

Ethical and Policy Issues in Selecting Oversight Frameworks for Gain-of-Function Studies

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Research Governance

- *Governance*. The broad range of regulations, principles, standards of good practice that exist to promote a particular policy end:
 - ban/prohibit
 - permit/enable
 - promote/encourage
- *Research governance*: those instruments that can:
 - **enable research** to occur (researchers need to know the rules)
 - **enable oversight**, monitoring and assurance of compliance with accepted requirement (sponsors, regulators, society want assurance the rules are followed)

Goals and Types of Governance

- Goal: Protection of human subjects
 - All types of clinical trials, surveys, genomic studies, public health interventions, comparative effectiveness studies...
- Types
 - Institutional Review Boards
 - Data Safety Monitoring Boards
 - Biosafety committees
 - Privacy committees
 - rDNA Advisory Committee
- Source/Framework
 - The Belmont Report; 45 CFR 46; 21 CFR 50/51; Helsinki; CIOMS, ICH...

Goals and Types

- Goal: Enable high quality, benefit-maximizing research*
 - Clear rules, less misinterpretation
- Types
 - Scientific peer review through the grant review process
 - Journal peer review and publication
 - Appropriations decisions by government sponsors
 - Annual reviews by sponsors
- Source/Framework
 - Professional standards; ICMJE; appropriations/authorization language

*vs. curiosity-driven research

Goals and Types

- Goal: Assure public health/safety
 - Domestic and international
 - Food safety, drug safety
- Types
 - Post-marketing pharmacovigilance by clinicians, FDA, pharmaceutical companies
 - WHO Global Outbreak Alert and Response Network; International Health Regulations; Global Influenza Surveillance Network
 - rDNA advisory committee
 - Laboratory certification requirements
- Source/Framework
 - State public health law; international declarations/commitments

Principles, Values and Norms

Substantive

- Non-maleficence
- Precaution
- Proportionality
- Reciprocity
- Fair benefits
- Academic freedom
- Contribution to knowledge
- Reputation, status

Procedural

- Prior agreements
- Responsiveness
- Transparency
- Uniformity of implementation

How to Decide How to Decide (on the framework)

- **Comprehensive** framework will cover more, but will take longer to achieve (see Common Rule) story.
- **Protectionist** framework (protecting human subjects, protecting the public, protecting facilities) will reduce risks of harm, but will affect cost and pace of science progress
- **Binary** framework (e.g., fund or don't fund) sets a clear bar but lacks adaptive, responsive need

Summary Points

- Incommensurability problem: different governance goals, different types of governance
- Unlike the biomedical research governance environment, where minimizing risk to human subjects is the primary governance emphasis, GoF governance emphasizes public health, social and political
- Conflict vs. confluence of interests need to be acknowledged