

Seattle committee members, who are kept anonymous, meet periodically to determine which patients may receive treatment at the kidney center.



November 9, 1962 Vol. 53, No. 19

Medical miracle and a moral burden

of a small committee

They Decide Who Lives,

Who Dies

by Shana Alexander

ohn Myers has known about his kidney trouble ever since a routine physical examination at the time of his Army discharge in 1945. But until two years ago he felt fine. Then the headaches began and his blood pressure began to rise. By last summer there were days when

he could barely drag himself out of bed to get to his office. He was 37 years old. Neither he nor his wife Kari had any idea that he had come, irrevocably, to the terminal stage of his disease. But a glance at his case history was enough to tell any physician that John Myers' death would be ugly and soon.

Last Christmas morning when Myers awakened at his home in Bremerton, Wash, his heart was pounding violently. He could not stop coughing. Blood was running from his nose. He had an indescribable headache, a horrible taste in his mouth, dreadful nausea. His face and limbs were grossly swollen. He was rushed to a hospital where it seemed certain he would be dead within a matter of hours. But today, 11 months later, Myers

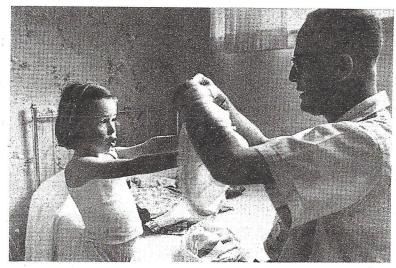
is still alive. He is no longer even an invalid in the usual sense of the word. He is back at his old desk with an oil company, and he is living comfortably at home with Kari and their three young children. To the casual observer, John Myers looks and acts just like everybody else. But he is different, in a very special way. There is now a small, U-shaped plastic tube sutured into the blood vessels of his left forearm.

Every Monday and Thursday afternoon Myers takes an hourlong ferryboat ride across Puget Sound from Bremerton to downtown Seattle. By 6 p.m. he is making his way down a short flight of steps to an unmarked basement door in an annex of Swedish Hospital. Inside, he exchanges his business suit for a green hospital gown and climbs into bed. A compact hunk of medical plumbing which looks like a stainless steel washing machine is wheeled to Myers' bedside. From its innards a technician unfurls a pair of clear plastic tentacles six feet long. A nurse connects these to the little tube in Myers' forearm, and twiddles a few controls. Suddenly, in one bright spurt, one of the tentacles becomes

red as John Myers' blood rushes out to fill the bedside machine.

The machine is an artificial kidney. Because it can be coupled at will to the U-shaped tube in Myers' forearm, it has become the first true artificial organ in medical history. For the rest of his life Myers will spend two nights a week joined by a plastic umbilical cord to this machine which keeps him alive.

At present the miraculous machine requires 10 to 12 hours to cleanse Myers' blood of accumulating poisons which otherwise would kill him. The procedure is quite painless, and Myers has now become so accustomed to the whole idea of surrendering his life's blood to a medical laundromat twice a week that during the cleansing he just goes to sleep. A



nurse monitors the blood-flow and makes sure he does not roll over and kink the tubing.

Every Tuesday and Friday morning his nurse brings Myers his breakfast—jam, tea, ersatz bread—checks his blood pressure, and unhooks him. He carefully weighs himself (he usually finds he has lost two to four pounds of excess ids overnight), showers, drives ck to the ferryboat and sails off to work.

John Myers knows that so long as he keeps his regular rendezvous with the machine, and so long as he sticks faithfully to a diet consisting chiefly of cornstarch mixtures, leafy vegetables and fruit, and so long as he takes scrupulous care of what is in effect a permanent open wound in his forearm, he should be able to live the semblance of a normal life. He knows too that without regular access to the machine he would die within a week or two.

Talking about his unique way of life, Myers today says, "When you go on the machine you feel absolutely nothing at all. You just watch the gal hook you up. I have no emotional reaction, and I'm glad I don't. I don't feel I'm a prisoner of the system—even though I know perfectly well I am." In the

inion of Myers' doctors, this matter-of-fact attitude is as important to Myers' continuing good health as the diet and the rest of his strict regime.

Kidney patient John Myers, one of the first selected for the kidney machine, helps daughter Carol dress. The bandage protects tubes sutured into his forearm that link him to machine during treatment.

The cause of John Myers' multiple agonies last Christmas is properly known as uremic poisoning and congestive heart failure due to end-stage kidney disease. Each year it kills about 100,000 people in the U.S. alone. Of these 100,000 doomed patients, only one in 50 at present can be considered a suitable candidate for wearing Seattle's new U-shaped tubes. These few have kidney disease in a fairly pure form, uncomplicated by other afflictions. They are both physically strong and emotionally mature enough to endure the treatment.

Today Seattle's Swedish Hospital cares regularly for five patients who wear the tubes. In addition to Myers, they are a car salesman, a physicist, an engineer and an aircraft worker. By the end of this year there will be five more. All 10 will be part of an unprecedented two-year trial program to determine whether and how the rugged and expensive new treatment—at present the cost is \$15,000 a year per patient—can be made feasible on a mass, nationwide basis.

Until the results of the trial in Seattle are known, many doctors feel it would be premature to set up additional treatment centers elsewhere, even if unlimited funds were available. The same treatment which keeps John Myers and

his four companions gratefully alive has driven less carefully selected patients to pray for a swift and merciful death.

As medicine advances and invents assorted other mechanical organs, millions of people with "fatal" diseases may be given the same second chance at life which John Myers was one of the first men in the world to receive. But the Brave New World in which people may literally have hearts of gold or nerves of steel is not yet at hand. In the interim, agonizing practical decisions must be made. For the present, someone must choose which one patient out of 50 shall be permitted to hook up to Seattle's life-giving machines, and which shall be denied.

There is in Seattle a small, littleknown group of quite ordinary people who have now made this choice five times, and will make it five times more before this year is

out. For John Myers and his fellow patients were not chosen by lot. They were not even chosen by physicians. Each was selected individually by an organization named "The Admissions and Policies Committee of the Seattle Artificial Kidney Center at Swedish Hospital." Behind this magnificent polysyllabic facade stand seven humble laymen. They are all high-minded, good-hearted citizens, much like the patients themselves, who were selected as a microcosm of societyat-large. They were appointed to their uncomfortable post by Seattle's King County Medical Society, and for more than a year now they have remained there voluntarily, anonymously and without pay.

These seven citizens are in fact a Life or Death Committee. With no moral or ethical guidelines save their own individual consciences, they must decide, in the words of the ancient Hebrew prayer, "Who shall live and who shall die; who shall attain the measure of man's days and who shall not attain it; who shall be at ease and who shall be afflicted." They do not much like the job.

n the summer of 1961 the seven members of Seattle's Life or Death Committee met for the first time. They were a lawyer, a minister, a banker, a housewife, an official of state government, a labor leader and a surgeon. Few of them knew any of the others, and most had only a sketchy idea of their committee's true purpose. Needless to add, none of them had ever heard of John Myers, with whose life they would soon be so intimately involved.

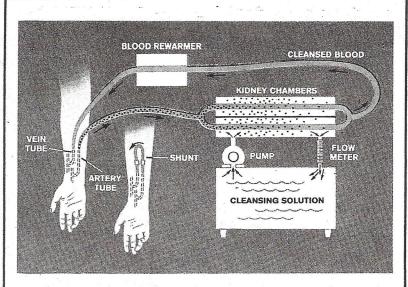
At this first meeting the committee was briefed by two physicians, both kidney specialists, who described the new Artificial Kidney Center then under construction, and explained why some grim lifeor-death choices would soon have to be made. The doctors explained that the committee would never be asked to make medical decisions. All prospective patients would be prescreened by a board of physicians which would weed out all medically or psychiatrically unsuitable candidates. This medical board had in fact already made certain rather arbitrary decisions designed to lighten the committee's burden as much as possible.

For example, the doctors recommended that the committee begin by passing a rule to reject automatically all candidates over 45 years of age. Older patients with chronic kidney disease are too apt to develop other serious complications, the medical men explained. Also, the doctors thought that the committee should arbitrarily reject children. The nature of the treatment itself might cruelly torment and terrorize a child, and there were other purely medical uncertainties, such as whether a child forced to live under the dietary restrictions would be capable of growth. In any case, the doctors believed it would be a mistake to accept children and thereby be forced to reject heads of families with children of their own.

Finally, the two doctors conducting this initial briefing offered to sit in on all the committee's future meetings in an advisory capacity. "We told them frankly that there were no guidelines, they were on their own. We really dumped it on them," one of these doctors has since said.

Before this first session broke up, the seven stunned committee members gratefully voted to accept the doctors' offer of future guidance. They also voted to keep their own names strictly anonymous. At their second session, they decided they did not want to know the names of the patients either. They will be reading John Myers' real name for the first time in this article. Then they drew up a list of all the factors which they would weigh in making their selections: age and sex of patient; marital status and number of dependents: income: net worth; emotional stability, with particular regard to the patient's capacity to accept the treatment; educational background; nature of occupation, past performance and future potential; and names of people who could serve as references.

At the committee's third meeting they finally got around to facing the problem of choice head-on. Somehow they must drastically narrow the field of candidates. "Wheredowe begin—the universe? the solar system? the earth?" one committee member asked wryly. Finally they agreed to consider only those applicants who were residents of the state of Washington at the time the feasibility trial got under way. They justified this stand on the grounds that, since the basic research to develop the Ushaped tube had been done at the University of Washington Medical School and at its new University Hospital-both state-supported in-



HOW THE MACHINE WORKS

A patient using the Seattle treatment has two plastic tubes permanently sewn into his forearm, one leading into an artery and the other into a vein (shown by dotted lines in drawings above). Through them he can be repeatedly hooked up to the artificial kidney machine. The tubes stick through the skin and between hook-ups are connected to each other by a U-shaped tubing called a shunt (shown on drawing of arm at right). which allows blood to flow from artery to vein and thus prevents clotting. When the patient comes for treatment, the shunt is removed and the artery and vein tubes are connected by long tubes to the machine (arm at left). The patient's heart pumps blood containing harmful waste products (black dots) to the kidney chambers of the machine. Here the blood passes between sheets of porous cellophane immersed in a special cleansing solution. As the blood moves through the chamber, wastes are drawn through the cellophane into the cleansing solution by a complex chemical process called dialysis. The cleansing solution is constantly renewed from a tank below. The blood itself does not penetrate the cellophane, but by the time it reaches the end of the chamber the harmful quantities of wastes have been removed. The cleansed blood then passes through a rewarmer which reheats it to body temperature before it returns to the patient's vein.

While this kidney machine treatment is saving lives in Seattle, it is still too experimental for mass application in hospitals throughout the country. Researchers are also working to perfect two other techniques. One would enable the patient periodically to introduce cleansing solution into his own abdominal cavity at home. The other would make feasible surgical transplants of healthy human kidneys. Since the need is so urgent, the National Kidney Disease Foundation is calling a conference soon to plan ways of speeding research and extending treatment to more patients.

COMMITTEE CONTINUED

stitutions—the people whose taxes had paid for the research should be its first beneficiaries. "This was arbitrary too," one committee member admits, "but we had to start somewhere!"

Six months after the first meeting, the Kidney Center was complete, special medical crews were trained, and the committee had hammered out its bylaws. In the

same six months John Myers had changed from a healthy-appearing young executive to a tottering invalid too weak to stand up in the shower. The net effect of the preliminary committee bylaws had been to reduce the number of candidates for treatment so that the odds for each remaining eligible, such as Myers, to be selected had increased from one in 50 to about one in four. At least these new odds could be rationally comprehended, the laymen felt.

The meetings of the Life or Death Committee are held in the small, ground-floor library of a nurse's residence hall in downtown Seattle. The room is actually only a few hundred feet away from the three-bed Kidney Center where John Myers and his fellow patients come to be hooked up to their lifegiving machines. But save for the comings and goings of the whitecoated doctors, there is absolutely no traffic between the two rooms. Neither the patients nor the committee wish any such confrontation. Their relationship is far too

intimate for casual informality. To protect the integrity of their work, the members of the committee do not disclose exactly how many meetings they have held or how many patients they have considered. But neither do they wish to conceal the way they try to reach a decision, and all seven members have contributed to the preparation of the following facsimile transcript of an actual discussion. The dialogue has been pieced together from the memories of the people who spoke it. If the exchanges as recorded here seem stilted, the people are nonetheless real, as are the five patients under discussion, and the dynamics of the debate are wholly accurate. The lawyer, who is the committee's chairman, has just called the meeting to order.

LAWYER: The doctors have told us they will soon have two more vacancies at the Kidney Center, and they have submitted a list of five candidates for us to choose from.

HOUSEWIFE: Are they all equally sick?

DR. MURRAY: (John A. Murray, M.D., Medical Director of the Kidney Center.) Patients Number One and Number Five can last only a couple more weeks. The others probably can go a bit longer. But for purposes of your selection, all five cases should be considered of equal urgency, because none of them can hold out until another treatment facility becomes available.

LAWYER: Are there any preliminary ideas?

BANKER: Just to get the ball rolling, why don't we start with Number One—the housewife from Walla Walla.

SURGEON: This patient could not commute for treatment from Walla Walla, so she would have to find a way to move her family to Seattle.

BANKER: Exactly my point. It says here that her husband has no funds to make such a move.

LAWYER: Then you are proposing we eliminate this candidate on the grounds that she could not possibly accept treatment if it were offered? MINISTER: How can we compare a family situation of two children, such as this woman in Walla Walla, with a family of six children, such as patient Number Four—the aircraft worker?

STATE OFFICIAL: But are we sure the aircraft worker can be rehabilitated? I note he is already too ill to work, whereas Number Two and Number Five, the chemist and the accountant, are both still able to keep going.

LABOR LEADER: I know from experience that the aircraft company where this man works will do everything possible to rehabilitate a handicapped employe. . . .

Housewife: If we are still looking for the men with the highest potential of service to society, then I think we must consider that the chemist and the accountant have the finest educational backgrounds of all five candidates.

SURGEON: How do the rest of you feel about Number Three—the small businessman with three children? I am impressed that his doctor took special pains to mention that this man is active in church work. This is an indication to me of character and moral strength. HOUSEWIFE: Which certainly would help him conform to the demands of the treatment. . . .

Lawyer: It would also help him to endure a lingering death. . . .

MINISTER: Perhaps one man is more active in church work than another because he belongs to a more active church.

BANKER: We could rule out the chemist and the accountant on economic grounds. Both do have a substantial net worth. . . .

LAWYER: Both these men have made provisions so that their deaths will not force their families to become a burden on society. STATE OFFICIAL: But that would seem to be placing a penalty on the very people who perhaps have been most provident. . . .

MINISTER: And both these families have three children too.

LABOR LEADER: For the children's sake, we've got to reckon with the surviving parent's opportunity to remarry, and a woman with three children has a better chance to find a new husband than a very young widow with six children. Surgeon: How can we possibly be sure of that?...

The central problem of such a Life or Death Committee is, of course, that nobody can be sure of anything. But at the end of an hour-and-a-half's discussion two patients actually were chosen. Both are alive and well today. One is the aircraft worker. The other is the small businessman, John Myers.

Because of the careful groundwork by the trustees of the medical society in appointing the seven members, Seattle's Life or Death

CONTINUED ON PAGE 115



As the members of the "Life or Death" Committee meet to deliberate on the new applicants, their hands reflect the strain of their agonizing responsibility.

Committee has functioned smoothly in its precedent-setting task. If the members have had private doubts, they have tried not to inflict them on one another or on their two doctor-advisers. But in private, the members do not shrink from facing or discussing their delicate assignment. On the contrary, they seem rather to welcome the opportunity to speak out about their uneasy doubts and hopes. THE LAWYER is prosperous, softspoken, and dead sure. One would not like to face him in court. He says, "When I was first invited to be on this committee, I said I would prefer not to serve. But I knew I was capable and I felt I would be impartial. We are dealing in this work with life that is being artificially sustained for experimental purposes. The so-called 'rejected' patients would have died with or without the committee—as, of course, we all will some day. I cannot honestly say I am overwrought by the plight of the patients we do not choose—the ones

we do choose have an awfully rugged life to look forward to. Not all men would wish it.

"As human beings ourselves, we rejected the idea instinctively of classifying other human beings in pigeonholes, but we realized we had to narrow the field somehow. Well, we didn't know it then, of course, but the very first rule we made—to take only candidates from the state of Washington—actually eliminated our very first candidate. She was a doctor's wife, from a neighboring state.

"Then I raised the question: what do we do if someone of great wealth says to us, 'Take my candidate, and I'll finance your whole program here'? I tried to point out that this is a two-sided problem: special attention to one candidate might well work out for the greatest benefit to all. But the others couldn't see it that way.

"We soon realized that our committee was of such a totally new nature that it was useless to try to anticipate our problems; we would only be borrowing trouble. The fact is that progress in this world comes about through the existence

of crises, not the anticipation of them. For example, how much chance would a great artist or composer have before our committee? In theory, I believe that a man's contribution to society should determine our ultimate decision. But I'm not so doggone sure that a great painting or a symphony would loom larger in my own mind than the needs of a woman with six children."

THE MINISTER is young and only rarely wears his collar. But when he doesn't, he has an incomplete look. He says, "I went into this thing with a sense of bewilderment. I had never heard of this research, or met any of these other people before I was asked to serve. After our first meeting, I was very bothered. I felt I was forced to make decisions I had no right to make, and I felt that, of necessity, our

selections would have to be made on the basis of inadequate information. Yet oddly enough, in the choices I have made, the correct decision appeared quite clear to me in each case. The principle of this thing has bothered me more than the practice.

"As we tried to work out our ground rules for selection, I felt a deep sense of awe, almost that we were going beyond our domain. As a clergyman, I have to deal a great deal with life and death, and there has been something helpful to me in recognizing life with some degree of reverence. I know that even with the best of care, there comes a time when life—physical life, as we know it-ceases to be. The realization that each of us is going to die suggests to me that, so long as we are a part of life, we are in a position of responsibility to use that life to help others.

"In the years since my ordination, I find too that my own viewpoint toward death has changed. Death itself is not the worst thing that can happen to a man, and just to live is not the greatest blessing. I've often lain awake nights wondering: would I want to take this treatment, if it became a medical necessity for me? But then I've thought: well, wouldn't refusing treatment be a sorry admission of cowardice—an easy way to escape my responsibility to my wife and children?

In my work on the committee, I tend to favor those candidates who have younger children. My thinking on this is—a child who is older has had the privilege of a parent longer, and ought to be better prepared to face life alone. But I often wonder—suppose I should somehow meet a man I had voted against? What would I say to him? I believe I would face it. I would tell him my reasons. The purpose of our committee is to protect the medical men from just such highly

emotional situations. If they have to go through emotional stress, they cannot conserve their energies for their own work. A doctor's job is the practice of medicine. My job is to help people form a set of life values. And to help them accept the fact that, like birth, death itself is a part of life -not, wham, the door slams!" THE HOUSEWIFE is an uncommonly pretty grandmother and she is no fool. She says, "All my life I have always been disgustingly healthy. Perhaps for that reason, I am not at all medically minded. In fact, the truth is that I think doctors are apt to be terribly stuffy—especially about new things. So it is wonderful to me to have a chance to help in a real breakthrough. This is not something like cancer, where you still don't know. This treatment works! That gives me terrific hope.

"I realize the doctors must use people, not animals, for this research, and I think in a funny way that actually helps me to serve on the committee. Because I do like people so much. I feel our own anonymity is vitally important too, because it is only if we are truly unknown that we really can be a buffer for the medical profession.

"At the same time I do wish we could somehow see the patient and get a personal impression. It is so hard to judge from a sheet of paper whether or not a man could take the treatment and hold on. I know he'd have to be an optimist by nature, because it does limit your life.

"You know, the doctors usually give us their estimate of how long a patient will live without treatment, and this information affects our thinking a good deal. We always have hope that by some miracle the facilities can be enlarged in time to save the patient who has some chance of living longer without this treatment."

THE BANKER is direct and peppery. He looks like a retired general. He says, "I've never had any idea how a kidney works, and I still don't. But I do have reservations about the moral aspects, the propriety of choosing A and not B, for whatever reason. I have often asked myself—as a human being, do I have that right? I don't really think I do. I finally came to the conclusion that we are not making a moral choice here—we are picking guinea pigs for experimental purposes. This happens to be true; it also happens to be the way I rationalize my presence on this committee.

"The situation, as I see it, is life and death, complicated by limitations of money. In this situation



Key members of Seattle team that developed the shunt and artificial kidney treatment are (clockwise from center foreground): Dr. John S. Murray, Dr. Belding Scribner, Dr. James M. Burnell, Dr. Jerome P. Pendras, Mrs. James Ray Albers, Carol Williams, James Ray Albers, Dr. Robert M. Hegstrom, Dr. Robert O. Hickman, Wayne E. Quinton.

COMMITTEE CONTINUED

our function is to take the pressure off the doctors. I don't know if we're doing the right thing or not. Maybe this whole deal is futile. Probably it is, in a sense, now, but maybe some economies of operation can come out of it so that everyone who needs treatment can have it, without becoming a burden on society. It costs \$15,000 a year to keep each of these patients alive. And once you put a man on the artificial kidney, it's for life. His life. Where is the money coming from?

We have limited funds, we take whom we can, and that's it. So far, fortunately, we have not had to make a choice between two absolutely equal candidates. I suspect that somehow the doctors started us out this way deliberately, to make things easier on us until we got used to the idea of choosing. But what happens when we get two men with the *same* job, the *same* number of children, the *same* income, and so forth? We could face that dilemma at any moment.

"I have asked myself—suppose I got this kidney disease, would I apply for treatment? Well, I think I would, like a shot! And if I was denied it, I'd feel bitter. I'd think society would owe it to me if they owe it to another individual.

"We send billions of dollars overseas to people we know nothing about, many of whom despise us. If Congress or somebody wanted to provide the money, we could take care of all our kidney people. But where do we stop? Who decides who needs treatment? The federal government would soon be treating the medically ill, alcoholics, old people, blind people, deaf people, people who need false teeth—everybody! Is this what we really want? I frankly don't know."

THE STATE OFFICIAL acts so meek and mild he almost manages to conceal his flashing intellect. He says, "The central problem here is that medicine has moved forward so rapidly it has advanced beyond the community's support. Our committee must try to bridge the gap. Our chief problem so far has been inadequate information. We

have forced ourselves to make lifeor-death decisions on a virtually intuitive basis. I do have real faith in the ability of kindly, conscientious, intelligent people to do a good job guided simply by their instincts, but we ought not to got on this way.

"Up to now, our only source of information has been the patient's personal physician, and he is in no position to ask the questions we want answered because he knows we might turn his patient down. In any case, a physician isn't geared to this approach. He is under the pressure of urgent medical problems. The committee needs its own staff of private investigators: a social worker, a vocational guidance counselor and a psychiatrist. We agreed to set up such a staff at our last meeting. We did not do this sooner because for a long time we feared that going directly to the patient for information would cruelly raise false hopes.

"I have come to believe we can tell the patient, if we say something like this: in order to help you best—a person who has a chronic

116

illness, and who may be expected to have it for a long time—it is necessary to know as much about you as possible. I believe patients will understand our attitude. The resources of the human spirit in adversity are truly remarkable. These people can face more than we give them credit for!"

THE LABOR LEADER wears an old-fashioned gold watch chain and the scrubbed, pragmatic expression of a railroad conductor with long tenure. He says, "The way I look at it, if the Seattle trial is to be a pilot for other committees, we cannot afford any human failures. Also, we just haven't got the funds. So I want to pick the man with the most will power, the fellow who is least likely to give up.

"Suppose we take someone on the program, keep him going for three months, and then he blows up on us? Suppose he fails to take care of himself, or follow his diet, or gets depressed and tries to take his own life? That can happen in these cases, you know. Well, this would deprive another patient of the opportunity we can offer. That's why knowing about a candidate's past life would rate so heavily with me-it's an indication of character. A man's job, his education, his wealth—that means nothing to me. But I do think a man ought to have some religion, because that indicates character. And I imagine a large family would be a great help—a lot of kids help keep a man from letting down, even when the going gets rough.

"The wonderful thing to me about this work is that we are finally past the stage of experiment. We know we can prolong life. These doctors got an idea and they made it work. With the mass production facilities we have in this country, I believe we can eventually take care of everybody. Meanwhile we say to these patients, in

effect, 'We're going to help you prolong your life by choosing to put you on this machine. Now, what can you do for us?' "

THE SURGEON is an enormous man with a tiny voice, a courtly air and great patience. He says, "Medically speaking, I am not a disciple of this particular approach to kidney disease. But in the larger view, this project will not just benefit one disease-it will benefit all aspects of medicine. We are hoping someday to learn how to transplant live organs. So far, the body will not accept foreign tissue from another person, but eventually we will find a way to break this tissue barrier. Meanwhile I serve on this committee not as a doctor but as a citizen and, I hope, a humanitarian.

"You know, at our committee's first meeting we seriously discussed selecting candidates by drawing straws. We were going to make it easy on ourselves by having a human lottery! Frankly, I was almost ready to vote for the lottery idea myself. In my practice as a surgeon, the responsibility of making a life-or-death choice faces me practically every day, and I can tell you this: I do sleep better at night after deciding on one of these committee cases than I sleep after deciding a case of my own. I'm awfully glad, too, that we just know these candidates by number, not their actual names.

"Being a medical man, I sometimes hear it via the grapevine when a patient whom we have passed over dies. Each time this happens there always comes a feeling of deep regret, and then that dreadful doubt—perhaps we chose the wrong man. One can just never face these situations without feeling a little sick inside. . . ."

he concept of the little Ushaped tube that started it all germinated two years ago in the mind of a deceptively mild professor of medicine at the University of Washington Medical School named Belding H. Scribner. Within a week the first experimental tube was made and sutured into the arm of a patient who was on his deathbed from Bright's Disease. It worked the man is alive today—and within a month it was successful again in three more "hopeless" cases. Then abruptly, for 13 months, the entire experiment was shut down. Before taking on any more patients it was necessary to perfect certain practical techniques. In the beginning, the tubes wore out too fast, or clotted, or became infected and had to be removed and resewn into other parts of the body. The early machines themselves were tricky to handle. The primary need was to simplify the entire technique from a complicated "operating room" type of procedure to a relatively simple routine, like making X rays. Until this was done, the technique would remain more a research triumph than a new treatment.

The problem was solved literally in the bodies of the four original patients at University Hospital. The very first was Clyde Shields, a 42-year-old machinist, who has

now survived the implantation of 11 successive sets of U-shaped tubes and has lived totally without any natural kidney function for over two years. Despite his ordeal as a human guinea pig, Shields says he feels better now than at any time since his treatment began.

The most battle-scarred of the original patients is a high-spirited shoe salesman named Harvey Gentry. One month after his treatments began, Gentry felt so well he decided to go clam-digging. He got sand in his first set of tubes, lost others through infection, and is now on his 13th set. "I've given the docs a pretty bad time, but they've learned a lot from me and they always manage to keep ahead somehow," he says with apparently indestructible optimism.

Another of these research patients is 37-year-old Kathy Curtiss. Between visits to University Hospital for treatments, she is able to carry on a full schedule of cooking and housekeeping for her husband and two teen-age sons. These patients and the dedicated University of Washington medical team which works with them have now proved that the new technique can be made to work. At the same time these patients are living proof that the possibilities of mass treatment must be determined at once.

During the 13-month moratorium on the experimental program, no new patients were accepted, and truly cloak-and-dagger measures were taken to keep the story out of the newspapers. Already, as word of the experiment circulated within the medical fraternity, the doctors were receiving agonizing appeals from colleagues to take on more patients than they could possibly care for. To avoid such intolerable pressures, the novel double-screening device of a medical board backstopped by a lay committee was proposed in the written application for a \$250,000 research grant which was made to the John A. Hartford Foundation. Then, even

before they were sure the money would come through, the doctors went to the trustees of their own county medical association and asked them to appoint the members of both the board and the committee.

The trustees agreed to act. This was a crucial decision. It meant acceptance of the principle that all segments of society, not just the medical fraternity, should share the burden of choice as to which patients to treat and which to let die. Otherwise society would be forcing the doctors alone to play God.

As a buffer between the doctors and the public, the committee has functioned well. It has protected doctors from having to make intolerable choices among their own patients. But in the 11 months of its operation a host of new problems has arisen to plague both doctors and laymen which neither group anticipated at the outset.

What happens to the kidney patient who has been maintained in good health by the machine for some time and then suddenly has a stroke or gets cancer? Is he now removed from the machine in favor of a "healthier" patient who only has one fatal disease, not two? Who decides? The patients? The doctor? The committee?

Compared to other vital organs, the kidney is relatively simple in function. It is a filter. What happens when, sooner or later, medicine learns to manufacture other artificial organs? Are we moving, in the name of science and mercy, toward a nightmare world in which a segment of our population is kept alive by being hooked up to ingenious machines operated by the other half? In such a world the most fit individuals would devote their lives to keeping the least fit alive.

Consider, also, a few of the strictly practical problems which have actually arisen in the committee's recent sessions. The patient's case history is written up by his own physician. Some doctors write better than others. How should the committee avoid being

swayed by the inadequacy or excellence of the presentation?

In any event, the facts at past meetings have seemed inadequate. But in the future, when the committee has in its employ a professional social worker, a vocational counselor and a psychologist to report on each patient, how can the relative abilities of these three staff members—say, their ability to write up case reports—be judged? And won't they have unconscious prejudices? And won't they have to be anonymous too? And if all these questions are fairly answered, then won't the committee be abdicating its own responsibilities and making the little three-man subcommittee bear the dreadful burden of choice?

No matter who decides, aren't the final choices all shaky, all arbitrary, all relative? They depend not on a patient's unique worth, but on his comparative position in a particular slate of candidates. Who really is the more suitable patient under the present committee rules—the man who, if he is permitted to continue living, can make the greatest contribution to society; or the man who by dying would leave behind the greatest burden on society?

On the basis of the past year's record, a candidate who plans to come before this committee would seem well-advised to father a great many children, then to throw away all his money, and finally to fall ill in a season when there will be a minimum of competition from other men dying of the same disease.

As the shock waves of each new committee decision reverberate further and wider over our moral and social landscape, we can look back to John Myers' hospital room the afternoon following Christmas Day. The delicate twoand-a-half-hour operation to implant the tube in his arm was done at his bedside, under local anesthetic. As soon as the surgeon finished, the artificial kidney was wheeled into the room and hooked up. Myers' long, slow physical decline had unexpectedly accelerated so rapidly that there was no time to wait for the wounds in his arm to heal. Such sudden speedups and slowdowns are characteristic of the disease. They explain why, though he had already been selected by the committee, Myers' arm had not yet been prepared for the machine.

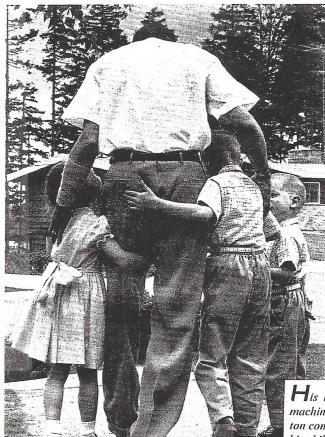
The kidney was set up at the head of Myers' bed, and he asked his wife Kari for her compact so he could watch in its little mirror what happened to his blood. But what he mainly remembers is staring at the frightening sight of his own face. "My skin had turned a funny, dark-gray color, my eyes were pink, and I was so swollen I had no chin at all. I looked exactly like a very sick seal."

By mid-January, Myers was able

to return home, and soon he went back to work, though only for an hour at a time. Now he is up to a seven-hour day and he feels better than he has in two years. "Of course I never feel like running a race or staying up all night," he admits. "Like all the patients, I still have high blood pressure, and I still get tired easily. But at least I'm like other people again."

Like the other patients, Myers is a veteran of many grimly efficient hospitals and he is greatly impressed by the easygoing, casual atmosphere at the Kidney Center. Indeed, at times he finds the whole place almost impossible to believe. So do outside visitors who happen to drop in. While their blood percolates through the machines alongside them, the patients read, chat, eat, watch TV or simply drift off to sleep. All the patients and the medical personnel call each other by their first names, and they all appear as cheery and relaxed and downright folksy as the customers and the attendants at an exclusive health spa. Says Myers, "What a terrific experience this has been! Even if we were paying through the nose, we wouldn't expect this kind of attention. The personal care they give you here—it borders on affection."

Though all the patients at the center are now aware that they owe their lives as much to a committee of unknown laymen as they do to doctors and nurses and machines, they find the committee a far more difficult subject to talk about. John Myers says, "I guess that as long as facilities are not unlimited, somebody has to pick and choose. And then they have to go home and sleep at night. What a dreadful decision! It's like trying to play God. Frankly, I'm surprised the doctors were able to round up seven people who were willing to take the job."



machine, John Myers of Bremerton comes home from a walk with his children. "Death doesn't worry me as much as it does those who are close to me," he said.