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Dealing With the Long-Term Social Implications of Research

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Abstract

Biomedical and behavioral research may affect strongly held social values and thereby create significant controversy over whether such research should be permitted in the first place. Institutional review boards (IRBs) responsible for protecting the rights and welfare of participants in research are sometimes faced with review of protocols that have significant implications for social policy and the potential for negative social consequences. Although IRB members often raise concerns about potential long-term social implications in protocol review, federal regulations strongly discourage IRBs from considering them in their decisions. Yet IRBs often do consider the social implications of research protocols and sometimes create significant delays in initiating or even prevent such research. The social implications of research are important topics for public scrutiny and professional discussion. This article examines the reasons that the federal regulations preclude IRBs from assessing the social risks of research, and examines alternative approaches that have been used with varying success by national advisory groups to provide such guidance. The article concludes with recommendations for characteristics of a national advisory group that could successfully fulfill this need, including sustainability, independence, diverse and relevant expertise, and public transparency.

Keywords

human subjects research; IRB (institutional review board); research ethics

Biomedical and behavioral research can generate new knowledge that may affect strongly held social values and beliefs, and influence public policy. In addition, the proliferation of biobanks and the current practice of genetic research with de-identified stored blood samples have been associated with public concern about informed consent and privacy. While we do not wish to contend that a significant amount of socially harmful research has occurred recently, we can identify areas of social controversy in current research and describe projects in which institutional review boards (IRBs) have used the potential social implications of research proposals to delay or preclude research. For example, recent attention has focused on problems encountered with genetic research among Native American tribes, highlighting some difficult ethical and social issues. These types of value concerns can result, and indeed have resulted, in significant controversy over whether some research should be permitted at all. Current examples of clinical research that raise controversial societal issues include projects focused on behavioral genetics, adolescent behavior, public health interventions to reduce the harms associated with illicit drug use, and human genetic enhancement. Discussions of the long-range social and political effects of particular kinds of research are valuable, but where should the social implications of research and research practices be debated? Since this issue was first raised in the 1970s it has been almost invisible, but it is essential to now consider, given the controversial nature of some research today, the likelihood of even more public scrutiny of this question in the future. In this article, we first provide some examples of controversial research that potentially have negative social implications. Next, we describe the role of IRBs in providing ethical oversight of research and their limited role in evaluating the social implications of research. We then describe how some national advisory groups have dealt with this issue. We conclude that IRBs should not consider the potential long-range social and policy impact of research in the protocol review process and provide recommendations on how to structure national deliberation concerning socially contentious research.

CURRENT EXAMPLES OF CONTROVERSIAL RESEARCH

Behavioral Genetics

Social scientists have long pursued genetic and environmental links to alcoholism, antisocial behavior, homosexuality, mental illness, and other behaviors (Carey and Gottesman 2006; Moffitt 2005; van Belzen and Hetulink 2006). They point to the potential value of being able to predict such behaviors early in life in order to provide individuals with important insights into possible future behaviors or to target interventions to affect outcome. This type of research has raised concern about such knowledge inappropriately stigmatizing individuals or groups and encouraging belief in genetic essentialism and biologic determinism. Moreover, some fear that the research will result in active discrimination, perpetuate preconceived stereotypes, and increase health disparities.

Adolescent Behavior

Much current research involving adolescents seeks to understand social determinants of health-related behaviors such as sexual activity and contraceptive practices, smoking, and alcohol and drug use (Hallfors et al. 2007; Hampton 2006; Hellerstedt et al. 2006; Miller et al. 2007). Some critics voice concerns that it is socially harmful to allow research in these

areas because it may be seen as condoning or even encouraging such behaviors in young people. Others regard the knowledge gained as having the potential to weaken the social fabric of society and to condone the creation or perpetuation of harmful social practices and policies.

Harm Reduction

Public health researchers study the effectiveness of interventions to decrease acquisition of infectious diseases such as hepatitis C and HIV among injection drug users and commercial sex workers (Coffin 2000; Paone et al. 1995). Such “harm reduction” strategies acknowledge that individuals may be participating in illegal activities that are unlikely to change in the short term, and that these activities increase the likelihood of acquiring diseases that are transmitted via shared needles or intimate sexual contact. Even though illegal behaviors are involved, social scientists attempt to study the effect on disease transmission rates of various interventions ranging from education and peer support, to condom distribution and needle exchange. Despite the possibility that the research might benefit the participants and others who are engaged in risky behaviors, some are concerned that the research condones illegal behaviors and the knowledge gained might increase the likelihood of creating social policies that will result in the spread of illegal behaviors in the community.

Human Genetic Enhancement

Current research in molecular genetics proposes to modify the human genome to affect disease expression or enhance human capacities. Much of this research remains in preclinical stages, but is beginning to include human experimentation (Botkin 1998; Harris 2006; Parens 2005; Sandel 2004). Critics of this research want to preclude most human genetic experimentation, raising concerns about the social implications of the manipulation of the “fundamental nature” of being human. Some argue that disease prevention, but not human enhancement, may be a reasonable goal of research, while others feel that any alteration of the genome is dangerous and, in addition, may ultimately result in irreversible changes to the germ-line.

THE ROLE OF INSTITUTIONAL REVIEW BOARDS

Almost all research involving humans is reviewed and approved by an institutional review board (IRB), as specified in federal regulations (U.S. Department of Health and Human Services 2005, 46.101–46.409). IRBs are responsible for protecting the rights and welfare of research participants, balancing risks to the individual participants against benefits to participants and to the society at large. Long-term risks to the society are not to be considered. After establishing that IRBs must determine that “Risks to subjects are reasonable in relation to anticipated benefits, if any, to subjects, and the importance of the knowledge that may reasonably be expected to result,” the regulations continue: “In evaluating risks and benefits, the IRB ... should not consider possible long-range effects of applying knowledge gained in the research (for example, the possible effects of the research on public policy) as among those risks that fall within the purview of its responsibility” (U.S. Department of Health and Human Services 2005, 46.111). Depending on how the words “should not” are interpreted, this regulation either strongly discourages or firmly

warns IRBs to avoid considering the potential long-range social and policy impact of research under review. In either reading, this regulation places speculation about negative social consequences off limits to IRBs.

This exclusion emerged from deliberations by the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (the National Commission) (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research 1978) and resulted in the present regulations (U.S. Department of Health and Human Services 2005, 46.101–46.409), which were first issued in 1975, substantially revised in 1981, and have undergone periodic changes since. There were many professional debates and public controversies in the 1970s about the appropriateness of behavioral research (Gaylin, Macklin, and Powledge 1981; Hastings Center Research Group 1976; Hastings Center Research Group 1979; Hastings Center Research Group 1980). The National Commission likely intended to insulate IRBs from the vagaries of politics and public debate around highly contentious issues. At the time, proponents of local review of research proposals involving human subjects argued that it increased institutional accountability and responsibility as well as enhanced sensitivity to community attitudes (Schwartz 1983). But there was also considerable concern that IRBs are not well suited to determine the appropriateness of a research proposal based on the potential social implications of the findings because predicting negative effects of new knowledge on populations or social policy is highly speculative, and essentially political (Gray 1980).

The regulation notwithstanding, in deliberating the appropriateness of research proposals, some IRB members consider ethical issues well beyond those related to the specific risks to participants. The process of local institutional review allows for interpretation of regulations, accepts inconsistency among sites, and provides little recourse for researchers whose proposals have not been approved. This may be particularly problematic when IRBs are asked to review research protocols that have the potential for negative social consequences and significant implications for social policy. Even while acknowledging that the risks to individual participants of the research may be minimal and that the information gained, in and of itself, might be interesting or important, some IRB members nonetheless may fear that the knowledge gained may lead to unintended but foreseeable harms to the community from which the participants are drawn, broader populations, and society in general. IRB members may argue that the knowledge gained in the research, even the conduct of the research itself, may, or may appear to, sanction behaviors that are illegal or socially undesirable, or that policies or attitudes deriving from the study findings might stigmatize a group or socially identifiable community and place them at future social, economic, and political risk.

We agree with the National Commission and the regulation drafters that IRBs should base approval decisions only on the quality of the design and implementation of the research, those risks and harms that affect participants weighed against the anticipated benefits, the informed consent process, and any clearly defined risks of the research to identifiable nonparticipants. Since anything further can result in well-designed and important research being precluded, IRB members, whether representative of the institution or unaffiliated, should not speculate about possible negative social and political consequences of the

research and the long-range impact of the knowledge gained. Yet when an IRB or one of its members has significant concerns about the social implications of a research project, there ought to be a national advisory group available to consider these issues, even while the specific research proposal may be approved and move forward with subject recruitment. The goal of a national advisory body would not be to consult on the specific proposal or to become involved in its review, but rather to consider the broader issue and make recommendations accordingly. It is our hope that having a national advisory group available for review of the social implications of research will make IRBs less likely to consider these issues and less likely to preclude important research while still creating the public dialogue about social implications of research that is necessary and appropriate.

ALTERNATIVE MECHANISMS FOR ASSESSING THE SOCIAL RISKS OF RESEARCH

If IRBs are not appropriate forums for assessing the social risks of research, what are the alternatives? Several approaches have been employed for deliberating on controversial issues in research ethics. Various government commissions and advisory committees have played substantial roles in shaping policy and practice in research ethics and public policy and have the advantage of national representation, presumed expertise on the issues being addressed, and high visibility. While providing a good venue for the discussion of social implications of research, commissions and advisory committees have also been the subject of substantial criticism (Capron 1997; Kass 2005; Moreno 1996). Potential disadvantages of these committees include the proliferation of such bodies, their vulnerability to being politicized, and their lack of authority to implement recommendations.

Advisory commissions, including the National Commission (1974–1978), the President's Commission on Ethical Problems in Medicine and Biomedical and Behavioral Research (1979–1982), the National Bioethics Advisory Commission (1996–2000), and, most recently, the President's Council on Bioethics (2001–2009), have devoted themselves in whole or in part to ethical concerns in research. Also, several advisory committees dedicated to research ethics have been created over the years. In response to public concern, the Recombinant DNA Advisory Committee (RAC) was created at the National Institutes of Health in 1974 for the purpose of setting safety standards for recombinant DNA research, and in 1984, the RAC established a working group to evaluate research protocols that planned to involve humans. The federal government also created the Ethics Advisory Board (EAB) in 1977 specifically to review fetal research and in vitro fertilization studies.

In 2000, the Secretary of the Department of Health and Human Services (DHHS) created the National Human Research Protections Advisory Committee (NHRPAC), another federal advisory committee, to provide independent advice on a wide range of research ethics issues to the Office for Human Research Protections (OHRP), the federal office charged with oversight of research involving human subjects. After working diligently on several issues related to research ethics, including research involving children, conflict of interest, social and behavioral research, genetics, incapacitated adults, and third parties in research, NHRPAC was disbanded and replaced in 2002 by another similar committee, the Secretary's Advisory Committee on Human Research Protection (SACHRP). SACHRP has been

meeting continually since 2002 to provide advice to the Secretary and Assistant Secretary for Health, DHHS, to improve the quality of the system of human research protection. The committee has made many recommendations for change in federal regulations and the development of guidance documents from OHRP, but has not been viewed as a site for referral of hard issues from individual IRBs or its members.

Each of these commissions and many of the advisory committees dealt with specific aspects of research involving humans, debated the social implications of various areas of research, and attempted to affect public policy and regulation. Some were more successful than others, but in many cases these bodies have been short-lived or less effective than they might have been based on becoming highly politicized as administrations and leadership changed. Committees recreated and reconstituted every few years may not make much progress but instead engage in work that “retrace[s] already well-traveled ground” (Moreno 2002).

Other advisory committees that have been effective and contributed to public policy in a meaningful way include the National Academies of Science/Institute of Medicine committees and investigative groups like the President’s Advisory Committee on Human Radiation Experiments. These groups have had clearly defined charges and the ability to identify appropriate members and needed resources, in order to respond effectively to the concerns of particular constituencies and stakeholders. By design, they have a limited life span and address only one issue. Although these reports have been erudite and at times effective, they affect public policy indirectly through recommendations to government agencies and Congress.

Virtually all government commissions and advisory bodies lack a mechanism for implementing recommendations. This is not to say that these groups inevitably have little or no impact. To the contrary, the recommendations of the National Commission were readily translated into policy and continue to provide the guiding philosophical and regulatory framework for human subjects research ethics in the United States. Other commissions and committees have issued influential reports. Nevertheless, in order for a body to be truly effective, it ought to have a built-in mechanism to translate its ideas into actual policy or be functioning in response to a specific charge from a responsible governmental group.

Clearly, shifting political winds can make credibility and staying power for governmental advisory bodies elusive. This raises ethical as well as practical concerns. Committees established with particular political ends in mind may not be representative of a wide range of perspectives, but rather created with a membership to promote a particular agenda, or at least so as not to strike discordant notes with the values of the concurrent administration. This can undermine careful consideration of issues and ultimately result in policies that may impact negatively on the nation’s health.

Relative freedom from political pressures (of institutions or governments), inclusive representation, and staying power seem to be essential elements of a successful mechanism for assessing ethical issues. The RAC, according to its admirers, illustrates such features, perhaps making it “a model worth extending” (King 2002). Having survived an effort to disband it in the late 1990s, the RAC now has a nearly 30-year history of thoughtful

deliberation. As a result, it has not had to “reinvent the ethical wheel” each time a new protocol comes before it even though there has been substantial rotation of membership (Parens 1996). The research enterprise, investigators, research participants, and ultimately the public have surely benefited from its independence and long-accumulated experience. Also, its representative membership (with relevant scientific expertise, ethicists, theologians, and lay people), accessibility to the public (through meetings and information sharing), and relative independence serve to promote fairness and thoroughness in the assessment of issues and have helped to inspire confidence and trust in genetics research among the public.

While previous advisory committees have had many of the characteristics we propose for this new body, we believe that each of the essential elements we describe should exist in the new advisory committee in order to produce credible and effective recommendations. Our proposal can at once allow for vital public scrutiny and dialogue about the social implications of research and, at the same time, enhance the research enterprise.

CONCLUSIONS

There is a need to address the broad ethical, social, and political concerns that are inherent in the generation of new knowledge in controversial areas. The challenge is to design a mechanism that is effective, efficient, and ethically defensible. The review of the methods used thus far reveals that certain elements are essential. The preferred approach will be national in scope, contain diverse and relevant expertise, be transparent and accessible to the public, and be independent of undue political influence. Membership should be drawn from a wide range of knowledgeable and interested parties but not require agreement on preconceived notions of the outcome or ideological litmus tests. In addition, such committees must be able to identify the range of issues, reason about them, and come to considered judgments independently. Sustainable mechanisms are important so participants can over time accumulate experience and wisdom, even if membership rotates periodically. Mechanisms for dissemination and implementation of recommendations will play an important role in the success of such endeavors.

We believe there should be a permanent national advisory committee to systematically examine ethical issues related to human participant research and recommend policies to regulatory and legislative groups. This group should be diverse, not be politically, religiously, or ideologically based, and represent the moral pluralism of our multicultural country. This national advisory committee could generate its own agenda and receive requests from local IRBs, branches of government, the academic community, and the public, to discuss specific issues and make recommendations for public policy. To enhance the effectiveness of the committee, it should have direct access to the Secretary of Health and Human Services and report its findings regularly to Congress. Some may be skeptical that such a committee will be free of political bias or effective, but past history gives us examples of some efforts that have been successful. The importance of this problem will hopefully motivate Congress and the Executive Branch of government to create a strong and apolitical committee to address the long term social consequences of research. Although the advisory committee would not review specific protocols, local IRBs could refer troubling issues to the committee for deliberation with the knowledge that such concerns were being addressed.

Finally, it is clear that there will always be research that may lead to socially and politically controversial results. The best way to obviate the potential for negative impact of such new knowledge is for investigators and IRBs to assure the quality of the research design and implementation, the involvement of relevant communities prospectively when appropriate, and the dissemination of this information fairly and objectively. As ever, there is a need for study and sustained debate on how best to design structures and processes to support ethical decision making in research, and broadly, how to encourage ethical conduct in the relationships and shared practices that constitute the research enterprise.

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