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# Futility of medical treatment in current medical practice

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#### **Abstract**

Intensive care provides support for acute reversible organ failure and most patients who receive intensive care recover from their illness. In some patients organ failure may become irreversible and in these patients further treatment or organ support may be considered futile. Emerging technologies and expertise can enable the medical profession to prolong life / death indefinitely without curing or controlling the underlying disease process. Introduction of ultramodern organ supports such as extracorporeal life-support systems, ventricular assist devices and organ transplantation surgeries have introduced some degree of ambiguity in defining futility of care. Furthermore medico legal implications of futility of care introduce further complexities in defining and instituting futile treatments.

In this review we discuss the evolution of the concept of futility of care, review the various meanings of the term "futility of care", explore the complexities of management when care is considered futile, offer suggestions as to how such patients and their families could be managed. We also review the legal framework when consensus is not achieved.

To cure sometimes, to relieve often and to comfort always – this is our work

Intensive care may provide support for acute reversible organ failure and most patients who receive intensive care recover from their illness. In some patients however, organ failure may become irreversible and in these patients further treatment or organ support may be considered futile.

In developed countries with well-funded health care systems, new technologies and expertise can enable the medical profession to prolong life / death indefinitely without curing or controlling the underlying disease process.

In sustaining life when the probability of leaving the intensive care unit or hospital is unlikely, many would reason that this constitutes futility of care. Furthermore, the introduction of ultramodern organ supports such as extracorporeal life-support systems, ventricular assist devices and organ transplantation surgeries have introduced some degree of ambiguity in defining futility of care

The implications for a patient when prolonged "futile" care is administered may be profound particularly if they are exposed to prolonged mechanical ventilation, renal replacement therapy and other invasive therapies. Such treatments may cause anxiety, be uncomfortable and sometimes induce pain.

Where more invasive procedures or surgery is performed the patient's discomfort may be even greater, often requiring medications that may have substantial side effects.

Despite prolonging life, the consequences of prolonged intensive care therapy and sedative drug administration may render patients unable to communicate with their family and friends. During such times many of the simple pleasures of life are removed and the implications of physical and emotional isolation may be profound.

Furthermore the emotional and physical implications on relatives of patients who are unlikely to recover can be intense. Such an approach may increase the costs of health care systems and may potentially deny lifesaving treatments from those who are likely to recover from their illness.

In this article, we:

- Discuss the evolution of the concept of futility of care,
- Review the various meanings of the term "futility of care",
- Explore the complexities of management when care is considered futile,
- Discuss the patient-centred approach, the role of ethics committees and institutional policies when discussing futile treatments with patients and their families, and finally
- Consider the legal framework in Australia and New Zealand when consensus is not achieved.

## **Futility of care**

### **Evolution of futility of care**

Historically the earliest suggestion that physicians should withhold medical interventions from terminally ill patients probably dates back to Hippocrates injunction to "refuse to treat those [patients] who are overmastered by their disease realizing that in such cases medicine is powerless".<sup>1</sup>

In 1835 Bigelow suggested to members of the Massachusetts Medical Society to withhold "therapies" such as cathartics and emetics from hopelessly ill patients.<sup>2</sup>

In North America in the late 1980s and early 1990s the view was held by some that physicians could ethically terminate futile treatments.<sup>3</sup> Despite the perceived advantages of such an approach there were inconsistencies in the use of the term 'futile'.<sup>4-6</sup> Initiatives to achieve uniformity on the term futility of care remain problematic as the term will remain subject to ethical, religious, clinical and legal considerations.

Medical futility must be contrasted to passive or active euthanasia, advanced care planning (although the importance of advanced care planning to medical futility is undeniable) and situations in which life prolonging treatment may be considered medically appropriate but is not supported by the patient (or by a substitute decision-maker).

#### **Futility of care**

The medical literature currently refers to futile care as care that is physiologically, qualitatively or quantitatively futile.

**Physiological futility**—Physiological futility is less complex to define and implies a therapy that will deliver no physiologic effect. An example of this may be to rush a patient to the emergency department after two hours of resuscitation in the field has failed to return spontaneous circulation. An emergency physician could confidently convey to the family that further chest compressions would be medically futile.

Another example may be an elderly patient in cardiogenic shock from end stage dilated cardiomyopathy who has not responded to maximum inotropic support.

**Qualitative futility**—Qualitative futility describes a situation in which the intervention may produce a result that may be "Lacking in purpose". An example of this may be to prescribe statins to a 90-year-old bedridden patient with ischaemic cardiomyopathy.

**Quantitative futility**—Quantitative futility refers to an intervention that has a very small chance of benefiting the patient; the most commonly used number is less than 1% chance of success". This would be the case of considering urgent coronary artery bypass surgery in a patient who had just completed 50 minutes of cardiopulmonary resuscitation before any return of spontaneous circulation.

Societal expectations may focus on active treatment in the ICU even when clinicians anticipate that recovery is not possible. <sup>8</sup> As convenient as it may be for some hospitals to enact a unilateral physician driven not for resuscitate policy, even when consensus is not reached with families, some would argue that this process is flawed. Those that argue that futility should only be physiologically defined hold the view that health care professionals should avoid imposing their values on families and patients and that patient autonomy should be seen as inviolable. <sup>9</sup>

When considering the concept of physiological futility and applying this definition when making end-of-life decisions we should be aware of the limitations of such an approach. If physicians were confined to adhere to dying patients autonomous wishes in the critical care unit they would function as technicians "body mechanics" completing tasks of organ support under the instruction of patients and their families.

In contrast to a physiological definition of futility, a patient centred approach argues that the provider should deliver therapy that the patient can appreciate. With such an approach, where therapy aims at benefiting patients there is an emphasis on beneficence while still maintaining patient autonomy.

#### The complexities of considering futility

Only after futility of care is considered does the complexity of this proposal become apparent. There are numerous barriers to engaging in futility of care discussions and these are complex and diverse. There may be regulations that make futility of care discussions problematic and these may be institutional, local, regional or at state or national level.

Existing regulations at many levels may lead to a pervasive fear of prosecution by physicians for prescribing medications aimed at the relief of pain and symptoms. In some institutions reimbursement and financial considerations may influence a physician's decision to engage in futility of care discussions.

Some physicians are influenced by the financial conditions attached to their activities and cognitive and counselling activities remain the least remunerative. Individual attitudes toward end-of-life care may represent a substantial barrier to initiating futility of care discussions.

For the concept of futility to be accepted by all concerned requires unequivocal confidence by the treating physician of a patient's prognosis and likely outcome,

agreement between physicians on the prognosis and outstanding communication between the care givers, the patient and their family. Under such circumstances it may be possible to reconcile the medical, ethical and religious views of patients, families and their surrogate decision-makers. There are numerous factors that compound the acceptance of medical futility by all parties concerned.

The medical staff may have a fear of failure should futility be considered. In interviews with nurses and physicians, 47% of all respondents reported acting contrary to conscience in providing care to the terminally ill, with many providing excessive rather than under treatment. <sup>10</sup> The religious view of death may have been replaced with attitudes that find little solace or meaning in death. <sup>11</sup>

Indecision or avoiding hard decisions regarding futility may further confound the process. Some physicians may perceive that their role extends into the domain of health economics and that their responsibility should include the financial realities of delivering healthcare.

There may also be situations in which the delivery of futile care may be considered harmful to other patients. <sup>12</sup> It could be argued that the use of antibiotics for those receiving futile care can be considered unethical by egalitarian theory because it can lead to antibiotic resistance that may make the treatment of other patients impossible. It has also been established that nurses have powerful emotional responses that may cause distress when witnessing medically futile care. <sup>13</sup>

The patient and family emotions that may be elicited during discussions of futility of care are often powerful, inconsistent and unpredictable. The determinants of such emotions may be fear, anxiety, denial, anger and guilt. There is also no consensus among patient surrogates about whether physicians should routinely provide a recommendation regarding life-support decisions for incapacitated patients. <sup>14</sup>

Doubt about a physician's ability to predict medical futility is common among surrogate decision-makers. <sup>15</sup> The nature of the doubt may have implications for responding to conflicts about futility in clinical practice. A survey from Japan revealed that there is no support for the physician's unilateral decision-making on futile care. <sup>16</sup> In this survey the majority of respondents (67.6%) believed that a physician's refusal to provide or continue a treatment on the ground of futility judgement could never be morally justified.

Whilst some commentators deny the concept of medical futility and the resultant consequences to the nature of future care to be provided, Pellegrino states: "Those who call for the abandonment of the concept [of futility] have no substitute to offer. <sup>17</sup> They persist in making decisions with, more or less, covert definitions.

The common sense notion that a time does come for all of us when death or disability exceeds our medical powers cannot be denied. This means that some operative way of making a decision when 'enough is enough' is necessary. It is a mark of our mortality that we shall die. For each of us some determination of futility by any other name will become a reality".

Pellegrino's above dissertation adds to a persuasive body of medical ethics that underpins the notion that a medical practitioner must cease treating a person at a point in time where such treatment serves no benefit to the patient.

It is evident that to fully understand and resolve these complexities the important communication skill required by the medical staff is listening, and that focusing on this skill may help in unravelling the issues involved in discussions on futile care.

For some families a percentage chance of success may add meaning to their understanding of medical futility. This percentage is difficult to establish but most definitions of quantitative futility offer a less than 1% chance of success as a suggestion.

#### Discussing futility of care with patients and or their families

#### The importance of a patient-centred approach—In 1988, the

Picker/Commonwealth Program for Patient-Centred Care (now the Picker Institute) coined the term "patient-centred care" to call attention to the need for clinicians, staff, and health care systems to shift their focus away from diseases and back to the patient and family. The term was meant to stress the importance of better understanding the experience of illness and of addressing patients' needs within an increasingly complex and fragmented health care delivery system.

The Institute of Medicine (IOM) defined patient-centred care as "care that is respectful of and responsive to individual patient preferences, needs, and values" and that ensures "that patient values guide all clinical decisions." The importance of this definition highlights the importance of a symbiosis between physicians and patients when making decisions about administering or withholding or withdrawing medical care. <sup>18</sup>

In an influential article on clinical practice guidelines, David Eddy argued that an intervention should be considered a "standard" only if there is "virtual unanimity among patients about the overall desirability. Of the outcomes." <sup>19</sup>

With many decisions in intensive care regarding futility it remains unlikely that there is a "standard" therefore making a patient centred approach an imperative Shared decision-making occurs when the patient and the treating medical team share information. The treating team outline management plans with the associated risks and benefits and patients or their surrogate decision-makers express preferences and values. <sup>18</sup>

Through shared decision-making, clinicians can help patients understand the importance of their values and preferences in making the decisions that are best for them. This interest is shared by patients worldwide, as demonstrated by the recent release of the Salzburg statement endorsing shared decision-making, authored by representatives from 18 countries. <sup>20</sup>

Clinicians need to relinquish their role as the single, paternalistic authority and train to become more effective coaches or partners — learning, in other words, how to ask, "What matters to you?" as well as "What is the matter?" 18

It is only when the treating team has informed those entrusted to their care what the strengths and limitations of their therapies are can genuine negotiation begin between patients, their surrogate decision-makers and the medical team.

Regional culture shall always play an important part in the end-of-life decision-making<sup>21</sup> and as the world has become a global village, attempts to standardise policy

have become more difficult. Furthermore, an increasingly educated public has made a unilateral declaration of futility by the physician untenable. Medicine has changed from being a scientific art to a contractual market place enterprise, with consequential erosion of trust between patient and physician.

Considering the numerous treatments now available for the critically ill, it has become very difficult for a patient or a patient's surrogate decision-maker to fully anticipate or understand the intricacies, burdens and benefits of all available options. <sup>22</sup>

The implications of the above are that the treating physician should openly and honestly explain the treatment options and likely outcomes when futility becomes evident and communicate consistently and frequently with the patient and their surrogate decision-makers.

Billings and Krakauer<sup>23</sup> have presented an approach that suggests a physician should first determine the patient's desire for information, and then assess the patient's values, goals and beliefs to determine the outcomes that would be acceptable to the patient. With this knowledge, the physician should propose a plan of treatment that is likely to achieve the patients goals, expressed in a manner that is easily comprehensible to the patient.

The complexity of the situation mandates that a senior and experienced clinician initiates discussions related to futile care. Too often we hear of the junior resident stating "your loved one is dying, would you like everything done to try and save her?" Such an immature statement may create ambiguity in relatives and can cause significant distress to the already stressed relatives. Furthermore "everything" is something that is elusive to define or explain to relatives who are distressed.

It is sometimes necessary and appropriate to have different physicians evaluate a patient's management and prognosis and communicate their views to all parties concerned. It is likely that different personalities and styles of communication may be required to communicate a view that advocates palliation on the grounds of medical futility. Should it be the wish of the family to have an external opinion from a different institution, this should be provided. Involvement of social workers and others such as the chaplain may prove vital in fostering communication and in facilitating the change from active to palliative/comfort treatment.

In some situations a limited period of administering futile care is required. Such an approach may have substantial benefits and may enable friends and family to travel long distances to pay their respects to the dying patient. For others ongoing care may provide them with time to grieve and reflect, restoring their sense of autonomy as they are no longer forced into acceptance of palliation through time constraints determined by the intensive care staff.

Decision aids, which can be delivered online, on paper, or on video, can efficiently help patients and their families absorb relevant clinical evidence and aid them in developing and communicating informed preferences. <sup>24</sup> The time afforded to patients and their families to process and interpret their own emotions and intellectualise endless information and data may be crucial in achieving agreement regarding ongoing management. It is this time of reflection and exploration that may enable families to walk out of the hospital with a feeling of wholeness.

There may be differences between acute and slowly evolving scenarios of potential medical futility. Examples of these differences may be prolonged resuscitation after cardiac arrest in a previously healthy 42 year old as compared to arrest in an 84 year old with metastatic cancer. The latter example illustrates a case of futility where the probability of the patient returning home is remote and next of kin have had time to interpret the slow transformation to death.

To the contrary in case of the younger patient, time for education, discussion and reflection would be expected and necessary. As the nature of the pathology in chronic situations of potential futility is often advanced malignancy or cardio vascular disease the likelihood of cure and restoration of health remains improbable. In such situations management of patients may be under the auspices of oncologists or palliative care physicians, where there has been the time and opportunity for ongoing patient centred care. These circumstances contrast sharply with the acute unexpected deterioration of younger well-functioning patients.

The role of palliative care—Palliative care is often the end-of-life pathway for elderly patients with undeniable incurable disease. The role of palliative care becomes less clear when clinical deterioration is acute, unexpected and the outcome less predictable. It is the exception to have routine palliative care consultation in intensive care units and referral by intensive physicians to their palliative care colleagues is infrequent. Furthermore the end-of-life approach of intensive care physicians and palliative care physicians may differ. In a European qualitative study intensivists favoured an indirect and stepwise disclosure of the prognosis whilst palliative care clinicians focused on a candid and empathetic information strategy. <sup>25</sup>

A recent study reviewed administrative claims and clinical data for critically ill older adults. Multivariable regressions examined the associations between palliative care types and hospital outcomes by advance directive status.

The authors found significantly lower hospital costs and in-hospital deaths with higher hospice discharges in integrative palliative care compared to consultative palliative care. However, these findings were diminished with the presence of advance directives. <sup>26</sup> These data support the notion that advanced directives may impact on patient outcomes and that integrative palliative care may have cost and clinical implications. <sup>26</sup>

Palliative care should play an integral role in the management of terminal conditions, particularly when futility-of-care discussions are considered. The recent policy document of The Australian National Health and Medical Research Council underpins the importance of integrating palliative care principles into the management of advanced chronic or terminal conditions. <sup>27</sup>

**Ethical considerations and the role of ethics committees**—The ethical considerations in cases where futility is contemplated remain complex and deserve further discussion. To quote from Dunstan "You should not judge- the success of intensive care is not to be measured only by the statistics of survival, as though each death were a medical failure.<sup>28</sup>

It is to be measured by the quality of lives preserved or restored, the quality of the dying in those whose interest it is to die and by the quality of the relationships

involved in each death." He argues that if death is inevitable, the dying process dignified and the family accepting, death has been good.

Adherence to the above mantra can only be achieved when sensitive communication has been maintained between all the relevant members of the medical team, the patient and / or their family. Such a process enables professional reflection on decisions and recommendations made, empowers the family to contribute to the decision-making process and provides time for the acceptance of end-of-life decisions.

The intensive care unit (ICU) is where patients are given some of the most technologically advanced life-sustaining treatments, and where difficult decisions are made about the usefulness of such treatments. End-of-life care is associated with increased burnout and distress among clinicians working in the ICU.<sup>29</sup>

To make end-of-life and futility of care decisions requires adequate training, good communication between the clinician and family, and the collaboration of a well-functioning interdisciplinary team. Facilitative ethics consultations can be helpful in resolving conflicts when physicians and families disagree in end-of-life decisions.

Ethics committees are allowed to make such decisions in one state of The United States of America when disagreements cannot be resolved otherwise. This so-called due process approach was incorporated in 1999 into an amendment to the Texas Advance Directives Act. It allows a physician to ask a hospital ethics committee to review a patient or family request for treatment the physicians consider futile or inappropriate. If the committee agrees that the request is inappropriate and no other physician or hospital will accept the patient in transfer within a 10-day time period, the treatment may be withheld or withdrawn. <sup>30</sup>

When families and physicians disagree over continuing treatment, physicians sometimes choose to withdraw life support unilaterally, although they run the risk of being sued for malpractice and accruing defence costs whether or not the suit is successful.

In the United States when clinicians and health care facilities have asked courts to sanction such withdrawal before it is performed, the courts have traditionally sided with families. This contrasts with cases in Canada and Australia wherein the courts allowed physicians to make end-of-life decisions over family objections. <sup>31</sup>

A recent multicentre study demonstrated that ethics consultations were associated with reductions in hospital and ICU lengths of stay and life-sustaining treatments in patients who ultimately did not survive to discharge. <sup>32</sup> These data suggest that Ethics Committees may have the ability to play a significant role in medical futility discussions when patient management consensus is elusive.

Institutional policies—In Australia the Respecting Patient Choices Project is funded under the National Palliative Care Programme and is supported by the Australian Government Department of Health and Ageing. This project aims to encourage advance care planning in individuals irrespective of their current state of health and has been recently implemented in a number of Australian Hospitals. The choices offered to patients regarding end-of-life decisions under this program facilitates limitation of therapy and resuscitation guidelines.

It remains unclear what the implications of such a policy will be on futility of care discussions and institutional bias will continue to limit widespread acceptance of such initiatives

# Legal framework in futility of care: some Australian and New Zealand perspectives

As a final resort, when all attempts to gain consensus on a decision have been exhausted alternative strategies may be considered. This could include referral to a tribunal or deferral for legal advice. This process may differ from state to state, country to country and may not always assist the process of trust and communication required by all parties concerned.

Despite this, the importance of the law in end-of-life decisions is profound, because ultimately the sources of duties in end-of-life decision-making emanate substantially from the obligations imposed by legislation and common law. Many and varied scenarios may face health practitioners and patients in end-of-life decision-making.

In the United States some states have enacted medical futility laws. In Texas, for example, if both the hospital ethics team and medical team are in agreement that treatments should be discontinued and if the patient's family disagree, the hospital should seek another centre willing to provide treatment. <sup>33</sup> If such an initiative is not successful after 10 days the family may appeal to a state court.

The law in the Australian state of Victoria in relation to futility of care is ambiguous and does little to guide practitioners. Yet, even if the law were clear and well defined, the complexities and emotions of end-of-life decisions will always play a significant role in the course of action to be undertaken. In the state of Victoria, neither legislation nor common law has defined futility. As such, the concept of futility is a medical construct, borne primarily out of medical ethics.

Whilst the definition of benefit may differ amongst commentators, we submit the notion of medical futility at some point cannot be denied. Further, whilst it may sound flippant, there is no such concept as "medicine on demand". That is, a patient or patient representative cannot demand a certain course of treatment, and a medical practitioner must not provide a course of treatment merely for the reason that it is demanded by a patient. Extending this to the futility context, a medical practitioner must not continue treatment that he or she considers futile merely because the patient or the patient's representative requests it.

Who determines medical futility?—Medical futility is determined by a medical practitioner. Such determination is as far as possible, an objective view that treatment would be unjustifiable. As there is no legal definition of futility in Victoria in legislation or at common law and no established medical definition of futility, the determination of medical futility can be a very difficult one to make.

Where a decision is made by a treating team to extend futile (and therefore medically unjustified) care, it can be difficult to later "reverse" that decision. A decision that future medical care would be medically futile, and the consequential effect of that decision on a patient, can be challenged by a patient (or patient advocate) in the Supreme Court of Victoria. There are broad powers available to the Supreme Court,

including ordering treatment to occur or not to occur, or awarding an injunction against a proposed course of action.

Australian courts have demonstrated a general reluctance to interfere in medical decision-making, but more readily intervene to safeguard the fairness and justice of the process to ensure that the correct medical decision and approach is made. For example, the Courts are unlikely to state that a properly qualified medical practitioner has made an incorrect medical decision, but will more likely require an additional independent opinion or additional time, where to not do so may cause an injustice against a patient.

Once a determination of medical futility has been established, what obligations exist?—The common law position in Australia is that a medical professional is under no obligation to provide treatment where "no benefit at all would be conferred". However, it is important to note that treatment in this context does not include palliative care. Palliative care is defined under the Medical Treatment Act 1988 of Victoria<sup>34</sup> as including the provision of reasonable medical procedures, food and water for the relief of pain, suffering and discomfort. Such care must be provided where appropriate.

Are there legal risks in medical futility cases?—Where a medical practitioner makes a decision to withhold or withdraw treatment on the basis of futility that decision, like any other decision, is subject to review by a court. In particular, if the decision of medical futility is a decision that falls below the standard of practice of a reasonable medical practitioner, a doctor may be liable in negligence.

Further, there is at least a theoretical possibility that a medical practitioner could be charged with murder or manslaughter as a result of death arising from the act of withdrawing treatment, or withholding treatment. However, criminal intervention is unlikely for a number of reasons that this analysis will not explore. If, on the other hand, treatment is provided to a patient once such treatment is seen to be futile, it is arguable that the provider of such treatment could be liable for the tort of battery or crime of assault.

What legal tools are available in end-of-life medicine?—It is clear that the clear expression by a competent patient of their future care needs is immensely valuable. In some cases, a patient can make such expression using formal legal tools. In other cases, such expression can be made by a person appointed to act on behalf of a patient in circumstances where the patient loses the capacity to make his or her own decisions, under the *Guardianship and Administration Act 1986* (Victoria).

There are a number of legal tools available to a patient (and sometimes to a substitute decision-maker) in relation to advanced care planning and end-of-life decisions, including refusal of treatment certificates and advanced care directives. Refusal of treatment certificates are statutory instruments under the *Medical Treatment Act 1988* (Victoria), but their application is limited to "current conditions".

Advanced care directives are common law expressions by a patient of their desires. There is some debate as to the applicability of advanced care directives in Victoria. However, the New South Wales Supreme Court case of *Hunter and New England Health Service* v A <sup>35</sup> has upheld that advanced care directives can be enforceable if it is both *valid* and *applicable*.

For an advanced care directive to be valid, it must have been made by a competent person, acting free of undue influence at the time of the directive. For it to be applicable, the advanced care directive must relate to the situation contemplated in the directive.

Whilst use of guardians, refusal of treatment certificates and advanced care directives may offer some legal certainty to end-of-life decision-making, they are by no means definitive. Therefore, in the absence of explicit legal guidance, the role of health practitioners remains central to end-of-life decision-making, in circumstances of medical futility.

Intensive Care practice and Resources in New Zealand may be different when compared to many other nations. <sup>36</sup> Consumers in New Zealand have a "Right to Services of an Appropriate Standard." <sup>37</sup> Health care "consumers" in New Zealand have statutory rights, specified in the above "Code of Rights" accompanying the relevant legislation; the code also defines corresponding duties of health care "providers". However, these rights do not include a right to any possible health care service. Not all possible services are "options" in the sense that the word could imply a "free choice from an unlimited menu".

Hospital Ethics Committees in New Zealand are seldom involved in end –of –life disputes and decision- making, possibly because of a lack of apparent need for such a role.

A landmark case in New Zealand was heard in the High Court of New Zealand in 1992 .The patient was suffering from chronic Guillain-Barre syndrome and he was totally paralysed ,ventilator dependent and deaf for one year at the time of the hearing. The medical specialists involved in his care had sought overseas expert opinion and the medical consensus was unanimous. It was concluded that his prognosis was hopeless and his condition irreversible .Under these tragic circumstances, the doctors caring for the patient had decided to withdraw ventilator support. They had the full support of the patient's wife and the judge stated that the medical staff had meticulously followed a cautious procedure in reaching their decision.

The doctors involved in the patient's management were concerned that if they proceeded with withdrawal of ventilator support they would be prosecuted for murder or manslaughter under the New Zealand Crimes Act of 1961.

The Judge ultimately delivered an order in the following terms:

If,

- the doctors responsible for the care of the patient, taking into account a
  responsible body of medical opinion, conclude that there is no reasonable
  possibility of the patient ever recovering from his present clinical condition;
  and if
- there is no therapeutic benefit to be gained by continuing to maintain the
  patient on artificial ventilator support, and to withdraw that support accords
  with good medical practice, as recognised and approved within the medical
  profession; and if

• the patient's wife and ethics committee of the relevant Health Board concur with the decision to withdraw ventilator support,

Then, ss 151 and/or 164 of the Crimes Act 1961 will not apply, and the withdrawal of the artificial ventilatory support from the patient will not constitute culpable homicide for the purposes of that Act.

Concluding from this judgment it would appear there is a good prospect that New Zealand health professionals will be able to deal with such difficult issues without undue concern of criminal prosecution if patient management accords with good medical practice.

#### **Conclusions**

There has been significant evolution in the concept of medical futility yet there remain many unanswered questions. The debate about how to resolve cases in which patients and families demand interventions that clinicians regard futile have been in evolution over the past 20 years.

A recent publication argues that the futility debate can be divided into three generations. The first generation was characterized by attempts to define futility in terms of certain clinical criteria. The second generation was a procedural approach that empowered hospitals, through their ethics committees, to decide whether interventions demanded by families were futile. The authors predict emergence of a third generation, focused on communication and negotiation at the bedside. <sup>38</sup>

It is clear when reviewing the history of the futility debate that clinical criteria and procedural approaches to unravel the complexities of futility remain problematic. The view of Burns and Truog <sup>38</sup> that an era of communication and negotiation may well improve the processes around futility seems plausible.

The future and evolution of medical futility may depend on open frank communication with a focus on the patient centred approach.

We argue that the leadership required when discussing futility should allow all involved to accept and understand that in some circumstances, death is inevitable.

Death will come to all of us and it is how patients and their families walk that final journey that will determine their lasting memories.

Care for the critically ill should remain decisive, gentle and inclusive. Why should this change when management includes evaluation and discussion regarding potentially futile therapy?

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#### **References:**

- 1. Hippocrates: The art. In Jones WHS (ed): Hippocrates. The Loeb Classical Library. Cambridge, MA, Harvard University Press, 1923.
- 2. Dr. Jacob Bigelow on self-limited diseases (1835). Pediatrics 1977;60:466.
- 3. Schneiderman LJ, Jecker NS, Jonsen AR. Medical futility: its meaning and ethical implications. Ann Intern Med 1990;112:949-954.
- 4. Truog RD, Brett AS, Frader J. The problem with futility. N Engl J Med 1992;326:1560-1564.
- 5. Veatch RM. Why physicians cannot determine if care is futile. J Am Geriatr Soc 1994;42:871-
- 6. Helft PR, Siegler M, Lantos J. The rise and fall of the futility movement. N Engl J Med 2000;343:293-296.
- 7. Schneiderman LJ, Jecker NS, Jonsen AR. Medical futility: response to critiques. Ann Intern Med 1996;125:669-674.
- 8. Azoulay E, Metnitz B, Sprung CL, et al. End-of-life practices in 282 intensive care units: data from the SAPS 3 database. Intensive Care Med 2009;35:623-630.
- 9. Wolf SM. Conflict between doctor and patient. Law Med Health Care 1988;16:197-203.
- 10. Solomon MZ, O'Donnell L, Jennings B, et al. Decisions near the end of life: professional views on life-sustaining treatments. Am J Public Health 1993;83:14-23.
- 11. Callahan D. Frustrated mastery. The cultural context of death in America. West J Med 1995;163:226-230.
- 12. Niederman MS, Berger JT. The delivery of futile care is harmful to other patients. Crit Care Med 2010;38:S518-S522.
- 13. Ferrell BR. Understanding the moral distress of nurses witnessing medically futile care. Oncol Nurs Forum 2006;33:922-930.
- 14. White DB, Evans LR, Bautista CA, et al. Are physicians' recommendations to limit life support beneficial or burdensome? Bringing empirical data to the debate. Am J Respir Crit Care Med 2009;180:320-325.
- 15. Zier LS, Burack JH, Micco G, et al. Surrogate decision makers' responses to physicians' predictions of medical futility. Chest 2009;136:110-117.
- 16. Bagheri A, Asai A, Ida R. Experts' attitudes towards medical futility: an empirical survey from Japan. BMC Med Ethics 2006;7:E8.
- 17. Pellegrino ED. Decisions to withdraw life-sustaining treatment: A moral algorithm. JAMA 2000;283:1065-1067.
- 18. Barry MJ, Edgman-Levitan S. Shared decision making—the pinnacle of patient-centered care. N Engl J Med 2012;366:780-781.
- 19. Eddy DM. The challenge. JAMA 1990;263:287-290.
- 20. Salzburg GS. Salzburg statement on shared decision making. BMJ 2011;342.
- 21. Ganz FD, Benbenishty J, Hersch M, et al. The impact of regional culture on intensive care end of life decision making: an Israeli perspective from the ETHICUS study. J Med Ethics 2006;32:196-199.
- 22. Johnson SK, Bautista CA, Hong SY, et al. An empirical study of surrogates' preferred level of control over value-laden life support decisions in intensive care units. Am J Respir Crit Care Med 2011;183:915-921.

- 23. Billings JA, Krakauer EL. On patient autonomy and physician responsibility in end-of-life care. Arch Intern Med 2011;171:849-853.
- 24. Dunstan GR. Hard questions in intensive care. Anaesthesia 1985;40:479-482.
- 25. Jox RJ, Schaider A, Marckmann G, Borasio GD. Medical futility at the end of life: the perspectives of intensive care and palliative care clinicians. Journal of Medical Ethics 2012;38:540-545.
- 26. Yoo JW, Nakagawa S, Kim S. Integrative Palliative Care, Advance Directives, and Hospital Outcomes of Critically Ill Older Adults. American Journal of Hospice and Palliative Medicine 2012;29:655-662.
- 27. http://www.nhmrc.gov.au/guidelines/publications/rec31
- 28. Dunstan GR. Hard questions in intensive care. A moralist answers questions put to him at a meeting of the Intensive Care Society, Autumn, 1984. Anaesthesia 1985;40:479-482.
- 29. Curtis JR, Vincent JL. Ethics and end-of-life care for adults in the intensive care unit. Lancet 2010;376:1347-1353.
- 30. Texas health and safety code 166.046. 2013.
- 31. Luce JM. End-of-life decision making in the intensive care unit. Am J Respir Crit Care Med 2010;182:6-11.
- 32. Schneiderman LJ, Gilmer T, Teetzel HD, et al. Effect of ethics consultations on nonbeneficial life-sustaining treatments in the intensive care setting: a randomized controlled trial. JAMA 2003;290:1166-1172.
- 33. Fine RL, Mayo TW. Resolution of futility by due process: early experience with the Texas Advance Directives Act. Ann Intern Med 2003;138:743-746.
- 34. <a href="http://www.legislation.vic.gov.au/domino/Web\_Notes/LDMS/LTObject\_Store/LTObjSt6.nsf/DDE300B846EED9C7CA257616000A3571/6D329679B5FA4D17CA2579FE001CD4EE/\$FILE/88-41aa046%20authorised.pdf">http://www.legislation.vic.gov.au/domino/Web\_Notes/LDMS/LTObject\_Store/LTObjSt6.nsf/DDE300B846EED9C7CA257616000A3571/6D329679B5FA4D17CA2579FE001CD4EE/\$FILE/88-41aa046%20authorised.pdf</a> (accessed June 2013).
- 35. <a href="http://www.archi.net.au/documents/resources/models/acp/evidence-base/LegalFAQ.pdf">http://www.archi.net.au/documents/resources/models/acp/evidence-base/LegalFAQ.pdf</a> (accessed June 2013).
- 36. Martin JM, Hart GK, Hicks P. A unique snapshot of intensive care resources in Australia and New Zealand. The Free Library (2010). Retrieved June 14, 2013.
- 37. <a href="http://www.legislation.govt.nz/act/public/1994/0088/latest/DLM333584.html">http://www.legislation.govt.nz/act/public/1994/0088/latest/DLM333584.html</a> (accessed June 2013)
- 38. Burns JP, Truog RD. Futility: a concept in evolution. Chest 2007;132:1987-1993.