil has ever completely been overcome as Scripture shows us (Phil 2:8).

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

John M. Travaline, MD https://orcid.org/0000-0001-8048-433X

References

Bonhoeffer, Dietrich. 1997. *Creation and Fall*. New York: Simon and Schuster.

Brase, Twila. 2005. "How Technocrats Are Taking over the Practice of Medicine a Wake-up Call to the American People." Citizens' Council on Health Care. Policy report (January). http://www.cchfreedom.org/pdfreport/.

Bucchi, Massimiano. 2009. "Beyond Technocracy: Democracy in the Age of Technoscience." In *Beyond Technocracy: Science, Politics and Citizens*, translated by Adrian Belton, 93–96. New York: Springer.

Callahan, Daniel. 1993. *The Troubled Dream of Life*. New York: Simon and Schuster.

Davis-Floyd, R. 2001. "The Technocratic, Humanistic, and Holistic Paradigms of Childbirth." *International Journal of Gynecology & Obstetrics* 75:S5–23.

Dreher, Rod. 2017. *The Benedict Option*. New York: Penguin Random House.

Finkelstein, J. L. 1990. "Biomedicine and Technocratic Power." *Hastings Center Report* 20 no. 4: 13–16.

John Paul II, Pope. 2006. *Man and Woman He Created Them: A Theology of the Body*. Translated by Michael Waldstein. Boston, MA: Pauline Books & Media.

Muller, Jerry Z. 2018. *The Tyranny of Metrics*. Princeton, NJ: Princeton University Press.

Rosoff, Arnold J. 2001. "Evidence-based Medicine and the Law: The Courts Confront Clinical Practice Guidelines." *Journal of Health Politics, Policy and Law* 26 no. 2: 327–68. doi: 10.1215/03616878-26-2-327.

Seyfer, Tara, and John Travaline. 2008. "The Theology of the Body and Modern Medicine: Informing the Practice of Healing." *The Linacre Quarterly* 75 no. 1: 16–30. doi: 10.1179/002436308803889701.

Travaline, John. 2018. "Practicing Medicine in Light of the Gospel." *The Linacre Quarterly* 85 no. 3: 193–99. doi: 10.1177/0024363918779840.

Weigel, George. 2005. *Witness to Hope: The Biography of Pope John Paul II*. New York: Harper Collins.

Weigel, George. 2018. *The Fragility of Order: Catholic Reflections on Turbulent Times*. San Francisco, CA: Ignatius Press.

Biographical Note

John M. Travaline, MD, is a professor of thoracic medicine and surgery at the Lewis Katz School of Medicine at Temple University. He earned his medical degree from Jefferson Medical College, completed internal medicine training at the University of Maryland Medical Center, and then training in pulmonary and critical care medicine at Temple University Hospital. His interest in religion and medicine is long-standing, and weaving Christian ethics as a discipline complementing his practice of medicine began as a graduate student of religious studies at Villanova University. He has been particularly interested in understanding human suffering in the context of illness and engaging medical students and physicians in conversation about caring for patients in accord with their dignity as persons, especially at the end of life. He lectures frequently at the local and national levels and is a member of the faculty for the Philadelphia archdiocesan program *Life Affirming Choices: End-of-life Decision Making* through the Office for Life and Family. Also through an initiative of the Catholic Medical Association, he coauthored and recorded public service announcements for radio broadcast intended for educating the public about the perils of euthanasia and physician-assisted suicide. In addition to ongoing contributions to the education and formation of medical students, he maintains an active clinical practice in both critical care of patients and in the care of patients with acute and chronic lung conditions including patients with lung cancer. He served on the ethics committee at the University of Maryland Medical Center and Temple University Hospital where he was its chairman from 1999 to 2004. He served many years as a member of the Temple Research Review Committee of the Institutional Review Board and has been a regular contributor to *The National Catholic Bioethics Quarterly*. He currently serves as the executive editor for the *Linacre Quarterly*, the official publication of the Catholic Medical Association. He is the author or coauthor of more than 120 peer-reviewed journal articles, abstracts, and book chapters, including publications on topics in medical ethics, physician–patient communication, end-of-life care, and selected areas in theology. He is also the coeditor of a newly published book, *Catholic Witness in Health Care, Practicing Medicine in Truth and Love*. In addition to his academic medical profession, he was ordained deacon for the Archdiocese of Philadelphia in 2012. He and his wife Cathy enjoy over 31 years of marriage, have four children, two grandchildren, and reside in suburban Philadelphia.