



# Research Involving Vulnerable Subjects : Ethical Aspects

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# History of Research Misconduct

Medical research during the Second World War: study subjects were abandoned suffering until death

Josef Mengele took the lives of children back then under the shadow of 'science'

- Bacteria were inserted into children's body to see if they caused disease → children were left ill and died
- Research on twins: twins were killed, observation was made to figure organ differences



# The Nuremberg Code

- After the Second World War ended

American judges

Nuremberg code

- Informed consent of the human subject is absolutely essential



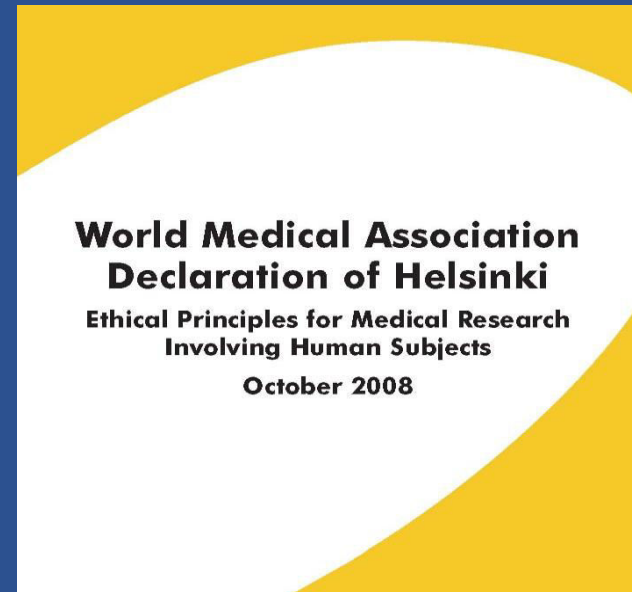
Valid only if the subject has the “capacity”

- Forbids using children as study subjects



# The Declaration of Helsinki

- 1964 The World Medical Association (WMA) set ethical principles regarding human experimentation
- Started to permit research on vulnerable subjects
- Introducing the terms of “Consent” and “Assent”



# The Tuskegee Study (1932-1972)

- Study on black African-American men in Alabama (400 subjects)
- They were told suffered from “Bad Blood”
- To see the pathogenesis of syphilis
- 1947: Discovery of Penicillin
- 1974: The Associated Press



Belmont report :

1. Respect for person
2. Beneficence and non maleficence
3. Justice

# “Respect for person” as described on “information sheet”:

- Explain the reason why the subject is suitable for the study
- Explain the aim of the study clearly (no element of disguise)
- Explain the detailed procedure
- Everything in appropriate language, easy to understand
- Explain the benefits of study for the society (direct and indirect)
- Whether compensation for the subject is given
- Whether there will be risk or discomfort for the subject

# What does “vulnerable subjects” mean?

- vulnerable subjects is subject having no ability to defend his/herself or such ability is taken
- vulnerable subject is more vulnerable to harm, (intentional or non intentional)

# Who belong to the group of “vulnerable subjects”?

- Children
- Pregnant women
- Those with cognitive function impairment
- Unconscious person
- Prisoner

## Special population in research

- Students
- Workers



# Why are they so-called vulnerable?

- Children are not yet developed in decision making
- Pregnant women: Risk carried for the baby
- Unconscious / person with cognitive impairment: impaired ability to understand information given
- Prisoner : they institutionally have no choice without the influence of force or persuasion

# Study with Children as Participants

- vulnerable ← limited intellectual and emotional ability

↓  
Not competent to give consent  
according to law

- Research on children
  - Serious ethical issue

↑  
Low autonomy and competence

- Limiting research on children is also not appropriate
  - The emerging need of finding new treatment method
  - Prevention

# US National Committee: Recommendation on Research Involving Children as Subjects

- Study is scientifically sound
- Previously conducted on experimental animal, adult, and older children
- Minimizing risk by conducting safe procedures
- Keeping children and parents' confidentiality
- Subjects are chosen in a fair manner

## Under what circumstances shall consent be given from either parent or both parents?

- Do the study procedures result in more than just minimal risks?
- Is the study directly beneficial for the children?

- Consent from one parent is sufficient if:
  - Study does not exceed minimal risks, or
  - Exceeds minimal risks but directly beneficial for the child

“Minimal risks” and “Direct benefit”?

- Minimal risk refers to the probability or the amount of risks, discomfort or harm arising, exceeding daily, normal events

Parents' consent required for involving children as study subjects are then classified according to the degree of risk and type of subject:

1. Study with minimal risk:

Consent from at least one parent

Child consent (if  $\geq 7$  years old) is required

2. Study exceeding minimal; risks, however, direct benefit is present:

Consent from at least one parent

Child consent (if  $\geq 7$  years old) is required

Ethical committee

3. Study exceeding minimal risks, no direct benefit is present, but scientifically beneficial:

Consent from both parents

Child consent (if  $\geq 7$  years old) is required

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4. Study with possible health and well being loss:

Consent from both parents

Child consent (if  $\geq 7$  years old) is required

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Rarely approved

Not requiring parental consent: Abandoned or harassed children

# Child's Consent

- At least 7 years of age
- Informed Consent sheet is arranged in understandable writing depending on child's age
  - Large writing
  - Easy scheme
  - Pictures
  - Two types of informed consent paper
  - For children 13-17 years of age, signature on separate paper might be required (Assent)



- **Study on pregnant women**

- Possible risk or harm to the fetus
- Previous safety assurance on non pregnant women and animal

**Ethical committee might approve the study on pregnant women if:**

Pre clinical study, including on pregnant animal is available

Fetal risks are taken care of

If there is no direct benefit, the risk to the fetus does not exceed the minimal risk and the study is beneficial for biomedical research not replaceable by other study

There is no intention nor procedure to terminate pregnancy

# Students and Workers

- Autonomy
- Pressure under certain circumstances: the researchers are the subjects superiors (lecturers, employer)
- Researcher (lecturer, employer) better not directly ask their participant to participate
- Keep things objective and confidential
- Insurance
- Never associate anything with ‘credits’

# Summary

- Study on vulnerable subjects aim to improve their health
- Clinical study on vulnerable subjects is required due to inavailability of replacing other subjects
- Knowledge on vulnerable subjects' health and biology is achieved only through research
- A good research planning is necessary for conducting research on vulnerable subjects



**Thank  
You**