The National Academies of SCIENCES ENGINEERING MEDICINE

GULF RESEARCH PROGRAM

Gulf Research Program – Frequently Asked Questions: Human Subjects Research & Institutional Review Board (IRB)

This document is designed to illustrate responsible conduct for human subjects research and to provide a brief overview of Institutional Review Board (IRB)[1] protections. The document is not exhaustive, and simply provides basic background information on IRB and confidentiality protocols. Links to sources and additional information are provided at the end of the document.

Contents

What is human subjects research?

As defined in federal regulations (see "What is an IRB" below), "human subjects" are living individuals "about whom an investigator (whether professional or student) conducting research obtains (1) Data through intervention or interaction with the individual, or (2) Identifiable private information." An example of an intervention is a clinical trial of alternative drug treatments; an example of an interaction is a survey. Secondary analysis with identifiable private information also constitutes human subject research.

"Research" means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge." Program evaluation, in which the results are intended for use in improving a program and not to be published in the research literature, is generally not "research" as defined in the regulations.

[1] An Institutional Review Board (IRB), or research ethics committee, provides core protection for human research participants through advance and periodic independent review of the ethical acceptability of proposals for human research. (Grady, 2015)

However, such evaluation needs to follow good human subjects research practices with regard to obtaining informed consent, protecting confidentiality, etc.

What sorts of harm can arise from human subjects research?

Some typical examples of harms that can arise from human subjects research include:

Harms commensurate with daily life (these do not require special protection):

- *Mere inconvenience* when a survey or other research interaction is administered at an inconvenient time or place or simply takes a long time to administer.

Harms that have the potential for serious effects, which IRBs should examine:

- *Emotional or psychological harm*, for example, when a research interaction causes upset, or worry about breach of confidentiality.
- *Social harm* due to stigma or other negative social outcomes of breach of confidentiality.
- *Physical harm* if revelations about others get back to those persons, particularly when researchers study domestic violence, gang activity, political activity in a conflict zone, or other phenomena concerning violence-prone individuals.
- *Financial harm* if revelations result in loss of employment or insurance coverage.
- *Legal harm* when illegal activities are disclosed.
- *Moral harm* when participation in research strengthens subjects' inclinations to behave unethically.

What is an IRB?

The Institutional Review Board (IRB) is an administrative body established to protect the rights and welfare of human research subjects recruited to participate in research activities conducted under the auspices of the institution with which it is affiliated.
The IRB is charged with the responsibility of reviewing, prior to its initiation, all research (whether funded or not) involving human participants. The IRB is concerned with protecting the welfare, rights, and privacy of human subjects. (Oregon State, 2019)

Federal regulations give the IRB the authority to: approve, disapprove, or modify research; conduct continuing reviews; observe and verify changes to research; suspend or terminate approval; and observe the consent process and the research procedures.

Three core principles serve as the foundation for regulations and guidelines. They are: respect for persons, beneficence, and justice. The application of these principles occurs through informed consent,[2] assessment of risks and benefits, and selection of subjects.

Every institution that receives federal funding for research with human subjects must establish an IRB "in accord with and for the purposes expressed in" Title 45 Code of Federal Regulations (CFR) Part 46. This set of regulations includes four subparts. Subpart A, better known as "the Common Rule," describes the required protections for all human subjects and provides the overall rule of ethics in the United States for research involving human subjects. Subparts B-D provide additional protections for pregnant women, human fetuses, neonates, prisoners, and children. The regulations do not specify additional protections for other vulnerable groups (e.g., mentally disabled, economically/educationally disadvantaged), but they do require investigators to include additional safeguards in projects to protect their rights and welfare "when some or all of the subjects are likely to be vulnerable to coercion or undue influence." (45 CFR 46.111)

When does a project need IRB review?

A project needs IRB review if there is systematic collection of quantitative or qualitative information that is intended to contribute to generalizable knowledge *and* the project involves human subjects. IRBs are to evaluate all protocols based on consideration of: (1) risk to subjects; (2) adequacy of protection against these risks; (3) potential benefits of the research to the subjects and others; and (4) importance of the knowledge gained or to be gained.

If the research involves human subjects, it will be reviewed at one of three levels: 1) full board review, 2) expedited review, and 3) exempt review. Federal regulations describe categories of human subjects research that may be exempt from regulatory requirements, including IRB oversight. However, *the authority to determine if research is exempt should rest with the IRB or another entity officially designated by the institution (i.e., a researcher may not "self-exempt" their study from IRB).* That is, all research involving human subjects should be reviewed by an IRB or officially designated entity to determine if it is approved, disapproved, needs modification or is exempt. The level of oversight for a project should be matched to the level of risk to human subjects.

[2] Informed consent is "a legally-effective, voluntary agreement that is given by a prospective research participant following comprehension and consideration of all relevant information pertinent to the decision to participate in a study." (National Institutes of Health) Written consent can be waived and oral or implicit consent given under some circumstances (e.g., an online or mail survey, in which the respondent is free to respond or not and response can be taken to indicate consent).

For the GRP, all projects involving human subjects must be submitted to an institutional review board (IRB) for review and either receive IRB approval or be granted exemption from human subjects regulations before an award can be made. Applicants should file their proposal with their IRB[3] at the same time the proposal is submitted to the Gulf Research Program so that any approval procedure determined as necessary will not delay the award process. A proposal may be submitted to the Gulf Research Program prior to receiving IRB approval or being granted exemption; however, if the proposal is selected for funding, the award will be made conditional upon IRB granting approval or exemption from human subjects regulations within 60 days of the notice of conditional award. If the project involves research on human subjects, Grantee shall comply with the Department of Health and Human Services (DHHS) Regulations (Title 45 Code of Federal Regulations Part 46) regarding the protection of human research subjects, unless that research is exempt as specified in the regulation.

If a proposed project involving human subjects is granted exemption from human subjects regulations [see 45 CFR 46.104], the applicant must provide documentation that an IRB (or the appropriate authority other than the project director or key personnel) has declared the project exempt from the human subjects regulations. Documentation should include the specific category justifying the exemption. Organizations without internal access to an IRB must seek approval or exemption from an independent review board or other appropriate authority (see "What happens if my institution does not have an IRB" section below).

An example of human subjects research could include research about classroom activities and exercises that are intended to lead to published results, be presented at a professional meeting, or are designed to advance generalizable knowledge for educational programs. Some examples of projects that *may* be exempt from IRB include questionnaires, tests, and interview-based studies, *unless* individual human subjects can be directly identified or identified through personal information linked to them (e.g., names, phone numbers, addresses) and disclosure of their responses could place them at risk of criminal/civil liability or damage their financial standing, employability, or reputation. (NSF)

What happens if my institution does not have an IRB?

According to federal regulations, all human subjects research must be reviewed and/or overseen by an IRB or ethics committee, regardless of where the research is conducted. Investigators at institutions without IRBs can: (1) not conduct human subjects research, (2) limit research studies to those that can be classified as "non-research" or "non-human subject," or (3) find and work with an IRB or ethics committee to review and approve their research.

[3] This may be the IRB of the applicant's institution or an IRB that the applicant has acquired to be the IRB or record (see "What happens if my institution does not have an IRB" section).

Investigators lacking an IRB can either undertake the process of starting one at their institution, use an external/commercial IRB (sometimes referred to as an Independent Review Board), or partner with an institution that has an IRB that is willing to serve as the IRB of record for the study. (Rice 2008)

What happens if/when IRB regulations are not followed?

During GRP's conditional awarding of grants, proof of IRB approval or exemption is a requirement. Funding may be withheld if IRB approval or exemption is not provided.

If GRP awards a grant to a project director/institution who indicated they were not carrying out human subjects research, but are found to be conducting human subjects research, GRP could consider that a material failure to comply with the terms and conditions of the grant. In such a case, GRP could terminate the grant for cause and require repayment. In addition, since grantees are solely responsible for any liabilities that may arise in connection with the performance of a grant, if the impermissible human subjects research resulted in a claim against GRP, the grantee could potentially be obligated to indemnify GRP for costs related to that claim.

Furthermore, the HHS Office of Human Research Protection is responsible for enforcing compliance with the regulations. If IRB regulations are not followed, consequences could include: suspension of the research project or of all of a primary investigator's research projects; inability to use or publish research results; notification of noncompliance to sponsors, regulatory agencies, and funding agencies; inability to receive federal funding; additional monitoring and oversight by the IRB; termination of employment; loss of licenses; and/or immediate shutdown of all research at an organization/institution (45 CFR 46; Rutgers).

References, Additional Web Links, and Resources

Additional resources about IRB policies and procedures (including sources used to assemble this document) are available on the following websites:

- Health and Human Services Office for Human Research Protections
    - Human Subject Regulations Decision Charts
    - IRBs and Assurances
- National Institutes of Health
- National Science Foundation
    - Frequently Asked Questions & Vignettes
- Oregon State University Office of Research Integrity
- Rutgers University Office of Research Regulatory Affairs - eIRB

Federal Committee on Statistical Methodology, Confidentiality and Data Access Committee (CDAC). 2018. CDAC: Resources for Confidentiality and Data Access Information.

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