KEEPING PACE:
A NEW PARADIGM FOR THE ETHICAL USE OF MEDICAL TECHNOLOGY

Kay Ely-Pierce

"We have met the enemy and he is us."
Pogo

Advances in health care technology have forged a mighty sword in the ongoing battle against illness and death. That sword, however, is double-edged and unfortunately has not been presented with guidance for its judicious use. Our health care system provides the technological power to prolong life, or perhaps more accurately to "sustain bodily functions" indefinitely, yet it has not compelled us, as a society, to seriously ask, "should we?" And, if we should, "when and for whom, and under what circumstances?" This is the ethical legacy of health care in the 20th century. There is but a short time to amend that legacy and promote a logical, reasoned and fair use of technologies, grounded in distributive justice for the 21st century.

WHO SHALL DECIDE?

Traditionally, the responsibility for deciding what was "best" for the patient fell to the physician alone. Today, health care teams, who witness the inequities in the present system every day, including the fiscal and human costs, and the benefits of advanced technology use, bear the responsibility for deciding. Tomorrow, health care teams will bear responsibility, not for deciding, but for asking how to best distribute technology use, and for providing society with the information necessary to formulate an answer.

We as a society must be prepared to use this information to determine who should be the recipient of any given technology at any given time and for any purpose. We have abdicated that responsibility in the past, first to the physician, then to the health care team. Yet now, we cry "foul" when

---

physicians act paternalistically. Paternalism is a natural outgrowth of beneficence run amok.\textsuperscript{318} Society should not demand that the physician give up this role without being ready to take up the mantle.

Consider the following: a 67-year-old male (O negative blood type) is admitted to the intensive care unit for end stage liver failure. Secondary to his liver failure, he has developed renal failure. He is in a metabolic coma because of the inability of his liver and kidneys to clear toxins, which consequently affect the brain. As a further complication, he has developed bleeding, necessitating blood product transfusions. The patient is critical and "critical illness stimulates heroic efforts at rescue."\textsuperscript{319} Currently, the most common approach to such a patient is to "go all out"\textsuperscript{320} -- put the patient on continuous dialysis to clear toxins; use intravenous, oral and rectal medications to maintain blood pressure and balance body electrolytes; give blood products to compensate for blood loss and to reestablish clotting; and place the patient on the liver transplant waiting list. How long should the patient be maintained in this state? Does it matter if he has insurance? Are there other costs beyond the mounting financial costs?

Consider these additional facts: this patient filled the last available bed in the ICU. The patient's blood type (O negative) is rare and difficult to obtain, and the blood bank has only very limited stores to serve the entire hospital, including the emergency department. Additionally, the patient is a chronic alcoholic who had been hospitalized numerous times before for alcohol related pathologies. Do these factors make a difference? Would it influence the decision to know that a 26-year-old father of two who has O negative blood has been injured in a hit-and-run automobile accident and needs both O negative blood and immediate admittance to the ICU?

**RATIONING**

The time to make these decisions is not when the patient is hospitalized. It is now. We must develop a framework for analyzing the costs and benefits of given treatments for different categories of patients. Is this rationing? Perhaps. Is that bad? Not necessarily. In fact, etymologically, the word ration derives from the Latin for "a

\textsuperscript{318} Tom L. Beauchamp & James F. Childress, Principles of Biomedical Ethics 264 (4th ed. 1994).
\textsuperscript{319} Is the Cost of Terminal Care Treatment the Issue?, Drugs \& Therapy Persp., May 26, 1997, at 14, 14.
reckoning, which may be defined as "a measuring of possibilities for the future." Rationing is a necessity in order to provide the greatest good to the greatest number in a health care system that does not currently provide for all people equitably. The word ration however, has taken on pejorative connotations in the field of health care. This is partially because of its association with Diagnostic Related Groups (DRG's), the limitations on admissions to and length of stay in hospitals by Managed Care Organizations and insurance companies, and perhaps more basically, because of its association with the idea of "socialized medicine."

DRG's were an attempt by the federal government to solve the problems of overuse of technology and runaway costs in programs such as Medicare. However, a study published by Johns Hopkins University found that the DRG system did not account for inter-hospital differences in distribution of illness severity, resulting in discrimination against certain hospitals and patients. "DRG's encourage a form of 'implicit rationing' in ICU's by pressuring physicians to alter, withhold, or withdraw expensive care and encourage hospitals to limit or reduce the number of beds in existing ICU's."

DRGs create more inequity in an already inequitable system because they seek to treat the symptoms of a failing health care system (i.e. runaway technology and uncontrolled costs), not the underlying cause - the failure of our system to utilize the principles of distributive justice to decide on the use of technology.

Because DRG's have had such a negative impact on our health care delivery, many have adopted the stance that rationing is per se untenable. It is regrettable that rationing has acquired such a negative meaning, when its true meaning applies so well to proper health care maintenance. Many authors use the term "allocation of resources," but this refers to distribution; it does not imply any shortages of resources. In reality, we are facing these types of shortages. In some cases, real shortages exist, such as the limited supply of organs for transplant. In other cases, the cost of technological interventions produces a de facto shortage of resources, which makes medical interventions inaccessible to the poor.

---

321 WEBSTER'S NEW WORLD DICTIONARY OF AMERICAN LANGUAGE 1179 (2d ed.).
323 See Rovner, supra note 7 (citing a number of bills presented and pending in Congress which are seen as part of a "backlash" against managed care dictates on length of stay, coverage, and treatment).
324 RUTH MACKLIN, MORTAL CHOICES: BIOETHICS IN TODAY'S WORLD 161 (1987).
325 Id. at 162.
326 JUDITH WILSON ROSS, HANDBOOK FOR HOSPITAL ETHICS COMMITTEES 23 (1986).
and/or uninsured. For example, the drugs used in the treatment of AIDS may cost thousands of dollars, precluding their use by the poor.\textsuperscript{328} The Health Insurance Portability & Accountability Act of 1996, (HIPAA)\textsuperscript{329} when originally proposed as the Kennedy - Kassebaum Bill\textsuperscript{330} envisioned creating equity via universal health care coverage. Although originally intended as a universal-access health care plan centered around managed care, HIPAA, as passed, does not extend coverage to the uninsured. While it does prohibit insurance companies from refusing to renew coverage, HIPPA sets no limits on the amount they may charge.\textsuperscript{331}

The state of Oregon attempted to address inequities in the provision of health care and implemented a state health care plan on February 1, 1994 which rations services based on a list of 709 medical procedures. Those below number 587 are considered to be least beneficial and are, therefore, not covered by the insurance plan.\textsuperscript{332} The plan has been criticized because it categorizes patients based on procedures, while not accounting for other factors which affect outcomes and benefits.\textsuperscript{333}

Solutions such as DRGs and the Oregon plan address the symptoms of a failing health care system: skyrocketing costs and inequitable distribution of services, not the underlying pathology. In order to find the solution, we must focus our efforts on the true root of the problem. Society must acknowledge what health care practitioners already know. Our present health care delivery system is inequitable and inconsistent.\textsuperscript{334} We must be prepared to face the reality of rationing. Calling it by any other name obscures the truth and limits our ability to solve the problem.

THE PROBLEM -- AN OUTDATED MORAL IMPERATIVE


\textsuperscript{330} Senator Edward Kennedy, Remarks at the Signing of the Health Insurance Portability and Accountability Act of 1996 (Aug, 21, 1996). Senator Kennedy spoke of the limitations of the bill, as passed. The bill was sponsored by Senators Edward Kennedy (Mass.) and Nancy Kasselbaum (Kan.).

\textsuperscript{331} Health Insurance Portability and Accountability Act of 1996, \textit{supra} note 14.

\textsuperscript{332} See Thomas Bodenheimer, \textit{The Oregon Health Plan—Lessons for the Nation (First of Two Parts)}, 337 NEW ENG. J. MED. 651 (1997); William M. Bennett, \textit{The Oregon Medicaid Controversy}, 327 NEW ENG. J. MED. 642-43 (1992).

\textsuperscript{333} Michael H. Shapiro & Roy G. Specce, \textit{CASES, MATERIALS, AND PROBLEMS ON BIOETHICS LAW} 307–08 (Supp. 1991) (criticisms were aimed at the precursor to the law as enacted in 1994. Many of the criticisms however, are still valid).

The problem is the current moral imperative in American society - that life is sacred and death is the enemy. This imperative has not kept pace with technological advances in health care. We must either change our moral imperative or withdraw the technology. To withdraw technology across the board would be foolish. What is necessary is to manage our technology in a manner consistent with a new imperative. The new imperative must be that life is sacred and death is a natural and respected part of life. Death then becomes the dignified exit of a peaceful person from a helpful society that is not torn by the idea of a biologic transition.\textsuperscript{335}

There is a movement toward acknowledging, if not accepting, this philosophic principle. This is evidenced by recent attention to advance directives, do-not-resuscitate orders (DNRs), federal enactment of the Patient Self Determination Act,\textsuperscript{336} the failure of the Michigan courts to successfully prosecute the infamous Dr. Kevorkian,\textsuperscript{337} and the rise in Hospice.\textsuperscript{338} In theory, these should indicate a society on the verge of accepting death as a transition - a stage in the process of living. In practice, however, they often fail to achieve their objective.

Advance directives are, as the name implies, a directive on the use of technological interventions (specifically, those aimed at prolonging life) which a patient sets forth in anticipation of the day when the patient may be incapable of making her wishes known.\textsuperscript{339} Under the Patient Self Determination Act (PSDA), the federal government now requires all hospitals receiving funds or services from either Medicare or Medicaid to provide adult patients with information on advance directives regarding termination of life support, to ask all patients if an advance directive has been executed, to document the answer, and to provide the patient with information on state laws regarding advance directives.\textsuperscript{340} In reality, only


\textsuperscript{337} As of August 1997, prosecutors have failed in their attempts to have an indictment issued against Dr. Kevorkian, a retired pathologist, for his practice of providing the means to accomplish suicide to patients he believes need his assistance.


\textsuperscript{340} See Omnibus Budget Reconciliation Act of 1990, \textit{supra} note 21.
between nine\textsuperscript{341} and twenty-eight percent\textsuperscript{342} of patients execute advance directives and often those are countermanded by family members or health care providers.\textsuperscript{343}

DNR orders may work in conjunction with advance directives or may exist independently of any such directive. A DNR order allows the patient the option to refuse resuscitation. In the event that the patient is incapable of making that decision, a "surrogate decisionmaker" will decide on behalf of the patient, based upon what the surrogate thinks the patient would want.\textsuperscript{344} The underlying rationale for a DNR order is that in many cases, efforts at resuscitation would be not only futile, but would prevent the patient from experiencing a dignified death.\textsuperscript{345}

DNR orders are cited as a particularly fitting measure of the respect health care providers should accord those patients whose condition has come to a point where the processes of dying are beginning to overtake the processes of living . . . [and where] artificial intervention in the prolongation of the patient's life would be considered cruel and inhuman punishment rather than a help.\textsuperscript{346} Studies indicate, however, that DNR orders are often overlooked or ignored and resuscitation efforts proceed regardless.\textsuperscript{347} For example, in a survey reported in the nursing journal \textit{RN}, six in ten of the survey respondents [nurses] reported having participated in resuscitation efforts they considered senseless or hopeless within the year preceding the survey.\textsuperscript{348}

The legislative enactment of Natural Death Acts\textsuperscript{349} shows an encouraging indicator that a segment of society has begun to accept death as a natural part of life. As an example, Virginia's Health Care Decisions Act\textsuperscript{350} defines a life-prolonging procedure as any medical procedure,

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{341} Smith, \textit{supra} note 1, at 55.
\item \textsuperscript{342} Teno, \textit{supra} note 24, at 23.
\item \textsuperscript{344} See, e.g., Health Care Decisions Act, VA. \textit{CODE ANN.} § 54.1-2983 (Michie 1994 & Supp. 1997).
\item \textsuperscript{345} \textit{RAYMOND J. DEVETTERE, PRACTICAL DECISION MAKING IN HEALTH CARE ETHICS} 199–207 (1995).
\item \textsuperscript{346} George, \textit{supra} note 20.
\item \textsuperscript{347} See \textit{Is the Cost of Terminal Care Treatment the Issue?}, \textit{supra} note 4, at 14.
\item \textsuperscript{348} David Anderson, \textit{Death and Dying: Ethics at the End of Life}, RN, Oct. 1988, at 42, 42. Specifically, nurses gave the following examples: (1) "A patient who had been in a coma for 8 years [who] began to have GI bleeding and was given pint after pint of blood." (2) "An 81 year old man with cancer metastases to the brain [who] came to the ED with a ruptured abdominal aortic aneurysm and they repaired it." (3) "A patient with end stage AIDS [who] received multiple resuscitations." \textit{Id}.
\item \textsuperscript{349} The Virginia Natural Death Act was subsumed by the Health Care Decisions Act effective July 1, 1992. VA. \textit{CODE ANN.} § 54.1-2981 (Michie 1994).
\item \textit{Id}.
\end{itemize}
\end{footnotesize}
treatment or intervention which utilizes mechanical or other artificial means to sustain, restore or supplant a spontaneous vital function, or which otherwise affords no reasonable expectation of recovery, or which serves only to prolong dying. It includes artificially administered hydration and nutrition. It explicitly states that nothing in the Act shall prohibit the administration of medication or performance of any medical procedure to provide comfort or alleviate pain, including the administration of excess dosages of pain relieving medications.

The implication is that futile interventions are wasteful and unjust, death is "natural," and dignity (e.g., pain relief, compassionate care) should be accorded to all. However, the United States Supreme Court has refused to find a constitutional right to physician assisted suicide and states may therefore criminalize an act which may be ethically supportable as compassionate care.

Society apparently seeks to support the patient's right to autonomy yet balks when the exercise of that right threatens the moral imperative that death is the enemy. Too often, patients are directed to be brave, tough it out and not take the easy way out: "do not go gentle into that good night." Families regularly override the stated preferences of patients that no heroic measures are instituted, insisting that everything be done.

As long as death is seen as the enemy, it is the antithesis of living. Only when death is seen as a stage in the process of living is there no longer the need to attempt to refute death. One may, at once, live and die. This is the premise of the hospice movement. Hospice is perhaps the most encouraging indicator that society may actually embrace a new imperative.

The Hospice movement began in the 1960's when Dame Cicely Saunders founded St. Christopher's Hospice near London. The term hospice derives from the Latin hospitum, meaning guesthouse, and was, in medieval times, used to describe a place of shelter and rest for weary or sick travelers returning from religious pilgrimages. This implicates the bioethical principle of “double effect.”

---

351 Id.
352 Id.
353 Id. This implicates the bioethical principle of “double effect.” See BEAUCHAMP, supra note 3, at 206–11.
357 See What is Hospice?, supra note 23.
358 Id.
treatment. The modern terms *hospital* and *hospitality* similarly derive from *hospitum*.

The Hospice foundation of America defines hospice as "not a place to go to die, but rather a concept of care based on the promise that when medical science can no longer add days to life, more life will be added to each day." Hospice utilizes the concept of palliative care, by providing pain control and other necessary comfort care measures. Artificial life-support measures and heroic medical and surgical interventions are not employed in hospice. Unfortunately, significant barriers to entering hospice exist. These barriers range from geographic unavailability, through the difficulty which physicians face in certifying that the patient has less than six months to live (a requirement for hospice care), to the necessary ideologic shift from acute care treatments to palliative care. These barriers are not, however, insurmountable.

Once we have truly accepted the new imperative, then we may acknowledge the inequities and inconsistencies in our treatment because we have operated under the old imperative. Then, our technologies can be applied in a more just fashion.

**CRITERIA FOR THE RATIONING OF TECHNOLOGIES**

Returning to the hypothetical situation of the death of either the 67-year-old alcoholic with liver failure or the 26-year-old hit-and-run victim is not intrinsically "bad." Under the facts given, the hit-and-run victim has the better long-term prognosis if he can be managed through the present crisis. He has no underlying pathology. The 67-year-old patient, however, has underlying liver disease which will necessitate a transplant, for which he is not a candidate because of current active alcohol abuse. These are prognoses.

Prognosis should be one factor in the process of deciding who should receive the resources available (in this case, the O negative blood and the ICU bed).

The other factor in this hypothetical scenario which must be considered concerns the nature of the situation. That is, is the patient's

---

359 *Id.*
360 *Id.*
361 *Id.*
362 *Id.*
364 Plural for prognosis (from the Greek prognosis meaning foreknowledge); a forecast as to the probable outcome of an attack of disease; the prospect as to recovery from a disease as indicated by the nature and symptoms of the case. DORLAND'S ILLUSTRATED MEDICAL DICTIONARY 1262 (28th ed. 1994).
present condition one that will be rendered temporary by the intervention of technology, or is the condition one which will remain permanent, regardless of intervention? In the cases presented, the accident victim's condition will be rendered temporary (assuming no other medically relevant factors), while the other patient's underlying condition (liver failure secondary to alcoholic cirrhosis) will not change through intervention.

Thus, two of the criteria which should be used in health care are prognosis and duration (i.e., temporariness) of condition. Another criterion which has been proposed by some and, in at least one case, put into practice is "social worth." This is a type of merit determination. The case in point took place in the early 1960s at the Seattle Artificial Kidney Center in Seattle, Washington. Dialysis was new and extremely expensive, and the center created a committee to decide the most appropriate applicants for dialysis. The decision was based upon a number of factors including age, sex, marital status, number of dependents, income, net worth, emotional stability, educational background, occupation, past performance, future potential and personal references. The case in point took place in the early 1960s at the Seattle Artificial Kidney Center in Seattle, Washington. Dialysis was new and extremely expensive, and the center created a committee to decide the most appropriate applicants for dialysis. The decision was based upon a number of factors including age, sex, marital status, number of dependents, income, net worth, emotional stability, educational background, occupation, past performance, future potential and personal references. The case in point took place in the early 1960s at the Seattle Artificial Kidney Center in Seattle, Washington. Dialysis was new and extremely expensive, and the center created a committee to decide the most appropriate applicants for dialysis. The decision was based upon a number of factors including age, sex, marital status, number of dependents, income, net worth, emotional stability, educational background, occupation, past performance, future potential and personal references.

Viewing the criteria used by the Seattle dialysis center, such merit considerations seem harsh and have in fact been dismissed by some bioethicists as "morally repugnant." A teleological approach, especially the utilitarian consequentialist position as found in the writings of Jeremy Bentham and John Stuart Mill, would seem to support the use of some type of merit system. The outcome of "the greatest good for the greatest number" determines the choices. Although such considerations are a "slippery slope," they are valid considerations. In our hypothetical situation, would it make a difference in the decision as to who would receive the blood and ICU bed if the terminal 67 year old was in fact a scientist who was within days of discovering a cure for cancer or a vaccine for HIV? This would make a difference under the utilitarian consequentialist theory because prolonging the life of the one (the patient/scientist), the many (all those having cancer or at risk of acquiring HIV) would benefit. Obviously, such a hypothetical assumes that the patient will regain his productivity and no other person involved in the research could carry on in his stead.

366 See id. at 160.
367 See BEAUCHAMP & CHILDRESS, supra note 3, at 47–48 (describing theory of consequentialism as adhering to the belief that the rightness or wrongness of an act is determined by its consequences, and utilitarianism as a theory that we ought always to do that which produces the most overall positive outcome).
A teleological (utilitarian consequentialist) perspective would take merit into consideration. However, the factors to be considered in determinations of merit must be outlined in a careful and ethically-supportable manner. Clearly, considerations such as income and net worth have no place in the decision process. But, what of the many other factors which may be considered? We as a society must decide what we will accept as meritorious. Should age be a factor? Urgency? Social Usefulness of the patient? Social responsibilities and dependents of the patient?\textsuperscript{368}

We are presented with a schema, then, where health care providers stand in the middle of a two-way street. They provide to the society the facts about prognosis of a given condition with and without technological intervention. They provide facts on the costs and benefits of a given technology. They provide guidance based upon experience with previous similar situations and their outcomes (casuistry).\textsuperscript{369} But society has a duty to provide the ethical framework which will allow the patient, the patient's family, and the health care team to make a just distribution of resources.

**THE ANSWER**

The answer is really a question. How will we address the dilemma posed by 20th century technology operating within a system whose basic tenet -- that death is an inexorable enemy -- no longer applies? The question is the answer. We must open a dialogue, confront the issues, question ourselves. We must question whether it is not time to change our moral imperative. I believe it is. We must leave behind the concept that death is the enemy to be vanquished. Arnold Beisser, M.D. expressed it much more eloquently than I when he wrote that "death is no more a defeat than is growing taller, starting school, or falling in love. All are phases of life, and each brings a special set of hazards and satisfactions."\textsuperscript{370} Once we have truly accepted this, then there will be no need to fight death in every situation.

Our challenge does not come in determining when to utilize our technologies to forestall death, but instead to substitute the principles of hospice. It is then that we may, in good conscience, begin the process of rationing our health care technologies. My position is that we must begin to set out our criteria for making these decisions now. Considerations of

\textsuperscript{368} See generally FRANCES MYRNA KAMM, MORALITY, MORTALITY 201–334 (1993) (discussing distribution of resources).

\textsuperscript{369} BEAUCHAMP & CHILDRESS, supra note 3, at 92.

\textsuperscript{370} ARNOLD R. BEISSER, A GRACEFUL PASSAGE: NOTES ON THE FREEDOM TO LIVE OR DIE xiv (1992). Dr. Beisser was stricken with polio at the age of twenty-five as a young surgery resident. He is paralyzed from the neck down and spends approximately half of each day in an iron lung. He is a clinical professor of psychiatry at UCLA and has written extensively.
prognosis, temporariness of affliction and merit must be undertaken. Society must decide on explicit criteria to be considered in determining merit. Without such an explicit framework, we are in the position of making ad hoc decisions which perpetuate the inequity and inconsistency of our present system.

This very problem was exposed in the 1960s when the ethically insupportable decision-making process of the Seattle Artificial Kidney Center selection committee was brought to light. Referring to that situation (specifically the determinations regarding social worth), an observation was made that, "if no understandable criteria of social worth can be agreed upon, committees measuring social worth must decide upon an ad hoc basis. Ad hockery is not the stuff from which the constitutional guaranties of equal protection and due process are made."\(^{371}\)

If we can accept a new moral imperative, acknowledge the need to ration technology use and begin the process of explicitly stating what criteria we, as a society, will sanction for allocation decisions, we will take into the 21st century, perhaps not the answer, but at least the framework for developing the answer. If we can do that, then the ethical legacy of the 20th century will be that of a people who strove toward justice.

---

\(^{371}\) Shapiro & Spece, supra note 18, at 834 (citing David Sanders & Jesse Dukeminier, Medical Advance and Legal Lag: Hemodialysis and Kidney Transplantation, 15 U.C.L.A. L. REV. 357 (1968)).