CENTER FOR PRACTICAL BIOETHICS
GUIDANCE AT THE CROSSROADS OF DECISION

The Ethics Dispatch

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"The object of philosophy is the logical clarification of thoughts. Philosophy is not a theory but an activity."

- Ludwig Wittgenstein

Hot Topic

ECMO and Ethics

In the goal of achieving longer and higher quality of life for patients and for all of us, medical technologies are oftentimes pushed further even than their inventors had initially imagined. Clinicians and clinical ethicists have referred to this phenomenon as "pushing the envelope."

Doing so has led to the development of medical procedures that would have been considered impossible not so long ago. Examples include hemodialysis, mechanical ventilation, organ transplantation, ventricular assist devices, and even pacemakers. Millions of people remain alive today because of technological advances in medicine such as these.

Can vs. Should

But technological advances in healthcare do not come without ethical concerns, some generalized and some unique to each new thing that comes along. The pattern is familiar by now: research and development, clinical trials and excitement at good outcomes, introduction and expanded utilization, unforeseen consequences or dilemmas, and retrospective ethical reflection.

When a new, disruptive medical technology becomes available, at some point a central ethics question inevitably gets raised: "Just because we can, does that mean we should?" Currently, we are seeing this phrase applied to the expanded utilization of ECMO.

A Bridge to Something Better

ECMO, extracorporeal membrane oxygenation, "is a type of artificial life support that can help a person whose lungs and heart aren't functioning correctly. ECMO continuously pumps blood out of your body and then sends it through devices that add oxygen and remove carbon dioxide. It then pumps the blood back into your body." (https://my.clevelandclinic.org/health/treatments/21722-extracorporeal-membrane-oxygenation-ecmo).

"ECMO may be used to help people who are very ill with conditions of the heart and lungs, or who are waiting for or recovering from a heart transplant. It may be an option when other life support measures haven't worked." Unfortunately, as advanced and beneficial as EMCO might seem, it "does not treat or cure a

disease, but can help you when your body temporarily can't provide your tissues with enough oxygen." (https://www.mayoclinic.org/tests-procedures/ecmo/about/pac-20484615)

Despite the benefits ECMO can provide and had been providing since its introduction in the 1960s up until the COVID pandemic, most of us probably knew little or nothing about it. The technology gained some attention when it was found to be useful in prolonging the lives of adults whose lungs were severely compromised from COVID, and suddenly ECMO became a familiar acronym. We also began to notice the ethical conundrums raised by its expanded use.

A recent article by Clayton Dalton in The *New Yorker* is titled, "How ECMO is Redefining Death." Dalton describes ethical concerns that are unique to ECMO technology. Ultimately though, the questions raised are those asked of all medical interventions: When should it be used or withheld? And who should decide? The article notes that ECMO is not a curative intervention but rather a bridge to hopefully something better. (Dalton)

Or a Bridge to Nowhere

That "something better" might never be realized. Palliative and critical care physician Dr. Jessica Zitter commented, "The unfortunate reality is that, sometimes, people get put on this machine and they don't get better." A patient whose heart has stopped could potentially live on the machine for months--awake, able to walk and read the newspaper. But he might never leave the I.C.U. "It's a trap," Zitter said. (Dalton)

"ECMO is transforming medical care, saving lives," writes Dalton in *The New Yorker* article. "But it also complicates care when life inevitably begins to end, committing some patients to a liminal state with no hope for recovery" (Dalton).

The article gives an example of a teenager with cystic fibrosis who was admitted to a hospital while in crisis. His life ultimately could not be saved, but it could be prolonged using ECMO while awaiting the possibility of a second lung transplant.

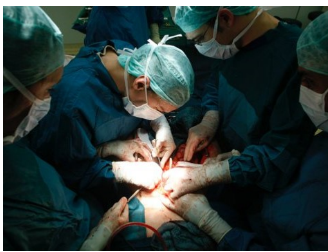
A previous lung transplant was failing, and his only hope was another transplant. He was put on ECMO while he waited. Two months later, doctors discovered that he had developed an incurable cancer. Now there was no way for him to leave the I.C.U. His lungs were beyond recovery, and the cancer made him ineligible for transplant. He was caught on a bridge to nowhere. Some members of the medical team thought that ECMO should be stopped. Transplant was no longer possible, and ECMO machines were scarce. As long as the patient was on the machine, it couldn't be used to save someone else. It's also expensive; according to a 2023 study, the median hospitalization charge for COVID patients on ECMO was around eight hundred and seventy thousand dollars, and prolonged cases can exceed several million. These resources might be needed to help other patients, and the boy couldn't live in the I.C.U. indefinitely." (Dalton))

All new major advances in medicine bring ethical challenges, complications and concerns, and ECMO is no different. The questions raised are those pertaining to fundamental principles of medical ethics: respect for persons, beneficence versus nonmaleficence, and distributive justice.

Quality of life versus quantity is at issue in extended use of ECMO technology. And who should decide? Then too: What about those extraordinary costs, which in almost every case are paid for by society via insurance premiums or taxes while other important healthcare priorities remain unfunded or underfunded? These questions do not have easy answers. The ethics of ECMO will be pondered, discussed, debated and, in particular cases, decided for years yet to come.

Bioethics in the News

A Common Good Framework in Bioethics and Policy



Catholic Bioethicists: Lack of Agreement about Brain Death

New Report Calls on Bioethics to Take a Stand Against Anti-Black Racism

Eggs Are a Hot Commodity: A Bioethical Perspective on Egg Donation

Applying The 4 Principles Of Bioethics To Plan Design

Debate Simmers over When Doctors Should Declare Brain Death

Case Study

"ECMO? For How Long?"

ECMO Extends Life and Poses Challenging Ethics Questions

Thad is a 44-year-old male patient suffering from multisystem organ failure including heart and lung failure. Thad remains in a minimally conscious state. He is in need of a heart transplant and has been waiting for two years on the donor recipient list but has continued to decline. He is now requiring ECMO in order to live. Thad lacks capacity and is totally bedbound. The patient's family (wife and daughter) are insistent that all aggressive measures continue, in the hope that he will eventually receive a heart transplant. The hospital team understand the importance ECMO has in keeping Thad alive and giving hope to the family but are concerned about its continuation as they do not known when a heart transplant will become available. They request an ethics consult regarding how long they should continue to provide ECMO.

Ethical Musings

Is a Curative State the only Destination Worth

Attaining?

ECMO as a medical technology is truly awe inspiring. It is capable of maintaining life potentially for weeks or months in someone who would otherwise be dead for lack of cardiopulmonary function. This sort of disruptive new technology enables life extension while also posing challenging ethics questions.

As previously noted, ECMO is not curative itself but can be a bridge to curative therapies. That is how it was intended, and that sort of utilization seems relatively noncontroversial. When a patient is on ECMO without any curative options—on a bridge to nowhere—we are confronted with more troubling questions of how long to continue and when to stop. Patients on ECMO might be awake and talking, unlike someone on a ventilator with heavy sedation. An ECMO patient is tethered to a machine, yes, but it might be a life worth living. At what point, if ever, is it ethically fitting to remove ECMO support from someone for whom that is their only hope for life extension?

While ECMO support is unique in some ways, in others it is not. Mechanical ventilator support, hemodialysis, tube feeds, and blood transfusions are other types of life supports for which there may not be a curative destination. Many patients will live only if such life support continues. They too are on a "bridge to nowhere."

But is life extension on life supports truly "nowhere"? Is a curative state the only destination worth attaining? This is something to ponder with care and humility, especially by those of us who currently are healthy and who may be called upon to make recommendations in regard to others critically ill yet still alive. Such persons are especially vulnerable to our opinions of what constitutes a life worth living or to what constitutes good stewardship of limited resources.

It may be a stretch to compare ECMO and other medical life supports to food consumption, but it's worth thinking about. Food too is a maintaining intervention but not curative. Everyone needs to eat to survive. Without food, a person will inevitably die. But food does not "cure" a person's hunger. It only delays it until that person is hungry again. Most people need to receive this intervention three times a day. But we do not question the value of continuing to provide food for people. Ought we question extended use of ECMO for a few for whom it is their only means of survival?

Life is a delicate thing that requires constant maintenance and upkeep. We need to eat, bathe, socialize, etc. These cannot be done once, like a surgical intervention, with the expectation of hopefully never having to do it again. Life is sustained by continual repetitive consumption of resources that will not eliminate our needs, or only for a while. Life-sustaining medical interventions like ECMO or dialysis can be understood as at least somewhat analogous. They are means for keeping people alive even if there is no possibility of a cure. Might it be important to value that sort of life also? Perhaps we ought not jump quickly to conclusions regarding the value or disvalue of something just because it is not an end in itself.

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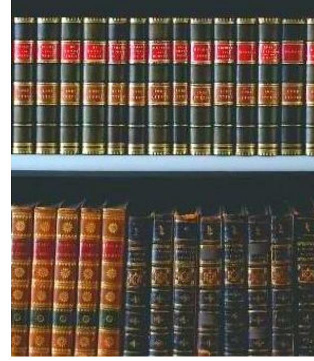

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