V. RECOMMENDATIONS

A. Preface

Before turning to our specific recommendations we would like to anticipate three possible criticisms of our proposals. First, the argument may be advanced that any regulation of human research is an unwarranted infringement of the "freedom of inquiry." But freedom of inquiry is only one facet of freedom in general. When scientists use other human beings as subjects of experimentation and in so doing jeopardize their rights and welfare, the scientists' freedom of inquiry clashes head-on with the right of every individual in our society to personal autonomy. Therefore, society must retain the right to define and limit the human costs it is willing to bear in order to benefit from advances of knowledge.

Second, whenever it is suggested that representatives of society at large participate in decision-making of significance to both science and society, concerns about the intrusion of "outsiders" in the domain of professionals are voiced. This position was forcefully expressed by Dr. Owen W. Wangensteen in a letter to Senator Walter F. Mondale prior to congressional hearings in 1968 on a proposed Commission to study the social and ethical problems raised by biomedical advances.

> Senator, I would urge you with all the strength I can muster to leave this subject to the conscionable people in the profession who are struggling valiantly to advance medicine. We are living through an era in which the innovator is often under suspicion, being second-guessed by self-appointed arbiters more versed in the art of criticism than in the subject under scrutiny. We need to take great care lest the wells of creativity and the spring of the mind of those who break with tradition are not manacled by well-intentioned but meddlesome intruders.
>
> I would urge you to leave these matters in the hand of their proponents, the persons who are actually doing the work. They know more about all this than any of us possibly could. They have wrestled with the problem day and night, almost invariably over many years. Theirs are not overnight judgments or convictions. In the academic community in which I have worked and spent my entire professional life of almost 50 years, you will find as warm, symphathetic human beings as are to be found on this earth. . . .
>
> It is important that we look back as well as forward. To have no concern for history is tantamount to having a physician with total amnesia. If we leave this matter alone, it will simmer down. Discussion should not be restrained, but legislative action, never.[89]

We appreciate Dr. Wangensteen's fears, which have been echoed by others. But not all intrusions by "outsiders" into medical decision-making are viewed by the profession as unwarranted interferences with the practice of medicine. Authorized representatives of society have the right to circumscribe some activities of professionals and this has been accepted; for example, the discretion of physicians to commit patients against their will or to prescribe addictive drugs is limited. Thus, the pertinent questions are: under what circumstances, to what extent, and by what means should the activities of the medical professional be controlled?

We have already mentioned that the human research decision-making process can be divided into three functionally distinct stages: the *formulation* of research policies, the *administration* of research, and the *review* of research decisions and their consequences. The participation of "outsiders"—which is to say, of persons deemed capable of representing the interests of society in the proper conduct of research—is highly desirable in the formulation and review stages. Such decisions as the allocation of resources for research, the extent of hazardous experimentation, the degree of respect to be shown for the autonomy of research subjects, and the extent of the participation of children, prisoners, members of minority groups, and other captive or disadvantaged persons in research, are of momentous consequence to society as well as to science. These decisions implicate general social policies and must not be left to the sole discretion of scientists.

Nonetheless, we agree that the often expressed fear of interference by laymen with the immediate clinical research decisions which physician-investigators must make has merit. However, we believe that the two positions can be reconciled. Once satisfactory rules and procedures for the protection of human subjects have been formulated and research practices are adequately reviewed by "insiders" and "outsiders," society should feel safe in leaving the actual administration of research and therapy to physician-investigators within the restraints imposed by peer review (through the already established institutional review committees.)

Current DHEW policies fail to identify the different stages in the regulation of research. Instead, institutional review committees are charged with formulating policies, administering policies, and evaluating the consequences of their decisions. Taken together these tasks are too burdensome for such committees. Moreover, because

89 *Hearings on S. J. Res. 145 before the Subcommittee on Government Research of the Senate Committee on Government Operations*, 90th Cong., 2d Sess. 98-99 (1968).

these committees must formulate policy and evaluate decisions, the demand for outsiders to sit on them has intensified, justifying the fear of interference in professional day-to-day decision-making by persons not qualified to do so. Our recommendations seek to reverse this development by confining the role of the institutional committees largely to the implementation of policies already adequately formulated by others.

A third criticism may be leveled against our recommendation that a National Human Investigation Board be established to oversee human experimentation. Some may fear that this Board will promulgate such detailed rules and impose so many legal duties that progress in research and innovation in treatment will be seriously impaired. The danger of cumbersome bureaucracy cannot be lightly dismissed and every effort must be made to avert it.[90] At the same time we doubt that society, if properly informed, would tolerate any serious impediments to the acquisition of knowledge, for the pervasive and compelling desire to benefit from advances in medicine should counteract any tendency to stifle research.

A national Board to regulate human research is needed for many reasons. One central group should be responsible for formulating policy, instead of the many different Federal agencies and the hundreds of individual review committees which, as we have argued, cannot be expected to assume this complex task. Moreover, "outsiders" who could represent and protect individual and societal values and interests could then be included in policy formulation and review, where they are most needed, without thereby hindering physician-investigators in their professional decision-making. The national Board would provide a forum in which the competing interests of science and society could be debated openly before authoritative decisions are made.

B. National Human Investigation Board

A permanent Governmental agency, to be called the National Human Investigation Board (NHIB), should be established to oversee *at a minimum* all Federally-supported research involving human subjects. The jurisdiction of this Board should extend to all extramural and intramural research sponsored by DHEW (including human research currently governed by FDA regulations) as well as to research supported by Government agencies other than DHEW, such as the Department of Defense. Ideally, the authority of this Board should also extend to all human research activities, even if not Federally supported. However, despite its apparent merits, such a sweeping proposal may raise insurmountable jurisdictional problems. We leave it to others to determine whether Congressional authority to regulate research may encompass investigations not conducted or financed by the Federal Government.[91]

The primary function of the NHIB would be to formulate policies and procedures to govern research with human beings. For this reason the Board must include, in addition to eminent medical and other professional researchers, lay members who can represent the interests of society in the ethical conduct of research with human subjects. Such lay members should be selected for their ability to make disinterested judgments about research issues of societal concern. Because medical and other research professionals have been trained to pursue other goals, they should not be expected to shoulder the added burden of speaking for the concerns of society.

Senator Hubert Humphrey has called for the establishment of a National Human Experimentation Standards Board which in some respects resembles the Board we propose. His bill[92] provides as follows:

> Sec. 2. (a) There is hereby established, as an independent agency in the executive branch, a National Human Experimentation Standards Board (hereinafter referred to as the "Board").
>
> (b) The Board shall be composed of 5 members to be appointed by the President by and with the advice and consent of the Senate from among individuals who by virtue of their service, experience, or education are especially qualified to serve on the Board. . . .
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> * * *
>
> (3d) Members should be chosen from persons who are representative of the fields associated and concerned with clinical investigations.
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> * * *
>
> Sec. 5. (a) It shall be the function of the Board to—
>
> (1) establish guidelines for the involvement of human beings in medical experiments which are funded in whole or in part with Federal funds;
>
> (2) review all planned medical experiments that involve human beings which are funded in whole

90. Another commonly expressed fear is that detailed regulations may adversely affect the well-being of patient-subjects because the physician-investigator's authority to intervene quickly, whenever his professional judgment dictates it, is unduly restricted. But discretionary authority must of course be delegated to physician-investigators in the exercise of purely professional judgments regarding their patient's health.

91. Senator Jacob Javits has also recently introduced a bill, in response to the Tuskegee Study, for the protection of research subjects. S. 3935, 92d Cong., 2d Sess. However, this proposed amendment to the Public Health Service Act is in essence simply a statutory enactment of current DHEW regulations. As we have argued, more than this is needed for the protection of research subjects.

92. S. 3951, 92d Cong., 2d Sess.

or in part with Federal funds to determine if the guidelines established under paragraph (1) are being complied with;

(3) obtain an injunction to prevent such experimentation in a case where such experiments are found not to comply with established guidelines; and

(4) prepare and submit an annual report to the President, for transmittal to the Congress recommending legislation, if required, and detailing the performance of the Board during the preceding year.

Senator Humphrey's bill assigns to his Board policy making, administrative and review powers. We believe that some of these functions should not be delegated entirely to the NHIB and that those functions which the NHIB should be given must be spelled out in greater detail. Senator Humphrey's bill also does not provide for the continuation of the institutional review committee system. We believe that institutional review committees should be maintained, although in modified form. We now turn to a discussion of the functions of the NHIB and institutional committees in the formulation, administration and review of policies for human research.

1. Formulation of Policy

The National Human Investigation Board must establish guidelines for the conduct of research with human beings with respect to such matters as:

a. *Selection of Subjects*—The Board must formulate criteria for the selection of subjects. It will have to reexamine the contemporary research practice of choosing subjects from the less educated, disadvantaged, or captive groups within society. In doing so, the Board will have to confront many questions. For example, should every effort be made, consistent with research objectives, to obtain a subject sample which represents a cross-section of the population at large? Or should subjects first be selected from among the best educated before turning to the less educated, since the former are more capable of giving "informed consent"? How should the recruitment of subjects be effectuated to implement whatever rules for their selection are adopted? Under what circumstances should non-comprehending subjects such as children or severely mentally disturbed individuals, or captive subjects such as prisoners or other institutionalized persons, be barred from participating in research?

b. *Ambit of Informed Consent*—The Board must not only formulate the overall criteria of informed consent but must also specify the circumstances in which the consent requirement can be modified, and to what extent, in order to accomplish important research objectives. In doing so, the Board will have to find answers to such policy questions as: Under what circumstances can what benefits to individuals or society justify modifications in the informed consent requirement? Should certain groups or potential subjects be excluded from participating in research or high-risk investigations be proscribed unless informed consent can be obtained? When is third party consent permissible, and what safeguards should be introduced whenever the consent of a third party is invoked? The Board may have to promulgate separate guidelines for the conduct of investigations which are predicated on the absence of informed consent, such as placebo, double blind, deception and secret observation studies. The latter two procedures are employed by sociologists and psychologists on such an extensive and repetitive scale, and constitute such a significant exception to the general requirement of informed consent, that serious consideration should be given to restricting their use.

This may be an appropriate place to introduce a note of caution. The policies we have in mind cannot be formulated overnight or without serious study of the problems inherent in this field. An example from the literature on informed consent illustrates this point. It has traditionally been assumed that the consent requirements should be more stringent in research with "healthy" volunteers than with patients. This assumption ought to be reexamined. Perhaps, as Alexander Capron has written:

> . . . higher requirements for informed consent should be imposed in therapy than in investigation, particularly when an element of honest experimentation is joined with the therapy. The "normal volunteer" solicited for an experiment is in a good position to consider the physical, psychological and monetary risks and benefits to him in consenting to participate. How much harder that is for the patient to whom an experimental technique is offered during a course of treatment. The man proposing the experiment is one to whom the patient may be deeply indebted (emotionally as well as financially) for past care and on whom he is probably dependent for his future well-being; the procedure may be offered, despite its unknown qualities, because more conventional modalities have proved ineffective.[93]

Finally, more attention must be given to the nature

93. Capron, "The Law of Genetic Therapy," in *The New Genetics and the Future of Man*, M. Hamilton, ed. (Eerdmans Pub. Co., 1972).

and quality of the interactions between investigator and subject if the ensuing consent is to be truly informed and voluntary. In this connection, consideration should also be given to make an adviser available to a subject whenever he thinks that his decision to participate or not might benefit from disinterested advice.[94] The authority and obligations of such advisers must be carefully defined and, as we have said repeatedly, with regard to policy formulation, cannot be left to each individual research committee to work out.

c. *Definition of "Research"*–To clarify the jurisdiction of the Board and of the institutional review committees, distinctions must be made between "research" activities and"accepted and established procedure." We have pointed out already that the borderline between research and therapy is difficult to draw. Physician-investigators have often wittingly or unwittingly added to the obfuscation by calling some investigations "therapy." in order to escape the obligations which the research designation entails. Such practices diminish the protection afforded subjects, and also undermine the scientific validity of the results of such investigations, because they were not established in carefully controlled clinical trails.

d. *Application of Risk-Benefit Criteria*–We have already suggested that the risk-benefit equation is one of the most difficult guidelines to implement. To evaluate risk taking, distinctions must be made between research designed to benefit its participants and those which may benefit society at large. With respect to societal benefits, answers will have to be found to such crucial questions as: Do even minimal risks from participation require an intensive scrutiny of the benefits to be derived from the study or should "minimal" risks, however defined, be exempted from this burdensome requirement? How often can risky experiments be repeated for the sake of verification, if results have already been reported in the literature? Must certain groups, such as children and mentally defective subjects, be excluded from all risky studies that are not designed to benefit them? When the risks and benefits of therapeutic measures are unknown, as in all first clinical trials of a new drug, should the tests be randomized with a limited number of patients in order to ascertain a scientifically valid estimate of effectiveness? In research with so-called normal volunteers or other subjects who are able to give a satisfactory consent, can greater risks to be taken than a weighing of risks against benefits would in general permit? Should dying patients who are willing to participate in risky experiments be exempted from the rule that no experiments are to be conducted which might hasten death?

e. *Promulgation of a Compensation Scheme*–An insurance plan should be devised and implemented for the compensation of subjects harmed as a consequence of their participation in research activities. Though many schemes for compensating subject deserve consideration, we mention one which we believe has substantial merit: "no fault" clinical research insurance paid for by each institution sponsoring research. Subjects would be compensated for any injurious consequences of their participation in research whether or not caused by the fault of the investigator. This plan would provide full protection for subjects and relieve investigators of the threat of liability. As to cost, one of the principal promoters of research insurance, Irving Ladimer, has asserted that:

> ...it is unlikely that the costs will be great, probably a small fraction of customary malpractice premiums. First, there are few compensable occurrences within responsible research institutions, where most of the studies are conducted. Second, the assumption of medical care, most likely at the sponsor's premises, will reduce such costs. Third, the adoption of such a system should tend to improve prior protection, controls, and research design; this is expecially true for studies approved by research review committees. Fourth, the spirit and philosophy of this form, which should be fully explained in advance in discussions with participants, should serve to diminish rather than induce any questionable claims.[95]

The cost of the insurance would probably vary directly with institutional safety records and thus might provide an additional impetus to careful consideration of research proposals. Guido Calabresi has called attention to this possiblity:

> ... Requiring compensation of injured subjects causes the full cost of research in humans to be placed on the research center. Accordingly, approval by the center of a particular experiment will require conscious consideration not only of the possible payoff (either in market or scientific terms), but also of the risks, converted to money, that the project entails. This may not deter many experiments, but it may cause those involved in the most risky or least useful ones to consider carefully whether the experiment is worth it, whether it is best done by those who propose to do it, and whether there is an alternative, and safer, way of obtaining approximately the same results. It may well be that all these considerations are already firmly in the minds of the experi-

94. We elaborate upon this recommendation *infra*, pp. 44 ff.

95. *Ladimer, supra*, footnote 84, at 259.

menters. If so, nothing is changed by requiring compensation. But if researchers–like auto makers, coal mine owners and the rest of mankind–tend to consider costs and benefits a bit more carefully when money is involved, a useful added control device will have been imposed.[96]

If "no fault" research insurance, or any other mechanism, is adopted as a device for compensating subjects, regulations will have to be established for adjudicating disputes over such matters as causation–whether the worsened condition of the subject was caused by the research in which he participated or whether it was merely the inevitable outcome of the subject's particular illness–or the amount of compensation. Similarly, the NHIB will have to work out procedures for implementing whatever compensation scheme is adopted.

f. *Promulgation of Sanctions*–Senator Humphrey's bill authorized his Board "to obtain an injunction to prevent. . .experimentation in a case where. . .experiments are found not to comply with established guidelines." Though the promulgation of sanctions raises many sensitive issues, more is needed than has been provided in Senator Humphrey's bill. Other sanctions tailored to specific violations of the policies governing research are required. For example, an investigator's failure to submit a protocol for review, his departure from an approved research protocol or a review committee's failure to follow its established procedures might in some circumstances justify suspension of further Federal funding of the investigator or the sponsoring institution.

It is beyond the scope of this report to detail the offenses which should lead to the invocation of sanctions, the particular penalties which should be imposed, or the procedures which must be followed to satisfy due process requirements. We also leave open the question of who–the National Human Investigation Board or Congress–should promulgate the regulations which will govern the imposition of sanctions.

g. *Delegation of Authority to Administer and Review the Research Process*–The National Human Investigation Board must also promulgate rules and procedures for the administration and review of the human research process. We now turn to these issues under their appropriate headings.

2. Administration of Research

a. Institutional Human Investigation Committees

Once adequate research policies have been formulated by a broadly representative body, "outsiders" should intervene as little as possible in the administration of those policies. For when research policies are put into effect, limitations imposed by colleagues are better tolerated by investigators than restrictions imposed by outsiders. The administration of research should therefore be performed principally by researchers' professional peers sitting on institutional review committees. Thus we seek to reverse the trend[97] toward outsider membership on institutional review committees and outsider interference with day-to-day professional decision-making. In our proposed restructuring of institutional review committees, we have sought to restrict the participation or outsiders to those areas where they have the most to contribute.

Senator Humphrey's bill does not specify the status of the institutional review committees which are now required by DHEW. The advantages of institutional committees are numerous, and we propose that they be retained, though with redefined functions. Among other things, administration at the institutional level simplifies the task of prior review of research protocols; permits closer scrutiny of research activities; encourages investigator involvement in and respect for the problems of ethical research; enables different institutions to deal with complex new problems from different vantage points, and facilitates responsiveness to difficulties in the research process as they arise. Instead of eliminating institutional committees, they should be restructured to enable them to perform their functions better than they now do.

We recommend the creation of a structured institutional body, to be called the Institutional Human Investigation Committee (IHIC), in place of the existing unspecialized institutional review committee. Each institution which is subject to the jurisdiction of the NHIB would be required to provide written assurance to the NHIB that it had appointed an IHIC. This would be similar to current practice which requires institutions to negotiate assurances with the NIH's Division of Research Grants.[98] As outlined below, each IHIC would be responsible for the conduct of research in its institution, and would be required to file with the NHIB its plans for carrying out the responsibility. Thus the NHIB would pass on the suitability of the IHIC membership, local policies, and administrative procedures, and NHIB

96. Calabresi, "Reflections on Medical Experimentation in Humans," 98 *Daedalus* 387, 398 (1969).

97. Current DHEW regulations suggest, and FDA regulations require, that outsiders be members of institutional review committees. See *Grants Administration Manual, supra,* footnote 23, § 1-40-40 (C) (2) (b); 21 CFR § 130.3; 36 Fed. Reg. 5037, 5038 (March 17, 1971).

98. See *Grants Administration Manual, supra,* footnote 23, § 1-40-40 (A):

> The assurance shall embody a statement of compliance with DHEW requirements for initial and continuing committee review of the supported activities; a set of implementing guidelines, including identification of the committee; and a description of its review procedures. . .

approval would be required before Federally funded research[99] could be conducted at the institution.[100]

IHIC members should be appointed by their institutions to serve for a period of years, so as to accumulate expertise in the problems of human experimentation. The membership should represent a cross-section of the disciplines involved in research at the institution. It ought also to include a few "outsiders." who can make a valuable contribution to the supervision of the consent process, as described below.

The main functions of each IHIC would be: to establish local policies, consistent with the uniform national guidelines promulgated by the NHIB, which are responsive to the individualized needs of the institution, to bring to the attention of the NHIB any procedural modifications deemed necessary for effective functioning; to inform local participants in the research enterprise of their rights and obligations; and to establish two subcommittees to carry out its administrative functions–a Protocol Review Group and a Subject Advisory Group. Although the membership of the subcommittees should be drawn largely from the IHIC, these subcommittees could also include others associated with the institution. Our recommendations regarding the two subcommittees are modeled on a similar proposal recently advanced by Jay Katz and Alexander Capron in a somewhat different context, and in what follows we quote from the draft document they have prepared.

b. Protocol Review Groups

> The heart of IHIC's will be their Protocol Review Groups (PRG) which will be responsible for approving, disapproving or offering suggestions for modification in protocols for experimental and therapeutic interventions which come within the policies on risk and consent formulated earlier in the process. The PRG's task is to apply the rules and policies already set down, but this should not be a matter of "clockwork" or mere routine. Realistically, it is unlikely that even if policy formulation proceeded with much more rigor (as we urge) it will result in directive that settle all issues faced by the PRG's. This does not suggest, however, that Protocol Review Groups set policies themselves, though these rules may give them some discretion in light of local institutional conditions and so as to permit experimentation with a variety of alternative policies which are still consistent with the general directives. This sort of flexibility is vital if the PRG's are to operate effectively and secure the services of thoughtful, devoted members.
>
> Membership in the Protocol Review Group should consist primarily of professionals with competence in biomedicine. This reflects the committee's function, which is to scrutinize protocols in light of the policy guidelines and directives, to evaluate whether the procedure should be undertaken, and to give advice to the physicians and scientists involved. In most instances these group members will be members of the university or research center's staff and faculty, but when the presence of more than one institution in a locality permits it, the cross-fertilization of having some people from one center serve on another's PRG would probably be advisable. Such an arrangement would provide "outsiders" in the sense of people's free of the personal ties and biases of the institution's own employees, while maintaining the biomedical expertise that should characterize "insiders."[101]

c. Subject Advisory Groups

Katz and Capron also propose "the establishment of Subject Advisory Groups (SAG) to aid patient-subjects in decision-making."[102] We do not lightly suggest the creation of another subgroup within the IHIC, since we have no desire to overburden the process with excessive bureaucracy. But, as we have emphasized, present procedures for obtaining consent are concerned with form to the neglect of substance. If informed and voluntary subject consent is to become a reality in human experimentation, efforts must focus on improving the quality of the communications between investigator and subject. We therefore endorse the Katz and Capron proposal that an adviser be made available to counsel any prospective subject who thinks his decision to participate or not might benefit from disinterested advice.

> Not all patient-subjects may wish to seek out representatives of the Subject Advisory Group, for some may be satisfied with the information obtained from physician-investigators. But patient-subjects should be well apprised of the availability of these representatives prior to their participation in projects which have to be sub-

99. Or any research – see *supra*, p. 39.

100. It should be noted that, as in present DHEW policy, different requirements might be established for institutions "having a significant number of concurrent" research projects and for institutions sponsoring only one, or a limited number, of such projects. See *Grants Administration Manual*, *supra*, footnote 23, § 1-40-40 (B), (C), and (D). The description of the IHIC presented in our report hereinafter is for an institution with a number of research activities.

101. *Katz and Capron*, *supra*, footnote 18.

102. *Ibid.*

mitted to the PRG because of the risk involved or because of the problems anticipated with obtaining valid consent. Patient-subjects may also wish to avail themselves of the SAG's services when they begin to wonder whether continuation of the intervention is worth the pain and suffering they have to endure. At such times the Subject Advisory Group assumes the important function of administering the procedures formulated for the termination of experimental treatments.[103]

The SAG should also aid investigators in developing fair methods of obtaining consent, and in avoiding inadvertent bias or coercion when seeking consent. It ought to go without saying that

> ...(c)reating an opportunity for someone in addition to physician-investigators to talk with patient-subjects does not suggest a lack of trust in the investigators' integrity, rather it recognizes the reality that investigators cannot help but plead, however unconsciously, their interests in the research and therefore must find it difficult fully to safeguard the interests of their subjects.[104]

Because the work of the SAG would be restricted to issues relating to consent, laymen could make a significant contribution in this subcommittee. They, more than professionals, would appreciate the difficulties prospective subjects might have when faced with an invitation to participate in research. And potential subjects might be less overawed in interactions with their peers, than in interactions with physicians.

d. Appeals

From time to time disagreements will arise between investigators and the Protocol Review Groups. No opportunity for appeal from an adverse institutional review committee ruling exists at present, and committees can cut investigators off from Federal funding without possibility of reconsideration. This may not only hinder the acquisition of knowledge; it may also undermine the legitimacy of peer review. Barber *et al.* have written:

> We have heard researchers object to peer review as they know or understand it because they believe that research proposals having real potential for medical scientific advances, or even "pioneering breakthroughs," frequently either are not or will not be approved by those who sit on institutional review committees. The reasons for these rejections they are especially concerned about do not involve the ethical defectiveness of the proposals. Rather they include local institutional politics and conflicts as well as resistance to innovations just because they depart from accustomed ways of scientific thinking and proceeding... (T)o forestall rejections of this kind, the biomedical community may have to go beyond the establishment of local appeal procedures by institutions. Perhaps what is necessary is the establishment of a hierarchy of "courts of appeal" thoughout the nation, culminating, as a final resort, in a "supreme court" composed of eminent peers including both "insiders" and "outsiders" with respect to any field. Such a system might be the best safeguard available against the object of these concerns—unjustified hindrance of medical progress by the peer review process.[105]

Procedures should be established for appeals to the National Human Investigation Board.[106] After a hearing of the controversy, the NHIB should be empowered to sustain or overrule the judgment of the Protocol Review Group.

Since the NHIB has a role to play in the administration of research, it must employ expert staff to evaluate research protocols and to prepare detailed findings. This staff would take over the reviewing function currently handled by DHEW study groups. However, it is beyond the scope of this report to set forth all the specific functions which the NHIB should assume. In particular, we have refrained from deciding how many of the protocols approved by the PRG's should be reviewed again by the NHIB. Though a certain number will have to be examined in order to provide the NHIB with sufficient information to carry out its most important function—policy formulation,—it may not be necessary to review all protocols a second time. This would be a time-consuming task.

3. Review of Decisions and Consequences

The NHIB must create mechanisms for the overall review of the human experimentation process in order to assess the continuing efficacy of its own policies and of the institutional peer group review. Thus, the Board has to keep itself informed about ongoing research practices, and a number of already esisting resources would facilities this task: scientific journals which publish research studies, legal cases in which conflicting claims about research have been brought before courts, newspaper accounts (such as the initial reports of the

103. *Ibid.*
104. *Ibid.*
105. *Barber et al., supra,* footnote 3, at 156-157. (footnote omitted).
106. IHIC's might also find it appropriate to establish an internal appeals procedure. This would be more convenient than, and would sometimes obviate the need for, appeals to the national level.

Tuskegee Syphilis Study), reports from Institutional Human Investigation Committees, etc.[107]

The NHIB must also establish rules and procedures for the direct review by IHIC's and by NHIB staff members of ongoing previously approved research projects. The current requirement of systematic review of all projects at fixed intervals is burdensome and inefficient and encourages perfunctory review. Instead of requiring continuing review of all research projects on a routine basis, it would reduce the burden on IHIC's and maximize the effectiveness of continuing review if investigators were asked to report immediately any contemplated or necessary deviations from approved research protocols, all inconveniences and injuries suffered by any subjects which has not been anticipated in the original protocol, or any medical advances which might benefit subjects and which has not been anticipated in the original protocol. Moreover, periodic "spot checks" of selected interventions which are now discretionary should be made a requirement. It is apparent that some approved research projects are carried out improperly. For example, in a recent study involving subjects subsequent to their participation in a medical research project which had been approved by an institutional review committee, an interviewer found that,

> (m)ost of these subjects learned of the existence of the study during the interviews done for my research. Second, many more subjects (the exact number awaits further analysis), while aware of the research, has significant gaps in their understanding of the project and consented on a more or less uninformed basis. These included women who had no knowledge of whether there were alternatives to participation, women who did not know of the double-blind nature of the study (it was not part of the research design to withhold this information), and women who were not aware of the fetal monitoring procedures and extra blood samples required by the research. Others were not aware beforehand that their consent to have the baby observed would be sought by a separate researcher.[108]

Spot checks would determine the extent of noncompliance with existing procedures. Should the checks reveal widespread noncompliance, then remedial steps could be taken, such as better education of physician-investigators about their responsibilities, more careful evaluation of protocols, or routine monitoring of all research activities for a period of time.

The NHIB should also invite the IHIC's to submit their most difficult decisions for an evaluation. Significant cases, inclucing the original PRG rulings and the subsequent NHIB opinions, should be published to give direction to the deliberation of local committees, to provide material for scholarly analysis, and to foster and sustain public awareness of the issues raised by human experimentation. Indeed, all important decisions rendered at the local or national level should be published and preserved in easily accessible form. These cases would serve as precedents for future opinions. Thus publication would be a first step toward the case-by-case development of sound policies for human experimentation. We regard such a development, analogous to the growth of the common law, as the best hope for ultimately providing workable standards for the regulation of the human experimentation process.

Finally, we emphasize again that the review of research decisions and their consequences requires the participation of persons representing a wide variety of societal interest and should not be limited to members of the biomedical professions. It is at the policy-formulation and review stages of the human experimentation process that "outsiders" have an important role to play by championing individual and societal rights and interests. Professionals have been trained to pursue other goals and should not be expected, even if they could, to shoulder the added burden of speaking for the concerns of society.

C. Education

Our last recommendation pertains to the education of investigators, particularly when they are still students, for the responsible practice of human research in a democratic society. Recently, Senator Jacob Javits introduced a bill[109] in the Senate which addresses itself to this problem. The bill

> would authorize special project grants for medical schools to develop and operate programs which provide increased emphasis on the ethical, social, moral, and legal implications of advances in biomedical research and technology.

* * *

107. The NHIB might consider inviting others – for example, editors of scientific journals – to submit for review studies which raise ethical questions. Editorial boards should welcome such an opportunity, particularly in the light of the recent debate about the publication of articles based on "unethical" research. Some commentators have favored non-publication, while others have felt that "(s)uch an editorial policy would maintain the low visibility of unethical experimentation and preclude not only review but also careful and constant appraisal of the conflicting values inherent in experimentation." (Katz, "Human Experimentation," 275 New Eng. J. of Med. 790 (1966)). Journal censorship creates difficult problems. If editorial boards could be assured that violations of "ethical" practice would be dealt with by an authorized body, they might prefer to call them to the attention of the NHIB and judge acceptability of articles on the basis of scientific merits.

108. Gray, "Some Vagaries of Consent," a preliminary report (1971) on data collected for the author's doctoral thesis, reproduced in *Katz, supra*, footnote 12, at 660.

109. S. 974, 93d Cong., 1st Sess.

> The bill... provides the opportunity for our Nation's medical schools to develop the appropriate program curriculums regarding ethical, moral, and social issues to meet the need–the protection of human subjects at risk in medical research and improved understanding of the consequences and implications for the individual and society of the advances in biomedical science–and through their own initiative and leadership construct and appropriate continuing professional institutional activity to safeguard human subjects in research.[110]

Senator Javits referred to the findings of Professor Bernard Barber *et al.*, and to document further the need for such an educational effort, we quote briefly another passage from their study:

> It is clear from our date that medical schools are presently giving very little serious attention to these matters in their curriculum. Of the 307 physicians interviewed, only 13% reported that they had had a seminar, a lecture or part of a course devoted to the issues involved in the use of human subjects in biomedical research, and only one researcher said that he had had a complete course dealing with these issues. Thirteen per cent of the respondents said that the issues of research ethics came up when as students they did practice procedures on one another, and 24% said that they became aware of the issues of balancing risk or suffering against potential benefits when doing experimental work with animals. Thirty-four per cent remembered discussions with instructors or other students of the ethical issues involved in specific research project which they had read about or learned of in class. But 57% of the physicians interviewed reported none of these experiences, even those peripheral to work with humans, such as those involving animal experimentation.[111]

It has sometimes been asserted that the human subject in experimentation is best safeguarded "by the presence of an intelligent, informed, conscientious, compassionate, responsible investigator."[112] Whatever merit underlies such a contention, sufficient attention has not been paid by educators in all professional schools to exploring the responsibilities of the professional toward his patients, clients, or research subjects. Without training, even a "conscientious" investigator is poorly prepared to deal knowledgeably or systematically with these problems.

Though in recent years there has been an upsurge in efforts to expose students to the issues raised by professional responsibility, considerably more thought and support must be given to this work. Professional schools must recruit faculty members who are interested in pursuing the complex problems created by human research in particular and contemporary professional practices in general. The task is not limited to educating students but must ultimately include a re-examination of the entire scope of professional decision-making.

110. 110 Cong. Rec. S 3114 (Feb. 22, 1973)
111. *Barber et al., supra*, footnote 3, at 101;
112. Beecher, "Ethics and Clinical Research," 274 New Eng. J. Med. 1354, 1360 (1966).

VI. CONCLUSION

Human experimentation reflects the recurrent societal dilemma of reconciling respect for human rights and individual dignity with the felt needs of society to overrule individual autonomy for the common good. Throughout this report we have expressed our concern for the lack of attention which has been given to the protection of the rights and welfare of human subjects in research. Society can no longer afford to leave the balancing of individual rights against scientific progress to the scientific community alone. The revelations of the Tuskegee Syphilis Study once again dramatically confirmed this conclusion.

We offer our far-reaching proposals in the hope that the decision-making process for human research will become more open and more effectively regulated. We have amply documented the need for implementing this most basic recommendation. Precise rules and efficient procedures, however, are not by themselves proof against a repetition of Tuskegee. For, however well designed the system of regulation, the danger of token adherence to ethical standards and evasion in the guise of flexibility will persist. Ultimately, the spirit in which an aware society undertakes to use human beings for research ends will determine the protection which those human beings will receive. Therefore, we have urged throughout a greater participation by society in the decisions which affect so many human lives.

Respectfully submitted,

Ronald H. Brown
Vernal Cave, M.D.
Jean L. Harris, M.D.
Seward Hiltner, Ph.D., D.D.
Jay Katz, M.D.
Jeanne C. Sinkford, D.D.S., Ph.D.
Fred Speaker
Barney H. Weeks

Abstention:
Broadus N. Butler, Ph.D.