การประเมินความเสี่ยงและคุณประโยชน์

Risk & Benefit Assessment

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The Belmont Report (1979)

Basic Ethical Principles:

- Respect for Persons
- Beneficence
- Justice

Principle of Beneficence

- Balancing between risks and benefits
- Minimizing harm
- Maximizing benefits

Benefit

The term "benefit" is refer to something of positive value related to health or welfare

Benefit Assessment

Potential Benefit

- **Physical benefits**
  - Improvement of disease
- **Psychological benefits**
  - Comfort from suffering
  - Feeling of helping others in the future
- **Economic benefits**
  - Financial benefits related to research participation?
- **Benefits to science/society**
  - Generalizable knowledge
  - Effective interventions in the future
  - Change in practice

Benefit

- **To participants**
  - Benefit of being in the research project itself
  - Benefit of (free) medical care/obtaining a new promising treatment
- **To others**
  - New knowledge
  - Community

Maximizing Benefits

- Communication of study results to individuals and communities
- Provision of health care or referral system
- Training of local health personnel
- Technology transfer
- Compensation to participants and staff
- Access to drugs

Risk

- Three steps
  - Risk identification
  - Risk assessment
  - Risk minimization

Risk identification

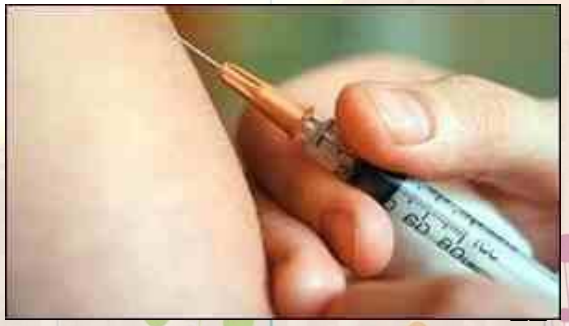
Physical Risks	Psychological Risks	Social Risks	Economical Risks	Legal Risks
Pain	Stress	Stigmatization	Financial cost	Prosecution
Injury	Anxiety	Harassment	Loss of income	Criminal liability
Discomfort	Depression	Discrimination	Job loss	Arrest
Illness	Embarrassment	Confidentiality		
	Guilt	Privacy		

Assessment of risks

- **Magnitude (severity) and duration of harm**
  - **Death**
  - **Slight discomfort**
- **Probability of harm (the chance)**
  - **Sometimes difficult to specify exactly**
- **Permanency**

Minimal risk

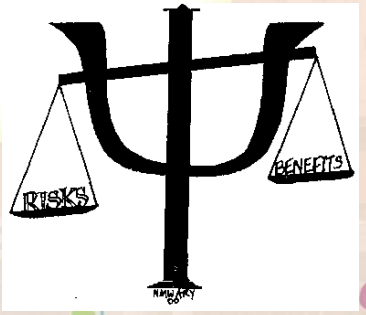
“ The probability and magnitude of harm or discomfort anticipated in the research are not greater than those ordinarily encountered in daily life or during routine performance of physical or psychological examination or tests.”



Risks & Benefit Assessment of EC

Elements for considerations

- Topic of research
- Investigators, settings, facilities
- Study design and methodology
- Subject selection
  - Inclusion/Exclusion criteria
- Intervention
  - Beneficial/Non-beneficial
- Safeguard to minimized risks
- Informed consent and recruitment
- Privacy and confidentiality



Topic of Research

- Identify
  - Sensitive issues e.g. HIV, genetic, psychological issue
  - Vulnerable populations
  - High risk intervention
  - Placebo-controlled trials
  - Outcomes of study : death, serious harm

ทบทวนผู้วิจัย

- พื้นฐานอาชีพหรือประสบการณ์การทำงานของผู้วิจัย (ICH GCP 2.8)
- การเปิดเผยการมีส่วนได้ส่วนเสีย (Conflict of interest) ของผู้วิจัย
- การศึกษาทางคลินิกของผู้วิจัยที่ไม่ใช่แพทย์ ต้องมีแพทย์หรือทันตแพทย์เป็นผู้วิจัยร่วม (ICH GCP 2.7)

Study design and methodology

By using procedures which are consistent with research design and which do not unnecessarily expose subjects to risk.

Subject selection

- Inclusion and exclusion criteria
  - Appropriate?
  - Exclude subjects at risk?
  - Vulnerability addressed?
  - Fair selection of subjects?

Subject selection

Recruitment Issues

1. How does a researcher gain access to a database of probable research participants?
2. What recruitment methods are used?

– Personal contact
– Recruiters
– Power relationships between researcher and participants (Coercion/Undue Inducement)

Intervention

- Beneficial
  - hold out the prospect of direct therapeutic benefit
- Non-beneficial
  - solely to answer the research question

- Beneficial interventions are justified as they are in medical practice by the expectation that they will be at least as advantageous to the individuals concerned, in the light of both risks and benefits, as any available alternative.

- Non-beneficial interventions are assessed differently; they may be justified only by appeal to the knowledge to be gained.
  - Minimal risk: acceptable
  - Slight or minor increases above minimal risk (no internationally agreed)

Safeguard to minimized risks

I. Identify mechanism to minimize risk

- Excluding subjects at higher risk of clinical deterioration
- Shortest trial duration necessary to test study hypothesis
- Rescue medications available in response to symptom exacerbation
- Discontinuation/termination criteria
- Quality control
- Disclosure of conflict of interest

Safeguard to minimized risks

II. Monitoring Risks

- Careful procedures or diagnostic test for monitoring Adverse Events (AE) reporting system
- Progress report for continuing review
- Feedback from research participants

Adverse Event (AE)

(เหตุการณ์ไม่พึงประสงค์)

- เหตุการณ์ซึ่งเกิดกับผู้ป่วยหรืออาสาสมัครที่เข้าร่วมการวิจัยทางคลินิก หลังจากได้รับผลิตภัณฑ์
- ไม่จำเป็นต้องสัมพันธ์กับยาที่ได้รับ
- อาการหรือโรคที่เกิดขึ้นเมื่อใช้ยาวิจัยไม่ว่าเหตุการณ์นั้นจะเกี่ยวข้องกับยาวิจัยที่ใช้หรือไม่ก็ตาม

Confidentiality Protection

- Recognize confidentiality issues in
  - Initial study design
  - Identification, recruitment and consent processes for the study population
  - Security, analysis and final disposition of data
  - Publication or dissemination of data and results

Risk Category

Category 1 – Research not involving greater than minimal risk.

Category 2 – Research involving greater than minimal risk but presenting the prospect of direct benefit to the individual subjects.

Category 3 – Research involving a minor increase over minimal risk and no prospect of direct benefit to individual subjects.

Category 4 – Research not fitting into categories 1 through 3, i.e., more than a minor increase above minimal risk, and no benefit.

Conclusion

- It is the responsibilities of researcher, EC, sponsor, and institution
- Study with no scientific validity or social value cannot justify exposing participants to risks, no matter how low
- A study should be continued only if the anticipated benefits justify the risks
- The level of cumulative (aggregate) risk should not be excessive
- Brutal or inhumane interventions are never morally justified

Thank You