

WHO SHALL LIVE AND WHO SHALL DIE AND WHO SHALL BE THE JUDGE?

By: William H. Barney, M.D.

Presented at the regular meeting of the SpheX Club on October 20, 1977

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In preparing my first presentation for the Sphex Club I have sought a subject of current interest. I hope that the content of this paper will address itself to contemporary problems but on reflection it is apparent that the subject itself is not new. Since the beginning of recorded history man has been concerned with death, a fact brought out by the writings of all ages from ancient Egypt until present time.

And the Sphex Club has not ignored this subject. A brief review of some of the subjects in the past indicates that from the origin of the club many members, and particularly physicians, discussed subjects relating to life and death. In recent years Dr. Fred Morrison presented a paper with some thoughts on euthanasia. Dr. John Hundley presented a paper entitled simply "Euthanasia". Mr. Marshall Frost has presented "To Kill or Not To Kill" and recently Dr. Alexander

Robertson discussed the subject "Life After Death". I note also that Mr. Frost once had a presentation called "What Shall We Do with Grandpa" which is suspiciously suggestive of some of the thoughts that will be brought out in the paper tonight.

And so with these preliminary remarks, I ask you the question, Who Shall Live and Who Shall Die and Who Shall be The Judge?

"I am a broken piece of machinery. I am ready". Thus spoke Woodrow Wilson the 28th President of The United States on the evening of January 31, 1924 and these proved to be his last words because he then lapsed into a coma and died 2 days later. Mr. Wilson had suffered a stroke in October of 1919, slightly more than 4 years previously and while still in office. From that time until his death he was a crippled man passing through various stages of incapacity. There has been, through the years, considerable speculation about Mr. Wilson's ability to function as President during this time with suggestions sometimes made that Mrs. Wilson actually functioned as the Chief Executive. There are others in this club who are more qualified than I to discuss the historical impact of Mr. Wilson's illness, but from a medical standpoint there

can be little doubt that his medical attention did little, if anything, to prolong his life beyond the expected termination of his illness. I say this, not in any criticism of those who attended him, because I am certain that everything was done to make him comfortable and to bring about a recovery. But at that time in medical history there was little that could be done to prolong a person's life by artificial means and when the natural history of a disease had run its course the patient would die despite all efforts.

Some 45 years later, on March 28, 1969, Dwight David Eisenhower, the 34th President of The United States, died. Like Mr. Wilson Mr.

Eisenhower had suffered a serious illness while President, a myocardial infarction on September 24, 1955. He made an uneventful recovery from this (if any illness of a President can be uneventful) and as in the case of Mr. Wilson, even though I am sure everything was done that was possible at Fitzsimmons Army Hospital in Denver where he was treated, I am certain that very little that was done altered the natural course of his disease. However, during the next few years, and after his retirement from the Presidency, Mr. Eisenhower suffered a stroke and subsequently a series of heart attacks. During his final years he was in and out of hospitals many times and during his

final months was continuously hospitalized at Walter Reed in Washington.

The complete medical story of Mr. Eisenhower's illness has not, to my knowledge, been recorded, but there have been reports that during Mr. Eisenhower's final months he suffered cardiac arrest on many occasions, probably numbering in the hundreds, and that on these occasions, he was artificially resuscitated by means of electric countershock.

During this period Mr. Eisenhower physically deteriorated to the point that he was only a shell of his former self, a fact confirmed by Mrs. Eisenhower who has stated that at his death he weighed less than 80 pounds.

Here again, I level no criticism at the physician's treatment of Mr. Eisenhower but I use these two examples to show the vast changes in medical capability that came about between the time of Mr. Wilson and the time of Mr. Eisenhower.

The techniques, which I will discuss I will call life support systems, basically mechanical means of artificially prolonging life beyond a point at which it would normally be expected to terminate in any given circumstance. The development of these capabilities has proved to be a two edged sword. Certainly in many cases productive

and viable lives have been saved and people are now alive and working in Lynchburg who, a few short years ago, would not have survived illnesses from which they have been resuscitated. But the other edge of the sword has been the dilemma in which many of us have been placed as we decide when to use and when not to use these life support systems and, more importantly, when we have once begun to use them, when should they be discontinued.

First of all, I would like to define some of these systems and indicate the important benefits which have been derived from them.

The first such mechanism is cardio-pulmonary-resuscitation, commonly referred to as CPR. This is a first line effort to resuscitate a person from a cardio-vascular or respiratory emergency. It is usually instituted within a few minutes of the time that such an emergency occurs. It is important to note that there are vast numbers of laymen who are now capable of performing CPR and indeed American Red Cross, The Life Saving Crews, The Heart Associations are all actively promoting courses for non-professionals and encouraging them to become knowledgeable in CPR. Basically, CPR is a method of keeping the heart and respirations active by very

simple means until a more sophisticated life support system can be provided.

CPR was first used in the surgical field. For many years it was recognized that when a surgeon was operating upon a patient, if the heart stopped the surgeon could open the chest and with his hand manually keep the heart beating until drugs or some other method could be used to restore the patient's normal heart action. It was also recognized that surgical patients who were under anesthetic control could be kept breathing for an indefinite period of time by oxygen, breathing bags, and anesthesia machines. But it was not possible in those days, or at least it was not known to to be possible, to resuscitate a person in such a manner without having him on an operating table. And then in the 1960's several things happened which changed the whole picture. First there was the discovery that cardiac massage could be performed without opening the chest. It was determined that effective circulation could be provided by rhythmically compressing the heart between the sternum and the backbone, this being done by applying pressure at a fixed rate per minute to the sternum, while the patient was in the supine position. At

about the same time another development took place, pioneered mostly by The American Red Cross, which has come to be known as mouth-to-mouth resuscitation.

Prior to that time manual resuscitative efforts were used mostly on drowning victims and the method used was what many of you will recall from your Boy Scout days as being the Shafer Prone Method. This method was mildly effective in removing water from the lungs but did very little to provide necessary oxygenation. Then it was discovered that one could use his own lungs to inflate the lungs of a victim, again in a rhythmic fashion and at a fixed rate per minute. With this method respiration can be kept going for an indefinite period of time.

It is the combination of these two mechanisms, external cardiac massage and mouth-to-mouth resuscitation that makes up CPR. At the present time a trained operator, and as I have indicated before, there are many working alone who can keep a person's heart beating and his lungs oxygenated for a period of time limited only by the operator's own physical stamina. Two trained operators can keep a patient alive indefinitely so that it is possible to keep a patient

viable for many hours until more definitive cardio-respiratory support can be obtained. This, then, is the first mechanism, CPR, which brings more people to the hospital emergency rooms after having had a major cardio-vascular or respiratory catastrophe, patients who without CPR would never have survived or reached the hospital in the first place.

The second development, with which we are concerned, is the introduction of critical care units in the hospitals, particularly the coronary care unit. Parenthetically, the coronary care concept has been, in large part, a spin off of our space program. It is a sad but true commentary in medicine that most advances occur in times of major crisis and many of our important developments such as the anti-biotic age for instance were introduced or were speeded up in their development by the necessities of war. But the space age program and the necessity for life support systems in outer space developed many electronical devices, particularly cardiac telemetry and memory tape recordings, which are now used today and are indispensable in our coronary care program.

Basically, the coronary care concept involves the constant monitoring,

by an electrocardiogram and other means, of a patient who has had a heart attack during the period of time when life threatening complications are most likely, usually the first 4-5 days. It has been known for many years that death in coronaries is most often due to electrical disturbances in the heart, commonly known as arrhythmias. The problem has been that there are many different types of arrhythmias which develop in heart disease and while medications have been developed for treatment of many of these, various disturbances are treated differently and a drug which helps one arrhythmia may be very harmful in another. It also has been impossible to predict when an arrhythmia was going to occur and what type it would be. The constant monitoring in the coronary care program has solved this problem and we can now predict, in many cases, when a person is going to develop an arrhythmia and treat it before that life threatening situation occurs. Along with the monitoring system, there also has been developed methods of cardio-version, or electric counter shock, which I referred to previously in the case of Mr. Eisenhower. This is a method of applying an electrical stimulus to the heart when it is either stopped or is in a serious arrhythmia

with such shock hopefully restoring its normal beat. This life support system, that is the coronary care concept, has allowed us to reduce the mortality rate from initial attack of myocardial infarction from something in the neighborhood of 40% now down to about 18%. And there is no question that this is a giant step forward in the treatment of cardio-vascular disease. Here again, however, as in the case of CPR we are now able to prolong life and at times we face the dilemma, as I am sure Mr. Eisenhower's physicians did when they shocked him those hundreds of times.

When do we stop?

This third life support system, and the one which has caused us the most agony, is in the field of respiration. There is no area in medicine which has, until recent years, been as little understood as the physiology of respiration and advances in that field have occurred at a more rapid rate in the past decade than at any time in history. Here, again, there are two mechanisms which make respiratory life support important. One is a more firm understanding of oxygen and its administration and how it affects the circulation. We now have methods of measuring oxygen content of the blood and we

have methods by which we can administer oxygen to put the oxygen content exactly where we want it at any given time. In other words, we can restore blood oxygen to normal and know scientifically that we are doing it by measuring the patient's arterial blood oxygen.

Secondly, there has been the development of ventilators. Prior to the 1960's oxygen was administered only by means of a nasal catheter or an oxygen tent, or occasionally, a loose fitting mask. The only type of a respirator that was known was the large Emerson Respirator which was used mostly in polio victims in which the patient was encased in a steel cylinder and alternating positive and negative pressure was applied to mechanically move the patient's chest wall in and out and thus breathe for him. And then, again as a part of the spin off of the space age program when it became necessary to support people in outer space where there was no oxygen, the principle of ventilator support was born. Briefly, a ventilator is a machine which supplies oxygen or some other gas to the patient through an internal closed system. Either a tight fitting face mask or a tube placed in the trachea by one of several methods which close the system and the ventilator actually breathes for the patient. With

this method, a patient who has no spontaneous respiration can be kept breathing for an indefinite period of time. Now this has been a giant step forward also in the treatment of many diseases. While the coronary care unit involves support for only myocardial infarction patients, the respiratory therapy concept provides support for a vast number of diseases.

To name a few, ventilator support can keep alive and restore to normal health such diverse occurrences as drowning, asphyxiation, electric shock, surgical shock, chest trauma, drug overdose, silo-fillers disease, congestive heart failure, pulmonary embolus, respiratory distress syndrome in infants, polio, asthma, and a host of others too numerous to mention here. I would point out that a great many of these occur in young, viable individuals and in many of them a short period of ventilation is all that is necessary to save their life and to restore them to their normal state of health.

But if these life support systems enable us to keep alive functional individuals who are able to return to a normal functional life they also enable us to keep alive patients who have no hope of being

restored to normal. And here is the dilemma which doctors have faced during these past few years, who shall live and who shall die and who shall be the judge?

But the question I would submit is no longer only the doctor's dilemma. It has become a question which involves not only medicine but economics, religion, ethics, philosophy and perhaps most other disciplines, as well as the concern of the average citizen who may be the patient.

So we can see this is a very complex problem which raises many complex questions. For instance, we should first of all ask, what is the physician's obligation to his patient under any given circumstance? Failure to supply life support, if it is available, and to discontinue it once it is begun, goes against all the teaching and training of the medical profession. It all began with Hippocrates 2400 years ago. At that time euthanasia, which comes from the Greek meaning a good death, was widely practiced and took many forms throughout the world. But from beneath a giant Plain tree on the Island of Cos came the words of the Hippocratic oath, "I will neither give a deadly drug to anybody if asked for nor will I make a suggestion to this effect"

and this has been a part of medical discipline ever since. In the broadest sense this means that we are committed to protect life under all circumstances. But until recently we have not been dealing with extraordinary means of prolonging life. But, we must now ask, what is life? What is a meaningful life? When is life merely existence? And are we obligated by our oath, by our ethics, by our morals, or legally to prolong life which has no meaning?

A larger question that has plagued us is what is death? That is, what is medical death? We have been taught, and the laws of most states have defined death as the cessation of heart action and respiration. And yet, as we have seen, we now have mechanical methods of keeping the heart going and the lungs breathing as long as we like. Should there then be another definition of death?

The major controversy over the definition of death involves what we now speak of as brain death. The brain in a multitude of ways is a most unusual organ. It is a complicated structure which is the most highly developed organ in the human body but at the same time has the least power of regeneration. The heart, lungs, kidneys, many of the organs can survive for prolonged periods of time without oxygen but

the brain can survive only a very few minutes. It is generally taught that 7 minutes is the maximum time that the brain can survive without irreparable damage but in the practical experience of most of us the time is far shorter than that, perhaps in the range of 4-5 minutes at the maximum. And when the brain is deprived of oxygen for that period of time, damage occurs which in most cases will leave the patient little more than a vegetable. Furthermore the brain is unique in that it lacks the powers of regeneration so that once the brain is without oxygen for a certain period of time and is damaged beyond repair and has no power of regeneration, the patient, in fact, although heart and respirations may continue to function will never again be a viable or perhaps not even a conscious individual.

In the state of Virginia, until 1972, death was described as "the cessation of life, the ceasing to exist, a total stoppage of the circulation of the blood and the cessation of the animal and vital functions constant thereto such as respiration and pulsation".

Note that no mention was made here of brain death. But then in 1968, in the midst of the era of transplantation of organs, there came to The Medical College of Virginia one Bruce Tucker, a 56 year old black

laborer who has sustained a massive brain injury in a fall which was diagnosed as a basilar skull fracture, a sub-dural hematoma, and a brain stem contusion which when translated medically means that he had such massive damage that almost any of us would have said that he had no possibility of recovery. He was admitted to the hospital at 6:05 p.m. At 11:00 p.m. an emergency craniotomy was performed in an attempt to remove a blood clot. At 11:30 the next morning he was placed on a respirator. At 11:45, 15 minutes after being placed on a respirator, his treating physicians made a note that prognosis for recovery is nil and death is imminent. At 1:00 p.m. on that date a neurologist was called and an electroencephelogram was made and the results showed "flat lines with occasional artifacts. There is no clinical evidence of viability and no evidence of cortical activity".

Following this, Mr. Tucker was taken to the operating room where he remained on the respirator until 3:30 p.m. at which time the respirator was cut off. Three minutes later Joseph Klett, a heart recipient, was brought into the operating room. His chest was opened. At 3:35 Mr. Tucker was pronounced dead. His heart was

removed and transplanted into the chest of Mr. Klett.

Mr. Klett died about one week later.

Now out of this case there came a law suit brought by William Tucker, brother of the dead man, who sued Dr. David Hume, the Chief of MCV surgery department, and others including the hospital, for \$100,000 damages charging that the transplant team was engaged in a systematic and nefarious scheme to use Bruce Tucker's heart and hastened his death by shutting off the mechanical means of support.

The suit, most observers believe, was triggered by the fact that no one in the family knew that Bruce Tucker was in the hospital or was being operated upon and no permission was given for the transplantation of his heart. Now this problem has been settled previously under a Virginia law which gives the state medical examiner the permission to order the disposition of a body or organs after a reasonable attempt has been made to locate relatives. William Tucker maintained that he was in the city, that he was available and that a reasonable effort was not made to locate him and that the organs were transplanted without his knowledge. This problem was really never settled or even approached in the trial which took place. The trial, in effect,

centered about the fact of whether or not Bruce Tucker was dead at the time his heart was removed or whether Dr. Hume and his associates were guilty of murder or wrongful death in proceeding with this operation.

In the beginning Judge Compton, who presided at this trial, made rulings which supported the Virginia statutes of the legal concept of death, that is that death is the cessation of respiration and pulsation. He initially ruled that the defense's attempt to employ a medical concept of neurological death would be rejected as an effort to establish a rule of law. When he reached the period of instructing the jury, however, Judge Compton back tracked and this is what he said. "In determining the time of death you may consider the following elements, none of which should necessarily be considered controlling although you may feel under the influence that one or more of these conditions are controlling. 1) The time of the total stoppage of the circulation of the blood. 2) The time of the total cessation of the other vital functions consequently thereto such as respiration and pulsation. 3) (And I emphasize) the time of complete and irreversible loss of all functions of the brain and whether or not

the aforesaid functions were spontaneous or being maintained artificially or mechanically". Judge Compton, therefore, according to many observers, gave the jury the option of establishing the concept of brain death, and they did this in bringing in a verdict of not guilty.

Now whether this actually established the concept of brain death as a rule of law has been in some conflict. In an article in the National Observer in June of 1972 Lawrence Mosher writing a rather long, detailed history of this trial came to the conclusion that this did, in fact, establish brain death as legal. In the same year in the Hastings Center Report, Robert M. Veitch came to the conclusion that it did not and to accept such a rule allowing the physicians to apply this without it being a concept of law would be vesting in physicians the authority to change public policy in areas of life and death and in Mr. Veitch's opinion this was intolerable.

Regardless of whether or not the Tucker case did establish brain death as a rule of law doctors, at least in Virginia, have felt more comfortable, legally, in refusing to institute or to continue artificial means to prolong life in the case where the brain is

medically dead. And then in 1973 the Virginia State Legislature enacted into law House Bill 1727 which added brain death as a criteria which could be used to determine the time of medical death.

There is, however, another question which goes beyond that of irreversible brain damage and that is the question of the quality of life. There are many who have suggested that decisions regarding the institution or the discontinuation of vigorous treatment should depend upon the quality of life that will result. But how do we define quality of life? And who defines it? And who makes the decision?

In 1972, writing in the Hastings Center report, Joseph Fletcher, a theologian and professor of medical ethics proposed a set of what he described as positive human criteria. He used the term "personhood" to describe people whose quality of life was such as to make continued life desirable. He used criteria such as Stanford-Benét or similar intelligence test suggesting that one with a score below 20 is not a "person". He also listed self awareness, self control, sense of time, sense of security, sense of the past, capabilities to relate to others, communication, control of existence, curiosity and a number of others. His last one listed was neo-cortical function.

Now here we are back again at the term brain death because all of the qualities of "personhood" which Dr. Fletcher listed above hinge upon neo-cortical function and this, according to some authors, offers legitimacy of human brain approach in defining death. There are others who have listed similar criteria but all of them, if we read them carefully, such as being able to abstract, to communicate, to establish a sense of values, all these become dependent upon the function of the brain.

But there are certainly others who may define quality of life in an entirely different way. A Baltimore couple several years ago let their mongoloid baby die of starvation by refusing to have an operation that would have corrected an abnormality in his digestive tract. One must speculate that these parents felt that their mongoloid child did not fulfill the criteria of "personhood".

What about patients in the terminal stages of multiple sclerosis and other neurological diseases? Or the patient with advanced emphysema whose every breath is a torture? Would not these people feel that the quality of their life was perhaps not worth continuing? Sigmund Freud, when 83 years old, had suffered from cancer of the jaw for 16 years and had undergone 33 operations. He lived in torture and

felt, in his own words, that it made no sense to go any further.

He talked with his physician, Dr. Max Schurr, and Dr. Schurr, when Freud next needed Morphine, gave him a dose large enough so that he went to sleep and not not recover. Apparently both Dr. Freud and his physician, Dr. Schurr, felt that the quality of his life was not worth continuing. This certainly exemplified the common dilemma faced by many in the terminal cancer cases.

But the even more perplexing question of how to decide on the quality of life is who makes that decision. In the early days of life support development the decision, almost invariably, was a medical one based on medical facts and adjudged by medical judgement. As life support systems became more common place and public awareness of them increased, other pressures came to bear. These pressures finally culminated in the Karen Quinlan case which made national headlines last year.

On April 15, 1975 Karen Quinlan of Denville, New Jersey accidentally took an overdose of tranquilizers and alcohol. She was admitted to a hospital where she was placed on a respirator. Three days later she was examined by a neurologist, Dr. Robert J. Morris, who felt that

she had suffered a lesion of the brain stem which probably also involved the cortex and that brain recovery was unlikely. Attempts were made to wean her from the respirator but each time that this was done the vital signs changed indicating that she would not be able to survive. Her parents requested that the respirator be discontinued and the patient be allowed to die but her doctors refused. And there was a subsequent trial which drew national attention in which the court held that Karen could be removed from a respirator at the parent's request.

The reaction to this decision has been mixed. There are those who felt that this did much to enhance the concept of the quality of life as a criteria for discontinuance of life support. There are others who feel that the issue is not nearly so clear. What does seem clear, however, is that the timing of this case was important in that it came when the public was developing a desire to understand the problems that are inherent in modern medical technology. The Euthanasia Educational Council said, for instance, that the number of living wills that it had distributed, since the Quinlan case has increased markedly over prior years, a condition which they

speculated was directly related to this case.

Of course, in recent years, attempts have been made to legally place such responsibility or at least allow such a responsibility to be assumed by members of a patient's family. So called Death with Dignity Bills have been introduced in a number of legislatures including our own here in Virginia. As of the writing of this paper eight states have enacted such laws. Such bills would, in effect, allow family members to make the decision when to discontinue life support systems. Doctors in general have opposed these bills, specifically The American Medical Association and The Medical Society of Virginia, are on record in opposition to Death with Dignity Bills. It is their feeling that such a bill totally removes decision making from the hands of the physician and takes it from the area of medical judgement and places it in the hands of relatives who may use it for economic or other self serving purposes. An example of this, although it is an extreme situation, will serve to illustrate the point. A recent medical journal had an article in reference to quality of life determination and describes the following case. In a state where a Death with

Dignity Bill has been passed in which the law allows the next of kin to determine when to discontinue life support, a 58 year old patient, Mr. Lewis, was in an automobile accident and had a severe head injury. He was placed on a respirator which was continued for a period of 28 days. His physician had had a conference with the family and had decided that if there was no improvement within 24-48 hours the respirator support would be discontinued.

On the morning that the respirator was to be cut off the physician is visited by a lawyer from an insurance company which tells him that Mr. Lewis is protected by a six figure insurance policy which has a double indemnity clause in case of accidental death. However, to qualify under the clause of the policy the death must take place within 30 days of the accident.

The lawyer says that his company had developed the fear that the physician is plotting in concert with Mr. Lewis' children to turn off the respirator inside the magic 30 day limit, despite the fact that he is obviously still alive. In order to guard itself against this course the company has authorized him to inform the physician that he will be sued in the amount of the insurance

policy should the respirator be turned off within the 30 day period.

No sooner had this gentleman left than the physician was visited by the attorney, newly retained by the Lewis children, who reminds the physician that the proper regard for the best interest of the patient's family would require that the respirator be turned off immediately since he is obviously already dead and should have the right to death with dignity without all sorts of tubes sticking in him. In any case, he encourages the physician to consider these interests more closely and notes that should the family lose the double indemnity sum they plan to sue the physician for that amount.

The author of the article asks the reader to help decide the dilemma. He asks, "After finishing the half full bottle of bourbon in the bottom drawer of your desk, Doctor, what would you do?"

Another concern of physicians in reference to death with dignity bills is the question of how big a step is it from death with dignity to active euthanasia? We usually define passive euthanasia as as failure to institute or the discontinuance of vigorous treatment.

Active euthanasia is providing the patient with the means to kill himself or physician or family actually doing the killing. The

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question of euthanasia, of course, whether active or passive, has been with us for a long time and it is even practiced in some societies today. Some Eskimo tribes, for instance, when their elderly members become unproductive and a drain on society they simply lead them out onto an ice flow and allow them to go to sleep. There are those in some of our more sophisticated societies, such as the United States, who feel that active euthanasia is desirable. A recent study at The University of California, for instance, has advocated that defective infants be put to death. They go into quite some detail quoting essays of leading authorities in medicine, economics, social welfare, psychology, law, philosophy and theology to support their claim. They end up, of course, by pointing out that mercy killing is now legally regarded as murder by both the federal and state law and that until statute books are changed a moral policy endorsing active euthanasia is meaningless. They also, very rightfully, point out that any active euthanasia policy would have to designate an appropriate executioner, a question addressed in the title of this paper. With the euthanasia question becoming increasingly important, The Euthanasia Society, the lobbying arm of the euthanasia movement, concedes that the word itself has probably prevented, as

much as anything else, legislators from passing active euthanasia legislation and, therefore, they have renamed themselves The Society for The Right to Die. Those who are opposed to euthanasia argue this is only dignifying a bad cause with a good name.

It is of historical interest, to note, that the first attempt at the right to die legislation occurred 71 years ago in 1906 when an Ohio state legislator submitted a bill for incurable sufferers.

It would have legalized a patient's request to receive active euthanasia. Needless to say, this particular bill did not get very far. Today, however, Death with Dignity Bills are being enacted into law and even some physicians are arguing for advancement to active euthanasia.

A British doctor recently stirred up considerable controversy when he predicted that a death bill for old people would be available and perhaps obligatory by the end of this century. Dr. John Goundry, writing in a magazine for British physicians, stated "society's view of life will change from the sentimental to the calculated and sophisticated and the overriding policy will be the survival of the fittest".

I am quick to point out that his suggestion, thusfar, and I emphasize thusfar, has not attracted much support and an official of The National Federation of Old Persons stated that in view of Dr. Goundry's opinion it was his hope that some day the pill would come to him.

As reference has been made to the fear that death with dignity bills might lead families to use it for nefarious purposes, I would like to point out that this, in no way, suggests that families should not have some input into the medical management of their loved ones. I think that most doctors today, in the case of seriously and especially terminally ill patients, almost invariably take the family into their confidence and seek their feeling as to the extent of heroic measures that should be used. It is also a growing concept that the patients themselves should be consulted in cases where they are mentally alert and in which their opinion could serve a useful purpose.

There is a very important study, now going on, at The Burn Center of The Los Angeles County University of Southern California Medical Center. This is an attempt to determine the reaction of patients when the question of heroic measures is put directly to them. Burn cases are

uniquely useful in this study for two reasons. In the first place, death from massive burns is very accurately predictable - in other words the extent of total body surface that has been burned will allow physicians who deal with these terrible accidents to establish a level beyond which no person has ever been known to recover. Secondly, burn patients in the early stages suffer little pain and remain in control of their mental facilities almost until the time of death. In the Los Angeles project patients who are burned beyond the point of known recovery are given the facts, presented by a senior physician, in a sympathetic and compassionate way, and then is asked what he chooses. Results from this project, thusfar, has shown that better than 90% of these patients reach the decision that they wanted only basic care and pain medicine without extraordinary measures. These findings have also suggested that once this decision is made the patient becomes peaceful and they try to live their remaining hours completely and fully to the end saying those things that they think important to them and making proper plans with their relatives.

I also point out that there is an increasing use of the so called "Living Will" to which I have previously referred, in which individuals

while they are still well and mentally alert sign a document, filed in their physicians office as well as that of their legal representative and frequently their religious advisor, in which they direct that should they become terminally and incurably ill, and in the opinion of their physician, continued support is not advisable that the physician is directed not to continue such heroic measures. This device, of course, is not legally binding but it does serve as a guide to the physician in these cases.

Thusfar we have been dealing with life and death on an individual basis or on a one-to-one doctor-patient relationship. In this area, which still remains somewhat gray, most physicians have been able to accept what they consider their responsibility to make judgements on a purely medical basis. Doctors are sometimes criticised in suggesting that they should retain this decision prerogative. We are accused of trying to play God. But it is my belief that in most cases this is not true, and that most physicians in life and death decisions base their judgement insofar as they are able on objective medical evidence.

There is another problem which has entered the field of life and

death decisions. This involves the limitation of medical care purely on an economic basis. There are those who blame advancing medical technology and the prolongation of life to problems associated with over population. With the life expectancy steadily increasing, population explosion is unquestionably a problem. But who has the answer?

Dr. Elliott K. Wicks, who is an economist and political scientist now on leave from Michigan State University and serving as a health planning consultant for the Michigan Office of Health Medical Affairs, thinks he does. Dr. Wicks states that as a result of increasing medical technology people are living longer and staying healthier. He argues that the demand of the people to expand the capacity of medicine is virtually insatiable. The problem, however, is that this expanding capacity is incredibly expensive because the diagnosis and treatment does involve complicated and expensive technology. He cites the question of kidney dialysis and organ transplants. He points out, for instance, that a coronary by-pass operation costs about \$10,000 per procedure and that if this operation were performed on only half of the potential candidates in the United States the cost would be twenty million

dollars or nearly 17% of all current health expenditures and this, as he points out, is only a single procedure employing existing technology.

He cites findings at The University of Chicago for Health which state that about 1% of the users of medical service account for about 25% of medical expenditures. He agrees that the result of pressures to utilize expensive technologies is not bad or unnecessary medicine but the critical question, in his view, is not whether patients are better off for these procedures, but whether such improvements in health justify such large expenditures. He feels, for instance, that we spend too much on health and that resources used to provide such care should be rechanneled to other useful things such as housing or education or transportation. What then is Dr. Wick's answer? He feels that our present method of allocating medical resources produces less than optimum results at a high cost and that the way that this should be done is to devise a means, not of limiting the demand for medical care, but of limiting the supply. He says that as a nation we must decide to limit the proportion of our productive capacity that is to be used to produce medical services and then we must strictly abide by that decision. In other words, he wants to

decide, in advance, what percentage of our gross national product should be allotted to the consumption of medical care. He feels that we should decide whether that proportion of our gross national product should be 5%, 8% or 10% and then stay within those stipulated limits and he argues that this is both ethically sound and consistent with good medical practice.

Dr. Wick's opinion is not shared by many. He presented his proposal at a symposium recently published in The American Medical Association News and his position was rebutted vigorously by physicians and theologians. But there are enough economists and social planners and others who, to a greater or lesser degree, have proposed the same course that leads me to the opinion that it is a problem with which we will have to deal in the not too distant future.

In summary then, advancing medical technology has handed to us of this generation the capability of prolonging life beyond what would normally be expected in the natural history of an individual disease. It has, heretofore, primarily been a problem involving physicians, patients and families and it has become complicated by definitions of death and by definitions of the quality of life.

Such problems of the past have dealt mainly with death with dignity or at the maximum what we might term passive euthanasia. There are those today, however, who feel that a more active form of euthanasia is somewhere not far down the road and as these ideas develop life and death is no longer a doctor-patient problem. It involves us all. It involves economics, theology, ethics, philosophy, in fact all disciplines and all people.

Who shall live and who shall die and which of us will be the judge?