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Perspective

Medical Futility: A Contemporary Review

Ellen Coonan

ABSTRACT

As medical technology has advanced, the question of medical futility has become a topic of intense debate both within the medical community and within society as a whole.[1] However, a unanimous definition thereof is yet to be decided[2]—some commentators are sceptical as to whether an agreement will ever be reached[3]—and this continues to lead to difficulties, tension, and even legal action when a treating physician disagrees with a patient and/or a patient's family regarding care and treatment options.[4] Although living in a pluralistic society presents one of the major reasons as to why, despite 30 years of intense discussion,[5] no consensus has been made; the issue of medical futility will always be complex as it is, by nature, multifaceted, and numerous elements—including possible risks, evidence of the probability of benefit, the wishes of the patient (and family), professional standards, and cost[6]—interact. Nevertheless, the global medical community has seen the development of two distinctly different approaches to medical futility: one in which the autonomy of patients is of paramount importance in the decision whether or not to pursue a treatment; and one in which beneficence and *primum non nocere*—first do no harm—are almost entirely the clinician's prerogative, and whereby he/she has a duty to refuse any treatment for which the potential risks outweigh the potential benefits for the patient.[7] Recently, however, there has been a rejection of this dichotomous view of medical futility[8] and the apparent "power struggle" between physician and patient,[9] and a positive movement towards a more collaborative decision-making process that highlights the necessity of communication, aiming to result in the obtainment of the best possible outcome for each patient as an individual.[10]

Ellen Coonan, MB, BS, is a Junior Medical Officer at the Royal Brisbane and Women's Hospital in Queensland, Australia. *ellen.coonan@uqconnect.edu.au*

MEDICAL FUTILITY: MERELY MEDICAL PATERNALISM?

Traditionally, physicians, with little input from patients, have governed medical treatment and the refusal thereof.[11] However, recent decades have seen an increased importance placed upon a patient's right to individual autonomy.[12] Opponents of the concept of medical futility believe the very idea to be a serious reversal of the advancements that have been made towards autonomy.[13] This side of the debate sees patients' independence as the most important factor to be considered in regards to medical treatment, and regards futility as a return to medical paternalism, with the physician having limited rights to an opinion during the decision-making process.[14] First seen during medieval times, one view—often religiously based—necessitates the prolongation of life at all costs,[15] often as a result of a belief in the "sanctity of life,"[16] and therefore, for this particular belief system, any definition of medical futility is null and void. Similarly, there is a common notion within society that, given the speed of medi-

cal advancements and technologies, novel treatment techniques and strategies are becoming readily available with high frequency, and that this denies any definition of futility, as the patient need only wait a small amount of time before a cure is available.[17] (Currently, however, this would not seem to be the case in practice, and thus this belief is unrealistic[18] and calls for better doctor-patient communication.[19]) Perhaps a little more scientifically, it has been noted that there is a distinct lack of empirical data apropos medical futility, and this may lead to not only uncertain quantitative definitions, but also to concern surrounding decisions not to treat.[20] Finally, it has been suggested that the execution of medical treatment that would usually be deemed "futile" by medical professionals can provide much needed relief and benefit to a patient's friends and family. The process of continuing treatment can be argued to help grieving relatives through their inevitable emotional upheaval in a kinder and less abrupt fashion[21] and would therefore alter the definition of medical futility to a much less patient-centered or physician-controlled approach, to a position that aligns more with the needs of the mourning family. Hence, it is impossible to ignore the many sided opposition to the idea of medical futility, as resistance comes from both scientific and spiritual arguments, and this continues to pose significant difficulties in finding consensus.

MEDICAL FUTILITY: EXCESSIVE PATIENT AUTONOMY?

On the other side of the debate, proponents of medical futility staunchly maintain and attest their and other's right to have a "good death."[22] This idea is not new. The father of modern medicine himself, Hippocrates, thought it immoral to prolong life beyond a certain point, advising doctors more than 2,300 years ago: "refuse to treat those who are overmastered by their disease, realizing that in such cases medicine is powerless."[23] Indeed, the Latin for futility—*futilis*—is literally translated as "leaky" (for instance, imagine collecting water in a bucket full of holes), which has led some to define medical futility as the moment when no treatment or intervention could be of any benefit to the patient as a whole (this should be distinguished from "effect," which is a positive outcome that is restricted to one portion of the patient's body).[24] This aligns with the bioethical principle of nonmaleficence and the theory of minimizing a person's suffering.[25] Some proponents of medical futility believe that patients and families do not (and given the difficulty of such circumstances, perhaps cannot) properly comprehend the gravity and significance of the situation, clinging to unrealistic expectations and the hope of a miracle.[26] Circumstances such as these could perhaps benefit from a switch to a management style that is less focused on autonomy, to one in which the physician contributes more considerably to the decision.[27] Similarly, it has been suggested that the label of futility and the subsequent decision to either withhold or withdraw treatment can provide much comfort and relief to families.[28] This early evaluation can alleviate later burdens of difficult decisions and can allow the family, already grieving, to move on more quickly than would otherwise have been possible; the psychological health of those remaining must be taken into account.[29] In a callous but perhaps more practical sense, the cost of any proposed treatments may be an aspect of the evaluation of futility and therefore may form part of the complex definition thereof.[30] Although, philosophically, this very idea may seem highly objectionable,[31] in a practical and clinical sense—whether it is due to a lack of private health insurance or as a result of a lack of public funding—expense cannot be ignored in making this difficult decision.[32] In addition, when considering the immense costs involved in end-of-life care and the world's ever-expanding population, the bioethical principle of justice and the ethical distribution of scant healthcare dollars becomes a necessary—albeit daunting and potentially treacherous—point of discussion. Thus, there continue to be great difficulties in the formation of a consensual definition of medical futility, in part due to the vast range of arguments—ranging from beneficence through the alleviation of suffering through to the more calculating question of cost—that proponents of medical futility propose.

MEDICAL FUTILITY: FINDING A HAPPY MEDIUM

There have been many varied attempts at defining medical futility but, due to the pluralistic nature of our society and the intensity of the arguments on both sides of the debate (several of which have been discussed above), this has not as of yet been achieved.[33] One attempt that has seen some agreement is that of the quantitative and qualitative method,[34] which includes both an objective and a subjective approach (respectively) to the determination of medical futility.[35] As described by medical ethicist and physician Lawrence Schneiderman, quantitative futility might be identified when empirical evidence suggests that there is less than a 1

percent chance that the proposed treatment will positively benefit (as opposed to effect) the patient;[36] qualitative futility occurs when a given treatment "merely preserves permanent unconsciousness or cannot end dependence on intensive medical care."[37] The use of semi-quantitative guidelines[38] such as these may provide some structure for physicians and patients alike, whilst allowing for a subjective assessment of the patient's quality of life; and some commentators suggest that a concrete definition is even necessary in order to reduce harms to patient, the discontent of family members, and the legal implications for physicians.[39] Conversely, some critics advocate that the term "futility" is itself confusing, and that any definition would involve arbitrary cut offs that would apply neither practically nor positively to a large number of patients, increasing the incidence of harm.[40] Likewise, some commentators highlight the need for discussion on an individual, case-by-case basis regarding the goals of the proposed treatment and the likely outcome in order to reach a conclusion.[41] This stance, which has become increasingly prevalent amongst experts in bioethics, highlights the need for effective communication between doctors and patients/patients' families in handling difficult end-of-life situations.[42] Evidence suggests that doctors' opinions on what constitutes medical futility differ greatly from those of the general population; that "laymen" are unlikely to fully comprehend the gravity of situations that have been deemed medically futile;[43] and that training physicians in effective communication techniques for futile circumstances is successful in reducing tension during this difficult period.[44] Therefore, although a consensual definition of medical futility may never (should never?) be established, through thorough and gentle communication with the patient and family, physicians can help to achieve individual goals for each unique patient and situation.

CONCLUSION

In summary, the idea of medical futility poses an interesting and difficult paradox between the bioethical principles of beneficence (and subsequently nonmaleficence) and justice versus autonomy. Whilst some believe it to have no place in modern medicine, as it leads to harm for patients and paternalism in physicians, others see it as the possibility of a "good death" and a means to provide relief for the patient, the family and, for some, the wallet (be it the patient's wallet or that of the state). However, it would be a much healthier alternative if the scope of the definition were left to be defined upon the presentation of each individual case, with positive communication between doctors and patients/families being of paramount importance.

NOTES

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