



Balancing Risks and Benefits in Ethics Review

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Concepts of Risks and Potential Benefits

POTENTIAL BENEFITS

- Research involving humans may produce benefits that positively affect the welfare of society as a whole through the advancement of knowledge for future generations, for participants themselves or for other individuals.

Concepts of Risks and Potential Benefits

RISKS

- Risk is a function of the **magnitude or seriousness of the harm**, and the **probability or likelihood that it will occur**, whether to participants or to third parties.
- ***Harm*** is anything that has a negative effect on the welfare of participants, and the nature of the harm can be physical, psychological, social and economic.

Risks: Types of Risk

- **Physical**- minor discomfort or pain, bodily harm, potentially serious or disabling, transient or permanent
- **Psychological**- embarrassment, stress, loss of dignity, confusion, depression
- **Social**- loss of confidentiality, loss of social status, threat to privacy, harassment
- **Economic**- threat to employment, insurability and insurance costs

Concepts of Risks and Potential Benefits

- Risks and benefits
 - Risks: immediate, measurable
 - Benefit: future, potential
- The analysis, balance, and distribution of risks and potential benefits are critical to the ethics of research involving humans.

Balancing Risks and Benefits in Ethics Review

- The main responsibility of an IRB is to protect the RIGHTS and WELFARE of human subjects in research.
- In their review, RECs should be concerned with an assessment that the potential **research outcomes** and **potential benefits** merit the risks.

Guidelines

- The degree of risk to be taken **should never exceed** that determined by **the humanitarian importance of the problem to be solved** by the experiment (Nuremberg)
- **Risks** to the subjects must **be reasonable in relation to anticipated benefits**, if any, to subjects, and the importance of the knowledge that may reasonably be expected to result (45 CFR 46.111a)

Balancing Risks and Benefits in Ethics Review

- Belmont Report:
 - ✓ Respect for Persons
 - ✓ Beneficence
 - ✓ Justice

The **benefits** of a research intervention might be **enhanced** by providing research participants with results of the intervention that are relevant to their clinical care.

Risk Assessment

Risk level is determined by the IRB

- A proper ethical analysis of research should consider both the foreseeable risk and the available methods of *eliminating or mitigating the risk*.
- Once it has been determined that there is good reason to include a given intervention, and the benefits of the intervention have been enhanced and its risks reduced, *RECs need a method for assessing the acceptability of the risks of the intervention*.

Risk Assessment

**For research to be exempt from IRB review it MUST be minimal risk*

MINIMAL RISK: where the probability and magnitude of harm or discomfort anticipated in the proposed research are **not greater**, in and of themselves, **than those ordinarily encountered in daily lives** of the general population or during the performance of routine physical or psychological examination or test.

Risk Assessment

Significant/Non-significant Risk

- FDA Device studies rules: Significant risk is when there is a potential serious risk to health of subject and the device is
 - An implant
 - Used in supporting/sustaining life
 - Important to diagnose, mitigate, or treat disease or prevent impairment of human health
- Otherwise: Non-significant

Risk Assessment

- Minimal risk research should normally receive expedited review and aboveminimal risk research shall receive full REC review.
- Regardless of the level of review selected, ***the review should include the necessary expertise.***

Risk Assessment

- Separate risks of research from standard of care risks the participants would receive even if not participating in research.
- Review potential risks, discomforts, hazards, or inconveniences of protocol
 - Probability, magnitude, duration, reversibility of risks

Risk – Benefit Assessment

- Give special consideration to risks for research involving vulnerable populations.
 - *Their inclusion in research should not exacerbate their vulnerability.*
- Consider hoped for benefits – for whom, in what form
- Consider if risks reasonable in relation to possible benefits

Risk – Benefit Assessment

- Potential participants should be provided with an accurate and fair description (during *consent*) of the risks or discomforts and the anticipated benefits.

To determine balance consider type of risk

– Physical, psychological, social, economic

Risk Assessment in Protocol Review

Scientific Review

- Rationale, Objectives, Research Design, Number of Subjects, Randomisation, Inclusion exclusion criteria, etc.

Identify and minimize risks as much as possible by using procedures that are consistent with sound research design.

Risk Assessment in Protocol Review

Ethical Review

- Risk /benefit ratio, Privacy & confidentiality, Subject Protection, Equitable selection, Investigator qualifications, COI management, Recruitment materials, Compensation

Balancing Risks and Benefits in Ethics Review

Uncertainty in risk judgments should make the REC member ask whether he/she or a family member would participate in the project.

The proportionate approach to REC review requires that a project have a ***favourable balance of risks and benefits in order to receive REC approval.***

