

Council for International Organizations of Medical  
Sciences  
(CIOMS) in collaboration with the World Health  
Organization (WHO)

**International Ethical Guidelines for  
Biomedical Research  
Involving Human Subjects**

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# Research involving human subjects includes:

- - studies of a **physiological, biochemical or pathological** process, or of the response to a specific intervention – whether physical, chemical or psychological – in healthy subjects or patients;
- - **controlled trials** of diagnostic, preventive or therapeutic measures in larger groups of persons, designed to demonstrate a specific generalizable response to these measures against a background of individual biological variation;
- - studies designed to determine the consequences for individuals and communities of specific **preventive or therapeutic** measures;
- - studies concerning human health-related **behavior** in a variety of circumstances and environments.

- Research involving human subjects may employ either **observation** or physical, chemical or psychological **intervention**;
- it may also either generate **records** or make use of existing records containing biomedical or other information about individuals who may or may not be identifiable from the records or information.

# ***Guideline 1: Ethical justification and scientific validity of biomedical research involving human beings***

- The ethical justification of biomedical research involving human subjects is the **prospect of discovering** new ways of benefiting people's health.
- Such research can be ethically justifiable **only** if it is carried out in ways that **respect and protect**, and are fair to, the subjects of that research and are morally acceptable within the communities in which the research is carried out.
- Moreover, because scientifically invalid research is unethical in that it exposes research subjects to risks without possible benefit, investigators and sponsors must ensure that proposed studies involving human subjects conform to generally accepted scientific principles and are based on adequate knowledge of the pertinent scientific literature.

## ***Guideline 2: Ethical review committees***

- All proposals to conduct research involving human subjects must be submitted for review of their scientific merit and ethical acceptability to one or more scientific review and ethical review committees.
- The review committees must be independent of the research team, and any direct financial or other material benefit they may derive from the research should not be contingent on the outcome of their review.
- The investigator must obtain their approval or clearance before undertaking the research. The ethical review committee should conduct further reviews as necessary in the course of the research, including monitoring of the progress of the study.

## ***Guideline 3: Ethical review of externally sponsored research***

- **An external sponsoring organization and individual investigators should submit the research protocol for ethical and scientific review in the country of the sponsoring organization, and the ethical standards applied should be no less stringent than they would be for research carried out in that country.**
- **The health authorities of the host country, as well as a national or local ethical review committee, should ensure that the proposed research is responsive to the health needs and priorities of the host country and meets the requisite ethical standards.**

## ***Guideline 4: Individual informed consent***

- For all biomedical research involving humans the investigator must obtain the voluntary informed consent of the prospective subject or, in the case of an
- individual who is not capable of giving informed consent, the permission of a legally
- authorized representative in accordance with applicable law.

- Informed consent is a decision to participate in research,
  - taken by a competent individual who has
  - received the necessary information;
  - who has adequately understood the information; and
  - who, after considering the information,
  - has arrived at a decision
  - without having been subjected to
    - coercion,
    - undue influence or inducement,
    - or intimidation.



## ***Guideline 5: Obtaining informed consent: Essential information for prospective research subjects***

- **Before requesting an individual's consent to participate in research, the investigator must provide the following information, in language or another form of communication that the individual can understand:**
  - **1. that the individual is invited to participate in research, the reasons for considering the individual suitable for the research, and that participation is voluntary;**

- 2. that the individual is free to refuse to participate and will be free to withdraw from the research at any time without penalty or loss of benefits to which he or she would otherwise be entitled;
- 3. the purpose of the research, the procedures to be carried out by the investigator and the subject, and an explanation of how the research differs from routine medical care;

- 4. for controlled trials, an explanation of features of the research design (e.g., randomization, double-blinding), and that the subject will not be told of the assigned treatment until the study has been completed and the blind has been broken;
- 5. the expected duration of the individual's participation (including number and duration of visits to the research centre and the total time involved) and the possibility of early termination of the trial or of the individual's participation in it;

- 6. whether money or other forms of material goods will be provided in return for the individual's participation and, if so, the kind and amount;
- 7. that, after the completion of the study, subjects will be informed of the findings of the research in general, and individual subjects will be informed of any finding that relates to their particular health status;

- 8. that subjects have the right of access to their data on demand, even if these
- data lack immediate clinical utility (unless the ethical review committee has
- approved temporary or permanent non-disclosure of data, in which case the
- subject should be informed of, and given, the reasons for such nondisclosure);

- **9. any foreseeable risks, pain or discomfort, or inconvenience to the individual (or others) associated with participation in the research, including risks to the health or well-being of a subject's spouse or partner;**

- 10. the direct benefits, if any, expected to result to subjects from participating in the research
- 11. the expected benefits of the research to the community or to society at large, or contributions to scientific knowledge;

- **12. whether, when and how any products or interventions proven by the research to be safe and effective will be made available to subjects after they have completed their participation in the research, and whether they will be expected to pay for them;**
- **Others.....**



## ***Guideline 6: Obtaining informed consent: Obligations of sponsors and investigators***

- **Sponsors and investigators have a duty to:**
  - **refrain from unjustified deception, undue influence, or intimidation;**
  - **seek consent only after ascertaining that the prospective subject has adequate understanding of the relevant facts and of the consequences of participation and has had sufficient opportunity to consider whether to participate;**

# *Guideline 7: Inducement to participate*

- Subjects may be reimbursed for lost earnings, travel costs and other expenses incurred in taking part in a study; they may also receive free medical services.
- Subjects, particularly those who receive no direct benefit from research, may also be paid or otherwise compensated for inconvenience and time spent.
- The payments should not be so large, however, or the medical services so extensive as to induce prospective subjects to consent to participate in the research against their better judgment ("undue inducement").
- All payments, reimbursements and medical services provided to research subjects must have been approved by an ethical review committee.

## ***Guideline 8: Benefits and risks of study participation***

- **For all biomedical research involving human subjects, the investigator must ensure that potential benefits and risks are reasonably balanced and risks are minimized.**

***Guideline 9: Special limitations on risk when research involves individuals who are not capable of giving informed consent***

- **When there is ethical and scientific justification to conduct research with individuals incapable of giving informed consent, the risk from research interventions that do not hold out the prospect of direct benefit for the individual subject should be no more likely and not greater than the risk attached to routine medical or psychological examination of such persons.**

# ***Guideline 11: Choice of control in clinical trials***

- **As a general rule, research subjects in the control group of a trial should receive an established effective intervention.**
- **In some circumstances it may be ethically acceptable to use an alternative comparator, such as placebo or "no treatment".**

- **Placebo may be used:**
  - • when there is no established effective intervention;
  - • when withholding an established effective intervention would expose subjects to, at most, temporary discomfort or delay in relief of symptoms;
  - • when use of an established effective intervention as comparator would not yield scientifically reliable results and use of placebo would not add any risk of serious or irreversible harm to the subjects.

***Guideline 12: Equitable distribution of burdens and benefits in the selection of groups of subjects in research***

- **Groups or communities to be invited to be subjects of research should be selected in such a way that the burdens and benefits of the research will be equitably distributed.**
- **The exclusion of groups or communities that might benefit from study participation must be justified.**

## ***Guideline 13: Research involving vulnerable persons***

- **Special justification is required for inviting vulnerable individuals to serve as research subjects and, if they are selected, the means of protecting their rights and welfare must be strictly applied.**



# ***Guideline 14: Research involving children***

- **Before undertaking research involving children, the investigator must ensure that:**
  - • the research might not equally well be carried out with adults;
  - • the purpose of the research is to obtain knowledge relevant to the health needs of children;
  - • a parent or legal representative of each child has given permission;
  - • the agreement (assent) of each child has been obtained to the extent of the child's capabilities; and,
  - • a child's refusal to participate or continue in the research will be respected.

*Guideline 15: Research involving individuals who by reason of mental or behavioural disorders are not capable of giving adequately informed consent*

- **the investigator must ensure that:**
  - such persons will not be subjects of research that might equally well be carried out on persons whose capacity to give adequately informed consent is not impaired;
  - the purpose of the research is to obtain knowledge relevant to the particular health needs of persons with mental or behavioural disorders;

- **the consent of each subject has been obtained to the extent of that person's capabilities, and a prospective subject's refusal to participate in research is always respected,**
- **in cases where prospective subjects lack capacity to consent, permission is obtained from a responsible family member or a legally authorized representative in accordance with applicable law.**

## ***Guideline 16: Women as research subjects***

- **Investigators, sponsors or ethical review committees should not exclude women of reproductive age from biomedical research.**
- **The potential for becoming pregnant during a study should not, in itself, be used as a reason for precluding or limiting participation.**

- **However, a thorough discussion of risks to the pregnant woman and to her fetus is a prerequisite for the woman's ability to make a rational decision to enrol in a clinical study**
- **In this discussion, if participation in the research might be hazardous to a fetus or a woman if she becomes pregnant, the sponsors/ investigators should guarantee the prospective subject a pregnancy test and access to effective contraceptive methods before the research commences.**

# **Guideline 17: Pregnant women as research participants.**

- **Pregnant women should be presumed to be eligible for participation in biomedical research.**
- **Investigators and ethical review committees should ensure that prospective subjects who are pregnant are adequately informed about the risks and benefits to themselves, their pregnancies, the fetus and their subsequent offspring, and to their fertility.**

- **Research in this population should be performed only if it is relevant to the particular health needs of a pregnant woman or her fetus, or to the health needs of pregnant women in general,**
- **and, when appropriate, if it is supported by reliable evidence from animal experiments, particularly as to risks of teratogenicity and mutagenicity .**

## ***Guideline 18: Safeguarding confidentiality***

- **The investigator must establish secure safeguards of the confidentiality of subjects research data.**
- **Subjects should be told the limits, legal or other, to the investigators' ability to safeguard confidentiality and the possible consequences of breaches of confidentiality.**



## ***Guideline 19: Right of injured subjects to treatment and compensation***

- **Investigators should ensure that research subjects who suffer injury as a result of their participation are entitled to free medical treatment for such injury and to such financial or other assistance as would compensate them equitably for any resultant impairment, disability or handicap.**
- **In the case of death as a result of their participation, their dependants are entitled to compensation. Subjects must not be asked to waive the right to compensation.**

## ***Guideline 20: Strengthening capacity for ethical and scientific review and biomedical research***

- Many countries lack the capacity to assess or ensure the scientific quality or ethical acceptability of biomedical research proposed or carried out in their jurisdictions.
- In externally sponsored collaborative research, sponsors and investigators have an ethical obligation to ensure that biomedical research projects for which they are responsible in such countries contribute effectively to national or local capacity to design and conduct biomedical research, and to provide scientific and ethical review and monitoring of such research.

- **Capacity-building may include, but is not limited to, the following activities:**
  - • **establishing and strengthening independent and competent ethical review processes/ committees**
  - • **strengthening research capacity.**
  - **developing technologies appropriate to health-care and biomedical research**
  - • **training of research and health-care staff**
  - • **educating the community from which research subjects will be drawn**

## ***Guideline 21: Ethical obligation of external sponsors to provide health-care services***

- **External sponsors are ethically obliged to ensure the availability of:**
  - – health-care services that are essential to the safe conduct of the research;
  - – treatment for subjects who suffer injury as a consequence of research interventions; and,
  - – services that are a necessary part of the commitment of a sponsor to make a beneficial intervention or product developed as a result of the research reasonably available to the population or community concerned.

