Ethical and Professional Issues in Medical Research

- The ethical issues in human subjects research have received increasing attention over the last 50 years. Institutional Review Boards for the Protection of Human Subjects (IRB's) have been established at most institutions that undertake research with humans. These committees are made up of scientists, clinical faculty, and administrators who review research according to the international regulations.

Nuremberg Trials (1945-1949)

- Nuremberg trials were carried out on prisoners and mentally retarded people.
- These trials brought the issue of research ethics to light.

Tuskegee Study (1932)

- To test the effectiveness of mercury in treating syphilis, US Public Health Service began a study in 1932 in Alabama on Black male farmers over the age of 25 years. Men diagnosed with syphilis were not given treatments.
- This unethical study became public knowledge 40 years after it started.

- "Syphilis victims in U.S. study went untreated for 40 years”

  New York Times, 1972

- In 1963, Chronic Disease hospital in Brooklyn, New York, injected live cancer cells into 22 elderly patients to measure patients' ability to reject foreign cells (Katz, 1972).

- Milgram obedience study (Milgram, 1963)
  - Participants were instructed to use electric shock to punish other individuals when they made errors in a learning task
  - participants were administering what appeared to be dangerously strong and painful shocks to those who could not accomplish the learning task.
  - Although the participants in this study did not actually suffer from physical harm, they felt ashamed for behaving inhumanely manners in the study.

Declaration of Helsinki (1964)

"The purpose of biomedical research involving human subjects must be to improve diagnostic, therapeutic and prophylactic procedures and the understanding of the aetiology and pathogenesis of disease."

Declaration of Helsinki

A revision added in 2000 states that the "benefits, risks, burdens, and effectiveness of a new method should be tested against those of the best current prophylactic, diagnostic, and therapeutic methods".

What are the main Issues in Human Subjects Research ?

- Safety of the research participants
- Informed consent
- Privacy and confidentiality

Is there a Difference Between Practice and Research ?

"*For the most part, the term "practice" refers to interventions that are designed solely to enhance the well-being of an individual patient or client and that have a reasonable expectation of success. By contrast, the term "research" designates an activity designed to test an hypothesis, permit conclusions to be drawn, and thereby to develop or contribute to generalizable knowledge*" **(Belmont Report, 1979)**

A Different Point of View

- Research and Practice are not separable (*s. Piantadosi, Clinical Trials: A methodologic Perspective, 1997*)
- Distinction should be made on the degree of certainty.
- In one setting a behaviour is considered practice, while in another setting the same behaviour becomes research.
- Example: Comparison of two standard therapies such as two types of antibiotics in a clinical trial

What are the Main Ethical Principles that Govern Research with Human Subjects?

- **Autonomy** (self-governing): The freedom to make choices about issues that affect one's life.
- **Beneficence**: The obligation on the part of the investigator to attempt to maximize benefits for the individual participant and/or society, while minimizing risk of harm to the individual

- **Justice**: Who ought to receive the benefits of research and bear its burdens?

  The selection of research subjects needs to be scrutinized in order to determine whether some classes (e.g., welfare patients, particular racial and ethnic minorities, or persons confined to institutions) are being systematically selected simply because of their easy availability, their compromised position, or their manipulability, rather than for reasons directly related to the problem being studied.

(*Belmont Report :The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979*)

Psychiatric Patients

- Research on psychiatric patients is needed.
- Surrogate informed consent is acceptable.
- Criteria for using psychiatric patients in clinical trials:
  - No more than minimum risk
  - Research cannot be carried out with competent individuals.

What are the Components of an Ethically Valid Informed Consent for Research?

- Disclosure
- Understanding
- Voluntariness
- Competence

Is informed Consent Required by Law?

- "No investigator may involve a human being as a subject in research covered by these regulations unless the investigator has obtained the legally effective informed consent of the subject or the subject's legally authorized representative."

Code of federation Regulations (1998)

(Guidance for Institutional Review Boards and Clinical Investigators)

Can I use Deception When Doing Research?

As a general rule, deception is not acceptable when doing research with humans. Using deception jeopardizes the integrity of the informed consent process and can potentially harm participants. Occasionally exploring area of interest fully may require misleading your participants about the subject of the study.

"Research should have two components:

Informed consent

AND

An intelligent, informed, conscientious, compassionate, responsible investigator."

Informed Consent

- Information given to subject “shall be in a language that
- is understandable…”
- Guidelines for writing Informed Consent Form
- Use short sentences and paragraphs
- Avoid scientific or medical jargon; define scientific or medical terms in lay language
- Write in the second person “you”

1) Describe the overall research process

- Statement that the study involves research
- The word “research” or “experiment” should be used not “study” or “trial”

Purpose of the research, if it is a clinical trial is to evaluate effectiveness – **no claims of effectiveness**

2) Expected duration of subject's participation

Number of days, number of visits to be made to the clinic or hospital

3) **Description of procedures that will be followed**

- Number of needle-sticks or other discomforts
- Verify procedures with protocol

- • Explain terms - placebo, randomization,

4) Describe the reasonably foreseeable risks, harms (including psychological harms or discomfort) and/or inconveniences associated with the research

5) Describe any benefits that the subject may reasonable expect from the research

May be none to subject but benefit to society

Compensation is NOT a benefit

6) Describe alternatives to participating in the research study

7) Explain full range of alternative options available

Example: they can receive the treatment of their choice

8) Confidentiality of Records

Inform subjects of extent to which their records will be kept confidential

9) Explain who will have excess to their records.

10) Explanation as to whether any compensation is available if injury or failure of treatment occurs, and what it consists of, or whom to contact for more information

11) Identification of persons to be contacted to answer questions about research (*usually investigator)*

12) Identification of persons to be contacted to answer questions about research subjects' rights (*Usually ethics committee*)

13) A statement that participation is **voluntary**

A statement that refusal to participate will involve **no penalty or loss of any benefits** to which the subject is otherwise entitled

14) A statement that subject may **withdraw** at any time without penalty or loss of any benefits to which the subject is otherwise entitled

Reference

- Gordis Epidemiology (second edition) pages 289-297