

When the research use of human biological specimens, tissues, or bodily fluid samples constitutes involvement of 'human subjects', in whole or in part, the activity is subject to policies for protecting the rights, safety and welfare of research participants. In accordance with OHRP guidance, the IRB retains the final authority to determine the involvement of human subjects in such projects.

1.0 Prospective collection:

Prospective collection of biological specimens for research constitutes involvement of human subjects, and requires IRB review as well as informed consent, unless the IRB approves a waiver of the requirement. However, the prospective nature of the collection would usually involve an opportunity to approach the donor(s), and seek their consent for research purposes. If the research would involve no more than minimal risk, it may qualify for expedited review, otherwise it would be reviewed at a convened meeting of the IRB. This would include use of:

- Specimens that will be collected as part of a research study, or
- Left-over or excess samples that will be collected during the course of medical care, or for other, non-research purposes

2.0 Retrospective collection:

Research use of biological specimens that are already in existence ('on-the-shelf'), and were collected for a purpose other than the proposed research may or may not constitute involvement of human subjects. *As the IRB has the final authority to make this determination, a protocol is required to be submitted for any research use of human specimens from living individuals.*

2.1 No human subjects involved. Obtaining coded or identified pre-existing specimens for research use **would not** constitute involvement of human subjects if:

- the research only involves the coded or identified specimens
- the investigator(s) cannot readily ascertain the identity of the individual(s) to whom the coded private information or specimens pertain because, for example:
 - the key to decipher the code is destroyed before the research begins;
 - the investigators and the holder of the key enter into an agreement prohibiting the release of the key to the investigators under any circumstances, until the individuals are deceased;
 - there are IRB-approved written policies and operating procedures for a repository or data management center that prohibits the release of the key to the investigators under any circumstances, until the individuals are deceased;
 - or
 - there are other legal requirements prohibiting the release of the key to the investigators, until the individuals are deceased.

2.2 Human subjects involved. Obtaining coded or identified pre-existing specimens for research use **would** constitute involvement of human subjects if:

- associated medical record, health information, or other information about the individual donor(s) will be obtained by the researchers
- The investigators will have access to the code or key, or unexpectedly learn the identity of one or more individuals

If the research would involve no more than minimal risk, it may qualify for expedited review and a waiver of informed consent; otherwise it would be reviewed at a convened meeting of the IRB.

2.3 No human subjects involved. Obtaining anonymous or anonymized (de-identified) pre-existing specimens for research **would not** constitute involvement of human subjects if the research is limited to use of these specimens. *As the IRB has the final authority to make this determination, a protocol should be submitted for any research use of human specimens.*

2.4 Human subjects involved. Obtaining anonymous or anonymized (de-identified) pre-existing specimens for research **would** constitute involvement of human subjects if associated medical, health, or other information will also be obtained. The research may qualify for exemption, category #4, or expedited review; or may be reviewed at a convened meeting of the IRB. It may qualify for a waiver of the requirement to obtain informed consent.

3.0 Potential risks and harms to research subjects:

Use of existing data or information for research may pose significant privacy and confidentiality concerns. If informed consent will not be sought from individuals for permission to use their specimens for research, the IRB must consider whether or not this would violate their rights, or be inconsistent with any previous agreement or terms under which that original specimen was obtained. There may be situations where certain policies, terms or agreements would preclude use of the material for research purposes, even if de-identified.

Harm to groups or communities may also result, even where data or information is individually de-identified, but the group or community is named in the research results. Refer to *8.2 Privacy and Confidentiality* for more information.

Private, identifiable information may place individuals at risk in the event of an unintended breach of confidentiality; such data requires robust safeguarding procedures. Potential risks may be related to civil or criminal liability, damage to financial standing or reputation, or employability. A breach of confidential data is considered to be an unanticipated event involving risks to subjects, and requires a report to the IRB. It may also be necessary to notify participants, so they can take appropriate measures to protect themselves. Consult the ITS Security Officer for appropriate current data security procedures for access, transfer, use and storage of electronic data; more information is found in *8.2 Privacy and Confidentiality*.

4.0 Tissue Banks or Repositories:

Prospective collection of human biological specimens with the intention to create a tissue or specimen bank or repository for future research purposes would constitute the involvement of human subjects and requires prospective IRB review and approval. The research may qualify for expedited review, or require a review by the convened IRB; informed consent would also be required, unless the criteria for a waiver of the requirement can be met. When research will involve utilization of specimens or tissues from a bank or repository, it may or may not constitute the involvement of human subjects; a protocol is required to the IRB for a determination.

5.0 Reporting research results to subjects:

When research analysis of biological specimens has the potential to reveal information that is clinically significant for an individual, the protocol should indicate whether or not individual subjects will be notified, if possible to do so. In general, the analysis should be scientifically valid (performed in a CLIA-certified laboratory), have significant implications for an individual's health, and for which a treatment for the condition is readily available.

6.0 Studies subject to FDA Regulations:

Clinical investigations performed to evaluate the safety and efficacy of FDA-regulated test articles (drugs, devices, biologicals, etc.) require IRB review, including projects where the research is conducted with only pre-existing, de-identified specimens. An example of this might be utilizing existing blood samples to evaluate an in-vitro diagnostic instrument (medical device). Refer to *11.5 FDA-Regulated Research* for more information.

7.0 Institutional Biosafety Committee (IBC):

If NDSU employees or agents will handle human biological specimens, for research or other purposes, approval from the IBC is also required. Refer to the IBC for appropriate policies and procedures.

DEFINITIONS:

Anonymized (de-identified): identifiers were originally collected, but have been irreversibly removed from previously identified samples; individual can no longer be identified or linked with their information

Anonymous: no identifiable information exists; individual identity cannot be known or deduced, no possibility of linkage with additional information or future data collection

Coded: 1) identifiable information has been replaced with a number, letter, symbol, or combination thereof (ie, the code); and 2) a key to decipher the code exists, enabling linkage of the identifying information to the private information or specimens

Confidentiality: pertains to the treatment of information that an individual has disclosed in a relationship of trust and with the expectation that it will not be divulged to others in ways that are inconsistent with the understanding of the original disclosure without permission

Human Subject: (HHS) a living individual, about whom, an investigator (whether professional or student) conducting research obtains:

- Data through intervention or interaction with the individual, or

- Identifiable private information

Human Subject: (FDA) an individual who is or becomes a participant in research, either as a recipient of the test article or as a control. A subject may be either a healthy human or a patient. This would include individuals whose private information is used to test the safety or efficacy of a diagnostic device, even if the information is not individually identifiable, and was obtained in a retrospective fashion.

Individually identifiable: the identity of the subject is or may be readily ascertained or associated with the information; data can be linked to specific individuals either directly or indirectly through coding systems. Would also include some demographic information, or other unique information or key details that would allow individual identification to be deduced (ie, using internet search engines or other means).

Investigator: anyone involved in conducting the research; ie, study design or supervision, data collection, obtaining informed consent, performing research procedures, obtaining coded private information or specimens, analyzing data (note that this would *not* include someone whose sole role is providing coded private information or specimens to an investigator)

Obtaining: receiving or accessing identifiable private information for research purposes; includes an investigator's use, study, or analysis for research purposes of identifiable private information already in the possession of the investigator

Private information: information that has been provided for specific purposes by an individual and which the individual can reasonably expect will not be made public (for example, a medical record). Private information must be individually identifiable (ie, the identity of the subject is or may readily be ascertained by the investigator or associated with the information) in order for obtaining the information to constitute research involving human subjects. *The IRB has the sole authority to determine whether or not a research project constitutes the involvement of human subjects.*

Test article: any drug (including a biological product for human use), medical device for human use, human food additive, color additive, electronic product, or any other article subject to the Federal Food, Drug and Cosmetic Act.

REFERENCES:

[45CFR46.102\(f\)](#) Definition of human subject

[45CFR46.111\(a\)\(7\)](#) Criteria for IRB approval – privacy and confidentiality

[45CFR46.116](#) General requirements for informed consent

21CFR50.3(g) Definitions (FDA)

[OHRP Informed Consent FAQs](#)

[OHRP Guidance on Research Involving Coded Private Information or Biological Specimens](#)

[OHRP Guidance on Tissue Repositories](#)

[Exemption Categories \(45CFR46.101\)](#)

[Expedited Review Categories](#)

[FDA Office of In Vitro Diagnostic Device Evaluation and Safety](#)

[FDA Guidance on In Vitro Diagnostic Device Studies using Left-over Human Specimens](#)

[Data-Sharing Policy for NIH Genome-Wide Association Studies](#)

[NDSU Biosafety Policy \(IBC\)](#)

RELATED FORMS: ([IRB forms page](#))

IRB Protocol Form

Exemption Protocol Form

Expedited Categories Attachment

Additional Materials Attachment

Informed Consent Waiver or Alteration Request Form

PHI and HIPAA Attachment

RELATED HRPP SECTIONS:

2 Applicability

7 IRB Review Process

8.2 Privacy and Confidentiality

9.3 Waiver or Alteration of Informed Consent Requirements

11.1 Use of Confidential Records

11.5 FDA Regulated Research

11.7 Clinical Research