

## Futile Treatment—A Review

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**Abstract** The main goal of intensive care medicine is helping patients survive acute threats to their lives, while preserving and restoring life quality. Because of medical advancements, it is now possible to sustain life to an extent that would previously have been difficult to imagine. However, the goals of medicine are not to preserve organ function or physiological activity but to treat and improve the health of a person as a whole. When dealing with medical futilities, physicians and other members of the care team should be aware of some ethical principles. Knowing these principles could make decision-making easier, especially in cases where legal guidelines are insufficient or lacking. Understanding of these principles can relieve the pressure that healthcare professionals feel when they have to deal with medical futility. Efforts should be made to promote an ethics of care, which means caring for patients even after further invasive treatment has been deemed to be futile. Treatments that improve patients' comfort and minimize suffering of both patients and their families are equally as important as those aimed at saving patients' lives.

**Keywords** Medical futility · Ethics · Critical care · Palliative care · Quality of life

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### Goals of Medical Treatment

Emergency and intensive care medicine have improved greatly during the last couple of decades (Gristina et al. 2011). In addition, advancements in technology have enabled the development of diagnostic and therapeutic methods which have significantly helped in saving lives. Along with improvements in medical care, increased medical costs have also become evident. In the United States, approximately 20 per cent of all medical costs are incurred by critical care patients (Huynh et al. 2013). Demographic trends are also changing, with people living longer. Older patients may have various comorbidities and may need intensive care treatment more often (Guidet et al. 2012). Furthermore, there is a growing prevalence of conditions requiring intensive-care management regardless of the patient's age, such as severe sepsis or high risk surgeries (Guidet et al. 2012).

In order to use available resources appropriately, medical practitioners should ask themselves: What is the main goal of the treatment? The main goal of intensive care medicine is helping patients survive acute threats to their lives, while preserving and restoring the quality of those lives (Truog et al. 2008). Because of medical advancements, it is now possible to sustain life to an extent that would previously have been difficult to imagine, although sometimes that can prove to be unreasonable, not to say harmful and unethical. In some situations, instead of sustaining life, we can end up prolonging the dying process as well as the suffering of the patient. In such cases, treatment that maintains a state of permanent coma or dependence on intensive

care without a real chance of improving the patient's health and quality of life is not only an inappropriate use of limited healthcare resources but also contrary to professional and ethical values (Huynh et al. 2013). The goals of medicine are not to preserve organ function or physiological activity but to treat and improve the health of a person as a whole (Schneiderman, Faber-Langendoen, and Jecker 1994). If the treatment is used merely to preserve the physiological functions of a permanently unconscious patient or has no chance of achieving the goal of returning the patient to a level of health that would enable him/her to survive outside of an intensive care unit with an acceptable quality of life, then such treatment is futile (Schneiderman 2011).

Although many doctors and other medical staff are aware of medical futility and all the problems related to it, it is not uncommon in everyday practice to see patients being treated even when that treatment could be considered futile (White et al. 2016; Willmott et al. 2016). Therefore, the purpose of this article is to increase the awareness of futile treatment and to discuss some of the ethical issues related to it. Although this review addresses mostly the situation in the United States, in many parts it can relate to other countries as well. The intention of the authors is also to make some recommendations that could be useful, especially in countries and regions where formal recommendations and algorithms for dealing with medical futility are lacking.

## Methods

Studies were retrieved by searching MEDLINE, Scopus, and WOS databases. Two reviewers independently screened and extracted abstracts to identify studies that included the topic of medical futility. An article had to satisfy several criteria to be considered in our review. Articles had to be published between 1990 and 2015 and written in English. Only studies for which full text was able to be retrieved were taken in consideration. Among those, forty articles were considered of value to our review.

In this review, some terms were used that can be understood differently depending on the country/region. To avoid misunderstanding, the term “physician” here refers to doctors who are specialized in working in intensive care units and “legal guardian” is the person that has legal authority to make decisions for a patient. The latter usually refers to a member of the patient's

family or in some cases a representative of a public institution such as a social care centre.

## Medical Futility Problem

The concept of medical futility is probably as old as medicine itself. Plato wrote:

For people whose lives are always in a state of inner sickness, Asclepius did not attempt to prescribe a regime to make their life a prolonged misery ... a life with preoccupation with illness and neglect of work is not worth living. (Schneiderman 2011)

Although this concept has been known for a long time, and many authors have tried to define it (Ardagh 2000; Rinehart 2013; Schneiderman 2011; Schneiderman, Faber-Langendoen, and Jecker 1994; Swetz et al. 2014), there is still no consensus on a definition of futile treatment, as it has proved hard to define specific criteria that could be used, for example, for unilateral withdrawal of treatment (Wilkinson and Savulescu 2011). Instead, opinions of experienced ICU physicians have been found to predict an individual patient's survival more accurately than do most computer-based prognostic scoring systems (Swetz et al. 2014). However, it is not always easy or possible for a physician to see that a specific treatment is futile. For example, doctors working in emergency departments will often start treatments that could later be seen as futile (Forero et al. 2012).

## The Grey Zone

There is general agreement that treatment is futile when it can no longer achieve its goals. Setting of the goals of treatment can sometimes be challenging. The concept of patient autonomy means that patients are directly involved in making decisions about their treatment. That does not mean that they can insist on and receive any treatment they desire but only that they can choose between the options that their physician thinks are likely to benefit their condition (Rinehart 2013). Furthermore, patients also have the right to refuse those options. Patients and their families often have unrealistic expectations and may insist on various invasive treatments and procedures even though such measures will not influence the final outcome (Swetz et al. 2014). On the other hand, doctors can sometimes feel obligated to use

different technological interventions not because they feel the patient would benefit from them but simply because they are available to them (Swetz et al. 2014). Furthermore, when many physicians are involved in treatment of a patient, achieving consensus about the goals of treatment can be problematic (Rinehart 2013). It is also important not to neglect the religious beliefs and personal morals of many physicians that conflict with the professional codes of the medical organizations to which they belong (Antiel et al. 2011). Therefore, the goals of treatment should be set by consensus between physicians and patients or their families whenever possible (Swetz et al. 2014). Although this may sound simple, sometimes it can be rather complicated to establish the goals of treatment.

### Decision-Making Process

When goals are set by consensus with the patient or his/her legal guardian, it will be easier to make a decision not to begin a specific treatment or to stop with a treatment that proves to be futile and to start with other measures aimed at improving the quality of the patient's life (Center for Practical Bioethics 2008). In cases where the care team and patient or patient's legal guardian cannot reach consensus, decision-making becomes complex; this is even more so in cases where patients are unconscious and cannot make decisions for themselves. After the Cruzan case in the United States (Cruzan v. Director, Missouri Department of Health, 110 S. Ct. 2841 [1990]), the use of advance health directives became recognized by the courts of law in the United States and have gradually gained legal status in many other countries. If a patient has completed such a directive, the decision about further treatment can be made more easily. Those directives usually include the patient's wishes regarding end-of-life care but they can also include appointment of a person who will make decisions in cases when the patient is incapable of making decisions by himself/herself. In most cases, however, there are no advance health directives. In those situations, physicians should take into consideration the opinion of the substitute decision-maker who knows what the patient would want, the probability of achieving the goals of treatment, and the potential benefits, risks, and burdens, also having in mind the patient's quality of life and propose treatment measures consistent with the prognosis (Jox et al. 2012; Rinehart 2013).

Those measures may include withdrawal or withholding of futile treatments, time-limited trials, or redirecting patients to palliative or comfort care (Gristina et al. 2011; Center for Practical Bioethics 2008; Rinehart 2013). It is not unusual to see a patient or his/her legal guardians disagree with measures proposed by the medical care team. In cases where it is not certain whether a patient would benefit from treatment, or in cases where the patient (or where they have lost capacity, their family or legal guardian) strongly opposes discontinuation of further treatment that the physician thinks is futile, a time-limited trial can be helpful. For example, for a patient who doesn't regain consciousness after cardiopulmonary resuscitation, a period of intensive care and life-support treatment can be instituted. The purpose of such a procedure is to enable family more time to accept the fact that the patient will die and to enable them to come to terms with it. However, in these situations the physician can find himself/herself dealing with competing ethical principles. One of the basic ethical principles in medicine is do no harm. On the other hand, continuing with further treatment will increase the cost of care in the setting of limited resources. The situation can be further complicated by the potential harm to family regarding the cost of care. Also, if it is not certain that treatment measures will improve a patient's health, we can start with treatment and then, after some time, evaluate the results. In order to make time-limited trials effective, there should be a written contract between the physician and the patient or his/her legal guardian (Rinehart 2013). In this contract, clear goals of treatment should be specified and if these goals are accomplished, treatment will continue. If the goals are not achieved, the physician is not obliged to provide further treatment and can either stop the life-support measures or transfer the patient to another institution if the family or legal guardian insists on it. The contract should also specify the time period after which the treatment effect will be evaluated, which can be from a few days to a few weeks. This kind of approach often helps the family to accept the fact that further treatment is futile and also helps the care team as they feel that they have done what they could (Gristina et al. 2011). In cases where physician and patient or his/her legal guardian cannot agree on a time-limited trial and goals of treatment cannot be set by consensus, the dispute can be resolved by consulting with ethics committees (Center for Practical Bioethics 2008; Moldow et al. 2004). The constitution of ethics committees that would help in dealing with decisions regarding

futile treatment came into practice in the United States after the case of Karen Quinlan (Kenny 2005). Ethics committees usually do not determine whether the treatment is futile or not. Studies have shown that most disputes are associated with insufficient communication between physicians and patients or their legal guardians (Swetz et al. 2014). Therefore, the ethics consultation primarily aims at encouraging both parties to undertake additional dialogue and tries to improve communication between them (Center for Practical Bioethics 2008). In some cases, however, these committees may be involved in deciding whether or not the proposed or ongoing treatment is futile. These are usually situations where physicians believe the further treatment is futile but the family still insists on it. If, even after ethics consultations, agreement cannot be reached, resolution of a problem can be sought at a court of law (Lofmark and Nilstun 2002; Wilkinson and Savulescu 2011). It is important to say that, regardless of patient autonomy in most legal jurisdictions, if a physician considers further treatment futile, he is not obliged to offer therapies which he thinks will not help in achieving the goals of care and therefore will be futile (Truog et al. 2008). In cases where courts have to decide about further treatment measures, their decisions can be both in favour of and against the provision of futile care (Appel 2005; Flannery 1995; Kenny 2005; Mueller 2009; Swetz et al. 2014).

### Ethical Principles

When dealing with medical futility, physicians and other members of the care team should be aware of some ethical principles. These principles can facilitate decision-making, especially in cases where legal guidelines are insufficient or lacking. Understanding of these principles can relieve the pressure that healthcare professionals feel when they have to deal with medical futility.

The first principle is that withholding or withdrawing life support are equivalent (Truog et al. 2008; Wilkinson and Savulescu 2014). That means that if a physician thinks that starting specific treatment in a given circumstance would be futile, and therefore chooses not to start it, then they would be equally justified to withdraw that treatment from a patient who is receiving it when it can no longer accomplish the goals of treatment. There is no difference, either in the intention of the physician who withholds and the one who withdraws the therapy or in the consequences for the patient, as the cause of their

death will be the same (Wilkinson and Savulescu 2014). Therefore, there is no difference in moral responsibility of the doctors for their decision (Wilkinson and Savulescu 2014). This principle is recognized in legal practice, for example in the case of Tony Bland (McLean 1999).

The second principle is that there is great difference between killing and allowing to die (Truog et al. 2008). Although withdrawing or withholding of life support from a critically ill patient leads to their death, in cases where further treatment is futile it is legally not considered killing, as was shown in the court decision in the case of Karen Ann Quinlan (Kenny 2005). On the ethical side, if further treatment is thought to be futile, then it is the ethical duty of the physician to stop further treatments aimed at simply prolonging life and to start treatments that improve the comfort and dignity of the patient and his/her family (Schneiderman, Faber-Langendoen, and Jecker 1994).

The third principle addresses the consequences of comfort and palliative care treatments. To ease patients suffering, physicians often have to use medications in doses that could shorten the patient's life. In those cases, the physician may feel like he is "killing" the patient. However, there is a clear distinction between giving medications with the intention to kill (in this case it would be euthanasia, which is illegal in most countries) and giving medication with the intention to make the patient comfortable. The crucial difference is therefore the intention of the physician who provides the medication. This difference is recognized by most religious and medical groups, and is also supported in U.S. law (Vacco v. Quill 521 U.S. 793 [1997]).

In some cases, medical futility can be mistaken for rationing of medical resources and a way of reducing costs of treatment. The difference between those two terms is clear. When something is futile, it means that it cannot bring any benefit to the patient, no matter how expensive the treatment might be or how well-resourced the health system is. On the other hand, rationing means that certain measures or procedures are withheld from one patient or a group of patients in order to provide them to other patients who will benefit more from them (Schneiderman, Faber-Langendoen, and Jecker 1994). Therefore, when considering futility, it is irrelevant whether the resources are limited or whether other patients are more entitled to care (Schneiderman, Faber-Langendoen, and Jecker 1994).

Although providing futile care is generally unethical or even harmful, there are some exceptions when such

measures can be morally justified. For example, compassionate exceptions can be made in cases of severely burned patients or patients with metastatic cancer where treatment measures that will result in only brief prolongation of life can be provided (Schneiderman 2011). That kind of treatment should be given only to enable a patient or their family to come to terms with the fact that the patient will die. During that period, comfort care should also be continued so that the patient's suffering is minimized since the dying process will be prolonged for a certain period of time. Of course, these situations are only exceptions and providing such measures to patients who are in a permanent vegetative state is clearly futile. It is important, however, to distinguish this compassionate act from an obligatory act.

### Advance Health Directives

During recent decades, there has been an increase in the number of patients admitted to hospitals who have some kind of advance health directive. This increase has been seen in hospitals in the United States and Europe but also in Australia, New Zealand, and Canada and increasingly in Asia and other parts of the world (Sellars, Detering, and Silvester 2015; Tsoh et al. 2015). In many hospitals, it has become common practice to speak with patients during admission about their wishes regarding possible cardiopulmonary resuscitation, mechanical ventilator support, or other invasive treatments. Although this approach is helpful in avoiding possible futile treatment in future care for these patients, there are some problems associated with it. Studies have shown that patients who have signed do-not-attempt-cardiopulmonary-resuscitation (DNACPR) forms are often subjected to suboptimal care and can have their treatment incorrectly withdrawn (Chang, Huang and Lin 2010; Fritz et al. 2010; Mockford et al. 2015). Therefore, when patients sign DNACPR forms, it doesn't mean that further treatment and care for those patients can stop. Furthermore, when additional treatment for a patient is considered futile, it does not mean that the healthcare team should give up on that patient. Instead, for all patients, active measures of treatment and care have to be provided as long as they are not futile or they have not been refused by the patient or legal guardian. When further treatment becomes futile, palliative or comfort care must be provided (or continued if it is already being provided). This transition from cure to

comfort can be and usually is difficult to make but is also a very important part of medical and nursing practice (Truog et al. 2008). Both the physician and the care team have an obligation to support the dignity of the patient at all times, including in the last days of the patient's life, and therefore have to make efforts to alleviate any suffering as much as possible (Schneiderman 2011). When talking to patients or their families and explaining to them that further treatment would be futile, the physician should not speak only about things that will not be done or those that will be withdrawn. Instead, the focus should be more on explaining the things that will be done in order to improve the comfort and quality of the remaining life (Rinehart 2013; Schneiderman, Faber-Langendoen, and Jecker 1994). Research has shown that informed discussions about end-of-life care help to reduce unnecessary ICU admissions and also help in improving quality of life for the patients (Rady and Johnson 2004). It is suggested that discussion about end-of-life preferences should begin, if possible, before hospitalization in patients with certain chronic diseases (Rady and Johnson 2004). As previously mentioned, patients with signed DNACPR forms often have suboptimal care. To avoid that, the universal form of treatment options (UFTO) has been introduced (Fritz et al. 2013). This form has focused on the patient's decision between active and supportive treatment, as well as listing treatments to be given instead of those to be withheld. First results show a significant decrease in harm to patients for whom a DNACPR decision has been made (Fritz et al. 2013). It has also been shown that early identification of patients who require palliative or supportive care has increased significantly, leading to better care for those patients (Fritz et al. 2013).

### Palliative Care/Comfort Care

Palliative and comfort care should not begin only after the futility of further treatment has been determined. That kind of care should be provided all the way from making the diagnosis until the end of life (Center for Practical Bioethics 2008). It should include management of pain and symptom control, withdrawal of futile life-sustaining treatments, decisions regarding cardiopulmonary resuscitation, and psychosocial support for both the patient and their family (Center for Practical Bioethics 2008).

When futility has been determined, all therapies should be evaluated in terms of whether they improve the patient's comfort (Schneiderman, Faber-Langendoen, and Jecker 1994; Truog et al. 2008). All procedures and treatments that do not contribute to the patient's well-being should be withheld or withdrawn (Schneiderman, Faber-Langendoen, and Jecker 1994). These include intravenous fluids and nutrition, antibiotics, renal replacement therapies, vasoactive drugs, and ventricular assistive devices. It has been shown that abrupt discontinuation of these measures does not result in patient discomfort, and there is no reason for weaning patients off those treatments (Joseph 2011; Truog et al. 2008). Instead, continuing or weaning off those treatments when they are proven to be futile can only prolong the dying process and increase the patient's distress. An exception is mechanical respiratory support, as its abrupt discontinuation can lead to dyspnoea. Therefore, it can be justified to gradually reduce respiratory support to allow time for pharmacological control of dyspnoea (Truog et al. 2008).

One of the most important things the physician has to address in patients at the end of life is pain management. A great number of seriously ill patients report some level of pain during hospitalization (Nelson et al. 2001; Puntillo et al. 2014). It is the physician's duty to minimize possible iatrogenic sources of pain as well as to administer proper medication (Truog et al. 2008). Opioid agents are often used for this purpose. The amount of these agents can be progressively increased until the patient is very comfortable, as there is virtually no maximum dose for them, especially when dealing with terminally ill patients (SIAARTI 2006). A physician may be concerned about the negative effects of administering high doses of opioid, especially in relation to respiratory depression. As mentioned earlier, it would be ethically justified to administer very high doses of opioids even if respiratory depression and possibly even death occurs but only if the medication is given with the intent to alleviate pain; in that case the physician would not be held responsible for the patient's death if it occurs (SIAARTI 2006; Truog et al. 2008). When symptoms cannot be sufficiently alleviated by analgesics, gradual reduction of the patient's state of consciousness is usually necessary to protect the patient from suffering (SIAARTI 2006).

Another important symptom physicians often have to address when dealing with terminally ill patients is dyspnoea. If further treatment for a patient is futile and symptoms of dyspnoea develop, the physician should

treat the symptoms by administering opioids and sedatives in order to minimize the patient's suffering (SIAARTI 2006). Intubation and mechanical respiratory support in these cases are best avoided as it will only prolong the dying process. In cases where the patient is mechanically ventilated, the situation for both the family and the care team is more difficult. However, if further life support is futile then respiratory support should be removed, either by being gradually reduced until it is finally discontinued or by being decreased rapidly, including by removing the tracheal tube if one has been inserted (SIAARTI 2006). In both cases, it is imperative that the patient, if conscious, and their family, as well as the medical staff, are all aware of the problems discontinuation of respiratory support will bring. Therefore, medical staff should begin with opioid and sedative administration on the first signs of dyspnoea (SIAARTI 2006). If members of the family are present at the time of respiratory support withdrawal, adequate support for them should be available. In cases of patients who are undergoing renal replacement therapies, if further treatment is futile, such therapies should also be withdrawn. After withdrawal, therapies for metabolic acidosis or hyperkalaemia should not be instituted. Symptoms of dyspnoea should, however, be managed with fluid restrictions and opioids, as well as with sedatives if needed (Materstvedt et al. 2003; SIAARTI 2006).

In cases of patients who have undergone cardiopulmonary resuscitation where spontaneous circulation resumed but consciousness did not, a decision to withdraw or continue with further treatment can be very difficult to make. Studies have proposed that if certain criteria are met, withholding or withdrawal of further treatment is ethically approvable (Booth et al. 2004; Zandbergen et al. 1998). Proposed criteria are the absence of photomotor reflex at twenty-four and seventy-two hours, absence of corneal reflex after twenty-four hours, absence of a motor response to pain stimulus after twenty-four and seventy-two hours and bilateral absence of N20 cortical somatosensory evoked potential median nerve (Booth et al. 2004; Zandbergen et al. 1998).

There are situations when futility of further treatment is determined but still physicians and other medical staff continue to provide active treatment. There are various reasons why they do so (Willmott et al. 2016). In some cases, physicians continue with futile care mainly because of family demands. In a study by Sibbald et al., physicians stated that lack of legal support was the main reason for continuing with futile treatment (Sibbald,

Downar, and Hawryluck 2007). Some healthcare professionals may irrationally feel obliged to use all available resources although the final outcome will not be altered by those interventions (Schneiderman 2011; Swetz et al. 2014). In many cases, reasons for providing futile care are primarily emotional. Those include emotions such as guilt and grief or fear about how the family would react (Jox et al. 2012). In some situations, futile care is caused by organizational routines or lack of consensus among the treating team (Sibbald, Downar, and Hawryluck 2007). In some situations, the reasons can be more objective, for example, lack of information about the patient's overall health status, a situation often encountered in emergency departments (Sibbald, Downar, and Hawryluck 2007).

### Recommendations

No matter what the reasons are for providing futile care, an effort to stop those treatments has to be made. Providing futile treatments not only prolongs the dying process and suffering of patients and their families but also raises the costs—and as a consequence limits the availability—of healthcare, especially of intensive care, where capacities are already limited.

Some recommendations can be made to address these issues and to improve healthcare for patients at the end of life. It has been shown that quality of life for patients with preexisting chronic disease is lower for those who are admitted to an ICU before death (Rady and Johnson 2004). To make those patients more comfortable, a discussion about their perception of quality of life and their wishes regarding end-of-life care should commence as early as possible, ideally in the prehospital setting (Rady and Johnson 2004). Awareness of a patient's wishes will make decision-making about further care easier. These discussions should not only be about negative aspects of care but more about positive ways of enhancing quality of life (Schneiderman, Faber-Langendoen, and Jecker 1994). One approach that has proved to be beneficial is use of the universal form of treatment options (UFTO) instead of merely signing DNACPR forms (Fritz et al. 2013).

As mentioned before, it is not rare that terminally ill patients continue to have active treatment although that treatment is futile. In most cases, the reason for continuing futile care is lack of communication between the medical team and the patient's family or the physician's

lack of knowledge about the patient's health or lack of experience and knowledge about alternative ways of treatment for those patients, such as palliative care (Rady and Johnson 2004). It is therefore recommended that options regarding futile treatment and palliative and comfort care are discussed with the patient and his family by a physician who is experienced in end-of-life care (Rady and Johnson 2004). In addition, efforts should be made to educate the public as well as healthcare professionals about the role of intensive care units and about alternative ways of treating patients at the end of life (Sibbald, Downar and Hawryluck 2007). It is also recommended that, in order to improve care for those patients, emphasis should be made on improving communication between healthcare teams and patients and their families (Jox et al. 2012; Sibbald, Downar, and Hawryluck 2007; Swetz et al. 2014)

As many studies have shown, the best way to reduce futile treatment and improve care for patients who are at the end of life is establishment of official guidelines and hospital policies (Jensen, Ammentorp, and Ording 2013; Jox et al. 2012; Sibbald, Downar, and Hawryluck 2007). Guidelines should address problems that healthcare professionals encounter in their everyday practice and help them in resolving such. They should not focus on trying to define futility but rather on a fair process of decision-making (Joseph 2011). The guidelines should clearly define the role of physicians in the decision-making process when dealing with futility. Although physicians are responsible for making decisions about whether the treatment will benefit the patient or not, consent either from the patient or from his legal guardian is still necessary for treatment to be withheld or withdrawn. Therefore, the importance of communication between physicians and patients and their families is emphasized once more. In order to help physicians and nurses when dealing with futility, discussion about moral dilemmas should be included in such guidelines. Guidelines and policies should also define the process of decision-making in cases when physicians and patients or their families or legal guardians don't agree about further treatment measures. Those can include referral to the hospital ethics committee, as previously stated.

### Conclusion

Medical futility and futile treatment have been recognized in medicine for a long time. However, there is still no

widely and universally accepted definition of what those terms mean. Unfortunately, while trying to develop a universal definition throughout the years, real problems associated with futility have largely been neglected (Schneiderman 2011). Those problems include lack of palliative and comfort care for patients who are at the end of life in order to make their last days as comfortable as possible. With this in mind, efforts should be made to promote an ethic of care, which means caring for patients even after further treatment is futile (Schneiderman, Faber-Langendoen, and Jecker 1994). Treatments that improve a patient's comfort and minimize the suffering of both the patient and their family are equally as important as those aimed at saving patients' lives. In the end, it should be said that although a particular treatment may be futile, palliative or comfort care never is (Schneiderman 2011).

## References

- Antiel, R.M., F.A. Curlin, C.C. Hook, and J.C. Tilburt. 2011. The impact of medical school oaths and other professional codes of ethics: results of a national physician survey. *Archives of Internal Medicine* 171(5): 469–471.
- Appel, J.M. 2005. Defining death: When physicians and families differ. *Journal of Medical Ethics* 31(11): 641–642.
- Ardagh, M. 2000. Futility has no utility in resuscitation medicine. *Journal of Medical Ethics* 26(5): 396–399.
- Booth, C.M., R.H. Boone, G. Tomlinson, and A.S. Detsky. 2004. Is this patient dead, vegetative, or severely neurologically impaired? Assessing outcome for comatose survivors of cardiac arrest. *JAMA* 291(7): 870–879.
- Center for Practical Bioethics. 2008. Recommended policy guidelines regarding medical futility. <https://www.practicalbioethics.org/files/guidelines/19-Futility-web-2008.pdf>. Accessed April 8, 2017.
- Chang, Y., C.F. Huang, and C.C. Lin. 2010. Do-not-resuscitate orders for critically ill patients in intensive care. *Nursing Ethics* 17(4): 445–455.
- Flannery, E.J. 1995. One advocate's viewpoint: Conflicts and tensions in the Baby K case. *The Journal of Law, Medicine & Ethics* 23(1): 7–12.
- Forero, R., G. McDonnell, B. Gallego, et al. 2012. A literature review on care at the end-of-life in the emergency department. *Emergency Medicine International* 2012: 486516.
- Fritz, Z., J. Fuld, S. Haydock, and C. Palmer. 2010. Interpretation and intent: A study of the (mis)understanding of DNAR orders in a teaching hospital. *Resuscitation* 81(9): 1138–1141.
- Fritz, Z., A. Malyon, J.M. Frankau, et al. 2013. The Universal Form of Treatment Options (UFTO) as an alternative to Do Not Attempt Cardiopulmonary Resuscitation (DNACPR) orders: A mixed methods evaluation of the effects on clinical practice and patient care. *PLoS One* 8(9): e70977.
- Gristina, G.R., R. De Gaudio, D. Mazzon and J.R. Curtis. 2011. End of life care in Italian intensive care units: Where are we now? *Minerva Anestesiologica* 77(9): 911–920.
- Guidet B., Y. Nguyen and A. Boumendil. 2012. Selection of ICU admission criteria for elderly patients.
- Huynh, T.N., E.C. Kleerup, J.F. Wiley, et al. 2013. The frequency and cost of treatment perceived to be futile in critical care. *JAMA Intern Med* 173(20): 1887–1894.
- Jensen, H.I., J. Ammentorp and H. Ording. 2013. Guidelines for withholding and withdrawing therapy in the ICU: Impact on decision-making process and interdisciplinary collaboration. *Heart Lung and Vessels* 5(3): 158–167.
- Joseph, R. 2011. Hospital policy on medical futility—Does it help in conflict resolution and ensuring good end-of-life care? *Annals, Academy of Medicine, Singapore* 40(1): 19–25.
- Jox, R.J., A. Schaider, G. Marckmann and G.D. Borasio. 2012. Medical futility at the end of life: The perspectives of intensive care and palliative care clinicians. *Journal of Medical Ethics* 38(9): 540–545.
- Kenny, R.W. 2005. A cycle of terms implicit in the idea of medicine: Karen Ann Quinlan as a rhetorical icon and the transvaluation of the ethics of euthanasia. *Health Communication* 17(1): 17–39.
- Lofmark, R., and T. Nilstun. 2002. Conditions and consequences of medical futility—From a literature review to a clinical model. *Journal of Medical Ethics* 28(2): 115–119.
- Materstvedt, L.J., D. Clark, J. Ellershaw, et al. 2003. Euthanasia and physician-assisted suicide: A view from an EAPC Ethics Task Force. *Palliative Medicine* 17(2): 97–101.
- McLean, S.A. 1999. Legal and ethical aspects of the vegetative state. *Journal of Clinical Pathology* 52(7): 490–493.
- Mockford, C., Z. Fritz, R. George, et al. 2015. Do not attempt cardiopulmonary resuscitation (DNACPR) orders: A systematic review of the barriers and facilitators of decision-making and implementation. *Resuscitation* 88: 99–113.
- Moldow, G., D. Bartels, D. Brunquell, and R. Cranford. 2004. Why address medical futility now? New guidelines aim to resolve the inevitable differences of opinion that occur when health care providers or family members deem that further medical care is futile. *Minnesota Medicine* 87(6): 38–44.
- Mueller, P.S. 2009. The Terri Schiavo saga: Ethical and legal aspects and implications for clinicians. *Polskie Archiwum Medycyny Wewnętrznej* 119(9): 574–581.
- Nelson, J.E., D.E. Meier, E.J. Oei, et al. 2001. Self-reported symptom experience of critically ill cancer patients receiving intensive care. *Critical Care Medicine* 29(2): 277–282.
- Puntillo, K., J.E. Nelson, D. Weissman, et al. 2014. Palliative care in the ICU: Relief of pain, dyspnea, and thirst—A report from the IPAL-ICU Advisory Board. *Intensive Care Medicine* 40(2): 235–248.
- Rady, M.Y., and D.J. Johnson. 2004. Admission to intensive care unit at the end-of-life: Is it an informed decision? *Palliative Medicine* 18(8): 705–711.
- Rinehart, A. 2013. Beyond the futility argument: The fair process approach and time-limited trials for managing dialysis conflict. *Clinical Journal of the American Society of Nephrology* 8(11): 2000–2006.
- Schneiderman, L.J. 2011. Defining medical futility and improving medical care. *Journal of Bioethical Inquiry* 8(2): 123–131.
- Schneiderman, L.J., K. Faber-Langendoen, and N.S. Jecker. 1994. Beyond futility to an ethic of care. *The American Journal of Medicine* 96(2): 110–114.
- Sellars, M., K.M. Detering, and W. Silvester. 2015. Current advance care planning practice in the Australian community:



- An online survey of home care package case managers and service managers. *BMC Palliative Care* 14: 15.
- SIAARTI. 2006. End-of-life care and the intensivist: SIAARTI recommendations on the management of the dying patient. *Minerva Anestesiologica* 72(12): 927–963.
- Sibbald, R., J. Downar, and L. Hawryluck. 2007. Perceptions of “futile care” among caregivers in intensive care units. *Canadian Medical Association Journal* 177(10): 1201–1208.
- Swetz, K.M., C.M. Burkle, K.H. Berge, and W.L. Lanier. 2014. Ten common questions (and their answers) on medical futility. *Mayo Clinic Proceedings* 89(7): 943–959.
- Truog, R.D., M.L. Campbell, J.R. Curtis, et al. 2008. Recommendations for end-of-life care in the intensive care unit: A consensus statement by the American College [corrected] of Critical Care Medicine. *Critical Care Medicine* 36(3): 953–963.
- Tsoh, J., C. Peisah, J. Narumoto, et al. 2015. Comparisons of guardianship laws and surrogate decision-making practices in China, Japan, Thailand and Australia: A review by the Asia Consortium, International Psychogeriatric Association (IPA) capacity taskforce. *International Psychogeriatrics* 27(6): 1029–1037.
- White, B., L. Willmott, E. Close, et al. 2016. What does “futility” mean? An empirical study of doctors’ perceptions. *Medical Journal of Australia* 204(8): 318.
- Wilkinson, D.J., and J. Savulescu. 2011. Knowing when to stop: Futility in the ICU. *Current Opinion in Anaesthesiology* 24(2): 160–165.
- \_\_\_\_\_. 2014. A costly separation between withdrawing and withholding treatment in intensive care. *Bioethics* 28(3): 127–137.
- Willmott, L., B. White, C. Gallois, et al. 2016. Reasons doctors provide futile treatment at the end of life: A qualitative study. *Journal of Medical Ethics* 42(8): 496–503.
- Zandbergen, E.G., R.J. de Haan, C.P. Stoutenbeek, J.H. Koelman, and A. Hijdra. 1998. Systematic review of early prediction of poor outcome in anoxic-ischaemic coma. *The Lancet* 352(9143): 1808–1812.