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# MAKING THE ROUNDS

IN HEALTH,  
FAITH,  
& ETHICS

VOLUME 1, NUMBER 19

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## An Interview with Martha Bermingham

### The Changing Nursing Environment

**Making the Rounds:** What are your day-to-day responsibilities here at Lutheran General?

**Martha Bermingham:** My overall responsibilities are for leading units. It's my responsibility to make sure the managers have the resources and the personnel they need and that they know the organization's strategic direction. It's my job to understand what the organization wants and then to bring it down to the level where it can be implemented. So what do I do? I go to units every day and try to get a pretty good feel for what's happening in them.

**MTR:** You mentioned strategic direction. In your role as a manager, do you have any direct impact in the development of strategic direction for the organization?

**Bermingham:** Yes, particularly in my area of responsibility—nursing. I'm a member of the nursing executive team. That group has spent a lot of energy setting the strategic direction for nursing.

**MTR:** There have been a number of recent changes in nursing in the hospital. Could you tell us about some of the forces behind those changes?

**Bermingham:** We've seen a dramatic change in our average daily census. Patients don't stay as long as they used to. So although we have maintained the same level of admissions, on any one day we have fewer patients in the hospital. We see lots of variation in our daily census among the units. That's caused us to look at nursing staffing. One thing we're trying to do is have people be more flexible, able to work in different areas. That will help us to match the needs with the people that are available. The term *nursing redesign* includes this cross-training of nurses to work in different areas. Everybody is looking at ways to use our resources well. We've also expanded the role of people who are not professionally trained.

*Martha Bermingham is a director for nursing in obstetrics and general surgery at Lutheran General Hospital—Advocate Health Care, Park Ridge, Illinois.*

**MTR:** So the staff workers have undergone a great deal of change in the last year?

**Bermingham:** Even longer than that. Recently responsibility for phlebotomy—blood drawing—was given to nurses. Nurses were on the unit, so we thought perhaps nurses could do the phlebotomy as part of their daily routine. We created a training process and

**“We’re trying to avoid the situation where the physician goes into a patient’s room, looks at the patient, and asks, ‘How’s he doing today?’ and the nurse says, ‘It’s the first time I’ve seen him.’”**



taught the nurses to do phlebotomy. They've been doing that for almost a year now, and the expansion of the nursing care technician's role has been going on for much longer than that.

**MTR:** I've heard comments that for some staff workers this trend toward cross-training, coming after an age of specialization, has been difficult at best.

**Bermingham:** Change is very difficult. We are in the process of cross-training nurses to care for patients on units other than the ones to which they're currently assigned. Often their initial reaction is “I'm a nurse for this kind of patient, not that kind of patient, and I don't want to do both.” To someone who's been on

one type of unit, patients on another nursing unit do not look very similar. Those of us who step back say, "Well, look at this. They have many of the same needs, and cross-training makes you a much more versatile employee. It gives you many more skills than you had before. When our census is up in one place and down in another, you don't have to go home. You can come over here and work."

**MTR:** One tension might be between what the organization perceives is good for the organization and its needs and what the employee believes is good for herself or the patient. Is there any attempt to balance that tension?

**Bermingham:** We try to say, "What's in the best interest of the organization is in the best interest of the employee as well. We



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should all be pulling our oar in the same direction." An employee can intellectually agree that it is in her best interest to increase her skill set; however, that means coming out of her comfort zone. So we can't just ask, Would you like to cross-train? We have to strongly encourage nurses to cross-train and learn these other skills. We provide the education and the support that are needed until the nurses have certain competencies and are comfortable.

**MTR:** What have you found is the most compelling or persuasive way to encourage cross-training? Is it the idea that people's skills will be increased and they'll be more marketable? Is it that they'll have fewer days off when the census varies from one department to another? Is it just the sense that this is the future in health care

and sooner or later they're going to have to adjust, so they might as well start getting used to it now?

**Bermingham:** It's probably all three.

**MTR:** Some organizational psychologists talk about the fact that when an organization makes changes like these, the people who are involved in the planning often have spent months coming to decisions that will translate into the changes. But staff members must incorporate the changes into their daily work much more quickly, which can create some difficulties and tensions.

**Bermingham:** I think you're right. Our patients were complaining that there was a lack of continuity of care: they had to repeat things many times, and they felt no one really understood what was going on with *them* particularly. (Our patients are in and out very quickly.) So when we did our nursing redesign we created new nursing roles. We spent 18 months to two years thinking through the process. We read articles by nursing theorist Dorothea Orem and various others, worked out the new roles, and then started introducing them in the units. By the time the new processes finally got to the units, the staff had heard enough about them that they knew what was coming.

**MTR:** What were some of these changes, and how would you evaluate the outcomes?

**Bermingham:** We created two new nurse roles—the care coordinator and the care manager. The care coordinator is a unit-based nurse who has responsibility for the overall coordination of care of patients on the floor. She serves as a liaison between the physician and the staff to anticipate patient needs, discharge needs, and utilization review questions that may come up. Her role is to work with the staff to implement the plan of care, to make sure things happen, to provide the continuity that patients have said in the past that they didn't have. We're trying to avoid the situation where the physician goes into a patient's room, looks at the patient, and asks, "How's he doing today?" and the nurse says, "It's the first time I've seen him." The care coordinator has seen that patient from the beginning. She makes rounds with the physicians and the resident staff every day and is part of the planning process.

The care manager's role is systemwide, across the continuum of care. Her responsibility is to make sure that the transitions before and after the hospital stay are smooth, that more complex cases are followed carefully from one unit to the next. For instance, we have care managers in trauma and in oncology—areas in which patients might need care or input from many different areas of the hospital.

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The care coordinator role has been exciting, and I think it has worked very well. It's really pulling everything together.

**MTR:** Could you elaborate more on the difficult aspects of the cross-training process?

**Bermingham:** When people resist stepping out of their comfort zone to cross-train, it's not because they're resistant. It's because they're good nurses. They're concerned about what they're doing. They are nervous and frightened.

**MTR:** Is there legitimacy to their fear?

**Bermingham:** There is some legitimacy to it. We give people enough education, enough orientation and training to make the leap, to develop competencies in other areas. But even so, competency by its very definition is not "I can sit down, learn this, take the test, and then go do it." You must demonstrate you can do it, and there's always a first time—jumping off the deep end. We have to prepare staff by giving them training.

**MTR:** Is their sense of calling involved? Might a nurse say, "I didn't go into nursing to do that kind of nursing"?

**Bermingham:** Absolutely. If a nurse was called to be a surgical nurse and now is asked to go to telemetry to care for unstable angina patients, even though she's gone through the basic arrhythmia class and learned about the medications, she may not feel called to do that. Caring for patients in the hospital is one option, but there are other places patients need to be cared for.

**MTR:** If you were teaching nursing, what would you do?

**Bermingham:** I would definitely have a seminar about alternative sites and have nurse practitioners come as speakers. I'm sure many of the programs do. I would have a senior seminar that would encourage students to think about where they wanted to be in five years, three years, two years. In a recent issue of *Nursing-Management*, editor-in-chief Leah Curtin wrote about how the number of hospital patients will continue to decline, so we are going to need fewer people to care for them.

**MTR:** Some nurses have just resigned themselves to what they call the horror of health care in today's environment—they express a kind of victim mentality. What advice would you give to people who are feeling this way? Have you heard this from any workers that you encounter in your day-to-day work?

**Bermingham:** Yes, certainly, and it's a terrible feeling. I would say, too, though, that people have to take some responsibility for themselves. They need to look at what they don't like about their work environment and decide whether or not it's going to change. If it's not, then maybe this isn't the right place for them. We talk about the need for employees to cross-train and be more flexible. If you really can't adjust to that situation, then maybe you need to make a change to a work environment where you can have greater control. Maybe you need to make home care visits and select only those visits that you want to do. To just wallow in it—"Isn't this awful, isn't this awful"—is not good for you, the organization, or your patients.

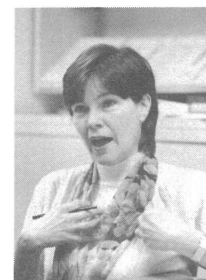
**MTR:** Do you think it's possible that in another five or ten years there will be some movement back toward the specialized practice that nurses have been accustomed to?

**Bermingham:** I think anything's possible. To have so much specialization where there are so few beds seems unlikely to me, but it might happen.

**MTR:** You mentioned that in preparing for the recent changes, you did quite a bit of reading on operational philosophies. What did you discover?

**Bermingham:** The good news and the bad news is that everybody's struggling with the same issues. Sometimes you feel that you're the

**"If a nurse was called to be a surgical nurse and now is asked to go to telemetry to care for unstable angina patients, even though she's gone through the basic arrhythmia class and learned about the medications, she may not feel called to do that."**



only one facing a certain problem. But the literature on case management, care management, care coordination—whatever it is called—reveals that we all wrestle with the same thing: very short stays, very complicated cases using lots of resources, and how to manage that. What we actually designed was not modeled on any one program. But we found a lot of documentation to reinforce that we were on the right track.

**MTR:** Were any layoffs necessary as you made these changes?

**Bermingham:** In this redesign, no.

**MTR:** You talked about the declining patient census that is driving many changes in the hospital. Why is the average census going down, and why is the length of the average patient stay going down?

**Bermingham:** The length of stay is going down because we are working very aggressively to keep patients in this acute-care setting only while they need acute care and then to move them as soon as we can to the kind of care that they should be getting, whether it's at home or in a nursing home. Third-party payers are very reluctant to pay for high-cost care unless they see the need for it.

**MTR:** Have you seen any negative impact on patients because of this?



**Bermingham:** On our patient surveys we do ask patients about their sense of the timing of their discharge. Many patients reply that they were discharged long before they felt ready to go home. Does that mean they really needed to be here longer? Not necessarily. I think that you have to measure the outcomes: Did they get sicker? Did they have to be readmitted?

**MTR:** Do you think that these changes have been affected in any way by the fact that you are working in a faith-based health care organization? Do nurses ever talk about that? Are they pleased to



**"We can no longer think that the hospital is the only place where people get care. They get care throughout the system. We need to think about the whole entity. We're in the health care business, not the hospital business."**

be working here instead of at Humana, for instance, or another for-profit hospital?

**Bermingham:** At the staff level there has always been a strong faith component. The chaplain has always been a very integral part of the team, and I don't think that has changed in the slightest. Calling the chaplain is a very integral part of what the nursing staff does.

**MTR:** There is an inherent tension between reducing variability in care and responding to individual patient needs. What are we building into the system to identify the unique needs of the patient?

**Bermingham:** What does the patient perceive he needs? It's an important question. And there are two really good reasons to ask it. First, it is very relevant to that patient. And second, it might save

time. We have a self-assessment of education needs for our vaginal-birth pathway patients: "What do you think you need to know?" If this is your third baby, your learning needs are different from what they are if it is your first child.

**MTR:** Are methods being built into nursing care to elicit the particularities of each patient's needs?

**Bermingham:** That's one of the functions of the care coordinator—to learn a patient's particular needs. The care coordinator knows the patient by name and can say "I talked to you yesterday and I know what your concerns are from yesterday, and now I know what they are today."

**MTR:** How and where does the physician fit into all of this?

**Bermingham:** Physicians are part of the team, and, of course, they are the people who are responsible. They can be there only a small part of the day. The care coordinator understands exactly what the physician's plan is for the patient and works on implementing it. She makes rounds with the residents, follows up with the discharge plan or the utilization review, and makes sure things get done.

**MTR:** Care coordinators work with how many patients?

**Bermingham:** Typically one unit, an average of 20 to 30 patients.

**MTR:** What is the strategic vision that you and others who are committed to adapting to change in the hospital environment have adopted?

**Bermingham:** My vision is the continuum. The big advantage we have as part of Advocate Health Care is the enormous continuum of services available throughout our system. What I envision for nursing is that nurses working collaboratively with physicians will be able to determine the best place for each patient. I envision an information system in which we don't have to ask patients the same question several times. We can just log someone into the system and say, "Oh yes, he was a patient of ours at Good Shepherd, and now he's a patient here, and he's been in Older Adult Services or over at the Moorings [a retirement residence]." We can no longer think that the hospital is the only place where people get care. They get care throughout the system. We need to think about the whole entity. We're in the health care business, not the hospital business. □

## The Patient-Physician Relationship in Clinical Trials: An Ethical Dilemma?

*T. Patrick Hill*

Randomized clinical trials have recently been attacked as unethical by leading medical scientists. In a February 11 article in the *Chicago Sun-Times*, noted University of Chicago clinical researcher Samuel Hellman stated, "There are trials I can find acceptable. But very few."

Others agree. "Randomized clinical trials are very important, but so are the choices and needs of patients with advanced cancer and other life-threatening disorders," said Robert Oldham, director of the Biological Therapy Institute in Franklin, Tennessee (interview, March 18, 1996). If we accept the validity of both of Oldham's assertions, together with the implied assertion that randomized clinical trials can compromise the interests of patients, may physicians participate with their patients in good conscience in such trials? Is it possible, in other words, to reconcile the scientific enterprise we know as a randomized clinical trial with the moral enterprise we know as the patient-physician relationship? Physicians and patients have expressed their concerns, and medical ethicists have questioned the ethics of such trials. Disease-specific interest groups have taken their case directly to the Food and Drug Administration (FDA), demanding that research procedures be shortened and made more flexible so that promising drugs can become available sooner and patients can receive them outside the standard procedures of clinical trials. Noticeable here is the consistent inclination to discount the integrity of the scientific enterprise, as though clinical scientists had no moral claims to make in the interests of their work, and to favor the moral claims of patients and their physicians, as though they alone had any moral claims to make. In some cases this tendency amounts to representing the research scientist as exploiting patients' vulnerable circumstances to get them to "choose" to be part of a controlled clinical trial. Equally noticeable is the tendency to discount societal interests in the successful outcome of medical research, as though there are no moral grounds for such interests, in favor of the individual interest, as though it alone has moral weight. Both tendencies unfortunately obscure the fact that randomized clinical trials, as a scientific enterprise, also make ethical claims that deserve respect and protection.

What those ethical claims are becomes apparent when we consider the nature of science. According to the scientist and philosopher Jacob Bronowski, "Science is the creation of concepts and their exploration in the facts. It has no other test of the concept

than its empirical truth to the fact" (1965:60). The test of science, as a system of concepts, is to ask whether they give an unforced unity in fact, not by edict, to our experience (1965:41). While acknowledging the debate among philosophers of science over how science comes to truth, one may reasonably, given the way that the debate is framed, think of science as the pursuit of truth that is found, not given. Accordingly, science is an activity at the center of which is the "habit of truth" where *truth* refers to a process or practice, not a dogma (1965:60). Central to this account of the ethical nature of science is the assertion that there is no distinction between means and ends (1965:64). To explain the meaning of this, Bronowski cites mathematician W. K. Clifford: "if I let myself believe anything on insufficient evidence, there may be no harm

done by the mere belief; it may be true after all. But I cannot help doing this great wrong . . . that I make myself credulous" (Clifford 1886:345). In science it is not good enough to say that something may be true. First, in science the test of truth is the evidence of the known, as distinct from the believed, fact. Second, the known fact as the test of truth ethically justifies action taken on account of that fact. The moral sanction of experienced fact is well illustrated by considering

the concepts that have shaped and directed Western civilization since the scientific revolution (1965:41). And from this we can draw the scientist's lesson: "We ought to act in such a way that what is true can be verified to be so" (1965:58).

This same lesson is found in philosopher R. M. Hare's observation that we make moral judgments with the understanding that they can be verified only by reference to a set of principles which we have by our own decision accepted (1973:77-79). This, he asserts, is analogous to the scientist who has to depend on his own observations. It might be thought that observations, unlike personal decisions, are public and that as a result the analogy is not apt. But as Hare remarks, what prompts one to become a scientist presumably is the personal conviction that the observations of other scientists are for the most part to be trusted. And significantly, that observation comes from observations one has made for oneself (1973:71). The moral agent behaves in a similar way. Like scientists, who rely on the observations of other scientists so as to proceed with their own observations, moral agents adopt the principles of their teachers so as to adapt them by their own decisions of principle. What becomes evident in moral terms is the interaction between decisions and principles with the result that principles result from decisions of principle. In terms of science, an identical interaction occurs between concepts and observations so that concepts are advanced on the basis of observations of concepts relative to the fact. At the center of moral agency and science is the habit of truth or the pursuit of truth that is found, not given, and which is

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the gold standard for concluding  
whether a new treatment is better than  
a more conventional therapy."**

—Robert Schilsky

*T. Patrick Hill is a research scholar at the Park Ridge Center for the Study of Health, Faith, and Ethics, and associate editor of Making the Rounds.*

constituted in the moral axiom that we ought to act in such a way that what is true can be verified to be so.

How might this axiom be applied to randomized clinical trials, and what significance would it have for what threatens the moral integrity of the patient-physician relationship within a randomized trial? To answer this question, it helps to remember that a randomized clinical trial is a research tool that can lead to effective treatment. According to Robert Schilsky, director of the Cancer Research Center, University of Chicago (interview, March 21, 1996), it is probably the most powerful research tool available for studying treatment comparisons across a large group of patients. "It has become, at least in cancer, the gold standard for concluding whether a new treatment is better than a more conventional therapy." On the basis of a controlled comparison, the medical scientist is then able to distinguish between effective and ineffective therapies, as well as to identify amongst effective therapies greater or lesser degrees of efficacy. Clinical trials consist of three phases. In the first and second phases, the goal is to measure the toxic or harmful effects and the effectiveness of the experimental treatment respectively. If clinical trials, during their first and second stages, demonstrate acceptable levels of toxicity and some measure of effectiveness, they can proceed to the third phase. At this point, medical scientists randomly assign patients to one of two arms of the trial, either to a treatment group that will receive the experimental treatment or to a control group that will receive standard treatment.

Randomization presents two issues that have immediate and considerable ethical significance for patients and their physicians. The first is that, as a condition of admission to the trial, patients do not know which of the two treatments they will receive. Does that compromise informed consent? The second is that, as a consequence of presenting their patient to a controlled trial, physicians acknowledge that they do not know which of the two treatments is better for their patient. Moreover, where it is a double-blind trial, physicians do not even know which treatment their patients will be receiving. Is this lack of knowledge compatible with the physician's responsibility for a patient's best interests?

A third issue (which has bearing on the first two) relates to the design of the trial itself. The degree of difference between the comparative arms of the trial exposes enrolled patients to proportionate level of risk or benefit. Where, for example, the comparison is between treatment and nontreatment, the patient and the attending physician run a higher risk than where the comparison is between two treatments. In the latter case, since treatment is available in both arms of the trial, the risk to the patient is smaller and would presumably be measured by the difference in efficacy between the two treatments (Schilsky interview, 1996). But here too some important issues must be considered. Conventional wisdom would say that controlled comparisons of treatment modalities are acceptable on the grounds that although it is unknown which modality is better, it is known that each is beneficial. But

there may be reasons for thinking that each is not equally beneficial for an individual patient. Previous treatment history of that patient might have shown difficulty with a particular medication used in the trial. On the basis of earlier experience, a physician may have grounds for preferring one treatment even though there is no evidence that it is better. Accounting for such variables as a patient's previous treatment history or a physician's bias based on experience is to be expected in the therapeutic model. In a controlled trial, however, adjusting treatment to the needs of individual participants may threaten its scientific integrity (Appelbaum et al. 1993:151). But should a patient's need ever override scientific integrity?

So far, we have examined the implications of controlled trials for the patient-physician relationship. But what of the implications of the patient-physician relationship for the randomized clinical trial? Physicians participate with their patients in clinical trials,

so that treatment is an integral component of the controlled clinical trial. Does that mean that patient treatment is the primary goal of a controlled trial? Some, like Oldham, appear to insist that it is; they argue that if treatment is good enough for the randomized patient, it has to be good enough for those who want to receive it without being randomized. And if treat-

ment were the primary purpose of randomized clinical trials, Oldham's assertion might have some merit. But as the most rigorous scientific research tool in clinical medicine, the controlled trial is designed to do something more significant than provide treatment (although treatment is a necessary condition). It is to *verify* that an experimental treatment is *better* than the available standard of treatment. Clearly, treatment is provided in the course of clinical trials. But since verification, not treatment, is the primary purpose, a patient's informed consent to cooperate with the requirements of verification should be understood to subsume consent to randomized treatment. Similarly, the physician will secure the best interests of the patient by meeting the requirements of verification which by definition demonstrates which treatment is superior.

This important point can be illustrated by use of a clinical example. In 1975, an effective regimen of chemotherapy, consisting of four drugs—cyclophosphamide, doxorubicin, vincristine, and prednisone—was developed for treating intermediate-grade non-Hodgkins lymphoma. During the following 15 years, clinical scientists around the country experimented in nonrandomized trials with variations of the original regimen, achieving what appeared to be better results. Eventually a large randomized clinical trial of the most promising of these regimens was undertaken. The results demonstrated that these treatments were absolutely equivalent; none was better than the original regimen. Indeed some of the more complicated variations were shown to be more toxic than the original regimen. Without randomization, and the scientific rigor that entails, however, these results would not have been achieved.

These results demonstrate also how a controlled clinical trial, in which the means as a necessary condition is randomized treat-

**"Randomized clinical trials are very important, but so are the choices and needs of patients with advanced cancer and other life-threatening disorders."**

**—Robert Oldham**

ment and the end is verification of the superior treatment, is compatible with the integrity of the patient-physician relationship. Indeed, the ethical warrant for randomization increases when considering what decisions physicians were making in treating patients with intermediate-grade non-Hodgkins lymphoma. On the basis of data from nonrandomized clinical trials, they were opting for one of several variations of the original chemotherapy regimen in the *belief* that it was the best treatment for the patient. Only after the randomized trial was that belief shown to be false. The contrast in the position of physicians in the patient-physician relationship before and after the controlled trial is morally significant. Before, acting on data from nonrandomized trials, they were in reality saying of a treatment, "it may be the best treatment available." Afterward, acting on the data from the randomized trial, they were truly in a position to select treatment in the *knowledge* that it was the best treatment available.

In drawing the difference between decisions made on the basis of *belief* of what is the case and on the basis of *knowledge* of what is the case regarding treatment, the example of how patients with lymphoma could be treated before and after the randomized trial further illuminates the ethical nature of such trials. As we can infer from our clinical example, it would be preferable to decide on treatment on the basis of knowing rather than believing what is the best available treatment. This is because it is possible to believe something that is not true, but impossible to know something that is not true. The principle that there is no such thing as false knowledge has critical ethical relevance here. In particular, it strengthens the moral claims inherent to the randomized clinical trial as a process of verification. As formulated, the principle means that the truth of A is a condition of the claim that one knows A. In that sense, knowing and believing are different. "It may be that believing can be construed in an entirely psychological sense. But knowing, in addition to some state of mind or psychological condition, requires also the truth of what is known" (Green 1971:67).

We can use this statement to turn a light, more questioning than usual, on the claim that since the controlled trial has no ethical claims of its own on either physician or patient, the physician, for example, is at liberty to set it aside and treat the patient on the basis of the belief that treatment A is better than treatment B, even though the trial is designed to demonstrate that very point. Similarly, the behavior of patients who insist on being assigned to the experimental treatment arm of the trial is questionable. They may, for example, be critically ill and unwilling to settle for anything less than the experimental treatment in the belief that it is their last best chance for effective treatment. As a result, they will not consent to randomized treatment stipulated in the trial for purposes of research. If, they argue, the experimental treatment can be given to patients within the trial, then it should be given to any patient, even one outside the controls of the trial. But this begs the research question at the center of the controlled trial. By definition, the experimental treatment is not known to be better than the prevailing standard of care that would be provided in the control arm of the clinical trial. Whether it is or not can be demon-

strated only through the scientific controls of the trial itself, in particular randomization, so that prior to the trial any belief in the superior efficacy of the experimental treatment would seem to rest on insufficient grounds. In the interests of verification as the basis for sound clinical decisions, there is a moral obligation to protect the integrity of the randomized clinical trial.

On this account, randomized clinical trials function in a way that is derived from the nature of science as a habit of truth. "By definition, they emphasize the aggregate result over the individual experience, data over anecdotes" (Young 1995:769) For this reason, it is axiomatic of the scientific methodology entailed in randomization that the larger the controlled trial, the higher the level of certainty that the clinical outcomes observed in the trial result from the treatment and do not occur by chance. Verification is then the primary purpose of the controlled clinical trial, justifying the randomization of patients and their treatment as the means to achieve it. This point is critical and serves to confirm once more the scientist's lesson that

there is no distinction between means and ends. In conventional moral terms, it is unacceptable to do something evil, even if the desired outcome were to be good, because in behaving this way one would become evil in the process. The equivalent in science would be to do something on the basis of a

### Randomized clinical trials, as a scientific enterprise, make ethical claims that deserve respect and protection.

belief for which there is insufficient grounds because in so doing one becomes credulous. Credulity and science are incompatible where science is understood to consist in the verification of the concept to the fact. It is imperative, therefore, for the protection of the integrity of the scientific enterprise, that nothing in one's behavior threaten whatever is required for purposes of verification. "The test of truth is the known factual evidence, and no glib expediency nor reason of state can justify the smallest self-deception in that. Our work is of a piece, in the large and in detail; so that if we silence one scruple about our means, we infect ourselves and our ends together" (Bronowski 1965:66). From this it is reasonable to conclude that clinical scientists find their ethic imbedded in their method, that habit of truth which requires them and patients who are participating in randomized clinical trials to act in such a way that what is true can be verified to be so. As long as they do that, far from compromising the integrity of the patient-physician relationship, they will enhance it. At the same time, they will restore societal purpose to clinical research □

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