
Editorial

Ethics in Biomedical Research

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There has been a sharp increase in the number of clinical trials in India. The number of countries in which clinical investigators conduct drug research that is tracked by FDA increased from 28 in 1990 to 79 in 1999. Among the countries that have experienced the largest growth in clinical investigators are Russia and countries in Eastern Europe, India and Latin America. Sponsors explain this growth by pointing to readily accessible human subjects, potential new markets for approved drugs and recent international agreements that ease FDA acceptance of foreign research data. Contract research organizations are also moving into these areas. The pharmaceutical industry, National Regulatory agencies, the National Bioethics Advisory Commission, and the World Health Organization have all raised concerns about some of the institutional review boards that review research at foreign sites. Their concerns tend to focus on the boards' lack of experience and insufficient monitoring practices.

Ethical Research

Our knowledge on bioethics in clinical research is guided by international codes of ethics and regulations such as Nuremberg Code (1947), Declaration of Helsinki (2000), Belmont Report (1979) and U.S. Common Rule (1991). Based on these, seven main principles have been described to guide the conduct of ethical research. They are

- 1- Social and clinical value
- 2- Scientific validity
- 3- Fair subject selection
- 4- Favorable risk-benefit ratio
- 5- Independent review
- 6- Informed consent
- 7- Respect for potential and enrolled subjects

In research, answering a research question should contribute to scientific understanding of health or improve our ways of preventing, treating, or caring for people with a given disease. Only if the society will gain useful knowledge — which requires sharing results, both

negative and positive — can exposing human subjects to the risk and burden of research be justified. A study should be designed in a way that will get an understandable answer to the valuable research question. Invalid research is unethical because it is a waste of resources and exposes people to risk for no purpose. People should be chosen in a way that minimizes risks and enhances benefits to individuals and society. Groups and individuals who accept the risks and burdens of research should be in a position to enjoy its benefits, and those who may benefit should share some of the risks and burdens. Uncertainty about the degree of risks and benefits associated with a drug, device, or procedure being tested is inherent in clinical research. Everything been done to minimize the risks and inconvenience to research subjects, to maximize the potential benefits.

To minimize potential conflicts of interest and make sure a study is ethically acceptable before it even starts, an independent review panel with no vested interest in the particular study should review the proposal. These groups also monitor a study while it is ongoing. For research to be ethical, most agree that individuals should make their own decision about whether they want to participate or continue participating in research. This is done through a process of informed consent in which individuals (1) are accurately informed of the purpose, methods, risks, benefits, and alternatives to the research, (2) understand this

information and how it relates to their own clinical situation or interests, and (3) make a voluntary decision about whether to participate. Individuals should be treated with respect from the time they are approached for possible participation, throughout their participation and after their participation ends¹.

Institutional Review Board:

Institutional review board is defined as the oversight bodies designated by an institution to review, to approve the initiation of, and to conduct periodic review of, biomedical research involving human subjects. The primary purpose of such review is to assure the protection of the rights and welfare of the human subjects². Institutional review boards are intended to protect human subjects in clinical trials, in part, by independently reviewing proposed research before investigators can enroll subjects in trials. According to FDA regulations, foreign boards must adhere to international ethical standards, whether the standards are set by FDA, the Declaration of Helsinki, or the International Conference on Harmonization, as well as any regulations of their respective countries' regulatory agencies.³

In 1999, The World Health Organization's Tropical Disease Research group conducted two seminars analyzing the status of ethical review in Asia, Africa, and the Western Pacific. These seminars revealed several weaknesses (table:1) in the

ethical review systems of these countries.⁴ As a result of the seminars, the World Health Organization developed Operational Guidelines for Ethics Committees that Review Biomedical Research, a document which provides guidance to countries and institutions for creating and operating their own research ethics

committees.⁵ It also established the Forum on Ethics Committees in Asia and the Western Pacific, a network for mobilizing resources, exchanging information and coordinating activities relating to institutional review boards. Among other activities, this forum facilitates training and education of members of ethics committees.

Table-1: Some Weaknesses in Ethical Review Systems in Asia, Western Pacific, and Africa

1	Lack of procedures for reviewing the protocol and informed consent forms
2	Lack of trained institutional review board members
3	Insufficient resources
4	Lack of monitoring systems
5	Lack of quorum requirements for institutional review board meetings
6	Lack of independence

Source: World Health Organization

International Harmonization of Research

FDA has played an important role in efforts to create international standards for clinical research that facilitate the acceptance of well conducted international research. The International Conference on Harmonization was established in 1990 to create international standards for ensuring and assessing the quality, safety, and efficacy of drugs, including Good Clinical Practice guidelines for investigators, institutional review boards, and sponsors. Its members include FDA, the regulatory agencies of the European Union and Japan, and the pharmaceutical industry trade groups from these three regions. These

guidelines are very similar to FDA regulations. An increasing amount of international research is being conducted under these voluntary guidelines.

India is an ideal destination for trials on account of its highly skilled medical professionals, sophisticated medical infrastructure and huge and diverse population. In 2007 the government amended Schedule Y of the Drugs and Cosmetics Act to allow multinationals to conduct clinical trials on their own or in collaboration with domestic organizations. It has also lifted customs duty on research supplies. In this context, the government should see how Indians would benefit from it. People must know why a test is

conducted. They must be provided health care during trials. Apparently this is not happening. Therefore, there is a growing need to increase the awareness among policymakers and researchers, particularly when they deal with vulnerable populations

India could be defined as a country in "Epidemiological transition". This means India has moved from being a country that is linked with diseases related to poverty to one that has diseases and ailments associated with industrialized countries, such as diabetes, cardiovascular diseases and cancer. If a country is in that transition then it is useful for an international drug company or research groups to experiment, as it serves the high-income countries interests.

A study on informed consent in the Indian context brought out an interesting aspect of the Western demand for informed consent clashing with cultural issues in India¹. The data brought out that gender dynamics, the family unit, financial constraints, and religion influenced the researcher-participant relationship as well as the decision-making process. So there is a need to develop a culturally relevant model applicable to Indian community research.

Five years ago the expose of tests of anti-cancer compounds discovered by Johns Hopkins University researchers

on 27 cancer patients at the Regional Cancer Centre in Thiruvananthapuram without obtaining their informed consent led to an exhaustive investigation, which included scrutinizing the involvement of medical professionals (*Frontline*, August 17 and August 31, 2001 and December 16, 2005). So it becomes all the more important that the Government, Institutional review Boards, researchers and the public should be aware of their role in biomedical research in this country, and at the same time they must try to avoid exploitation at any cost.

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