Protocol Template for Data/Sample Collection Studies (Retrospective or Prospective) involving NO patient contact

GENERAL INSTRUCTIONS

A complete description of the planned research (i.e., protocol) must be submitted with initial applications for IRB review (if submitting for expedited or full committee review). The Geisinger IRB does **not** require a protocol to be submitted with a research determination worksheet (RDW) or with an application for exempt review; however, a protocol may still serve as a useful tool in developing and conducting your research.

The research protocol should provide the information needed for reviewers to determine that the regulatory and Human Research Protection Program (HRPP) policy requirements have been met. There is no required format or template; different sections and formatting may be used, provided the necessary information is included. Please use this as a guide.

Note that **text in RED are instructions and points to consider;** do not use the RED text as an outline. Please **delete the RED text and complete the section with study appropriate information**.

1. Use this protocol template if your study will use **ONLY:**
    a. Data (retrospective or prospective data collection study with no patient contact).
    b. Samples from a biobank or leftover clinical samples that typically do **not** require obtaining consent/authorization from subjects.
    c. If your study involves recruitment of subjects, please use the Prospective Protocol Template for studies involving patient contact.
2. **Definitions:**
    a. **Retrospective:** A retrospective study is one that will only use data, documents or specimens that have been collected on or before the date of the initial IRB submission (not the IRB approval date); i.e. secondary use of data and samples. Therefore, all data, documents and specimens needed to complete the study are

already in existence before the IRB review takes place. Note, this does not mean that they are in existence in the investigator's possession.

b. **Prospective:** A prospective study involves the use of at least some data or specimens that have **not** yet been collected on or before the date of the initial IRB submission; i.e. secondary use of data or samples that will be collected. Therefore, all data, documents and specimens needed to complete the study are **not** already in existence before the IRB review takes place.

3. Text that is **not** in **RED** is provided as **example** and may be kept or modified as necessary.
4. **If a section is not applicable, write "Not Applicable" under the header or delete the section.**
5. If you are adding sections, use heading font in "Styles" list found in the Home tab. This will ensure title appears in the table of contents.
6. To update the Table of Contents, move cursor to the Table (text will turn grey) and hit F9. Choose option to update entire table.
7. To insert references, use RefWorks application or the Insert/References/Endnotes function in Word. Contact Health Sciences Library for RefWorks training. http://geisinger.libguides.com/hslhome
8. Run spell check prior to submitting.
9. For assistance with sample size or statistical analysis plan, contact the Biostatistics Core (570-214-8688, biostatistics@geisinger.edu).*
10. For assistance with pulling data from Epic, or one of the Geisinger data bases, or creating a REDCap database, contact the Phenomic Analytics and Clinical Data Core (PACDC) by submitting a PACDC Service Request*: https://redcap.geisinger.org/surveys/?s=W99LCPWMFF

11. If your study will use MyCode data or samples, you must obtain approval from the MyCode governing board prior to IRB submission. Please reach out to Lance Adams to request the current MyCode forms: 1) MyCode Sample and Data Access Request and 2) DiscovEHR Project Concept Request Form. Submit the completed forms to him at ljadams1@geisinger.edu. Once approved, submit your MyCode approval documents to the IRB.*

12. If your study will use Geisinger Health Plan (GHP) data, you must obtain approval from GHP. For datasets that contain Protected Health Information (PHI), you must also execute a data sharing agreement between Geisinger Clinic and GHP. Submit the GHP Proposal Form and supporting documents to researchcontracts@geisinger.edu to start the process. Once approved, submit your GHP approval and Proposal Form to the IRB.*

13. Studies that include electronic transmission of patient data or institutional proprietary information will require Information Security Office and Privacy Office assessment and approval. These approvals will need to be included in the IRB application.

    a. Information Security Office: INFOSECURITY@geisinger.edu

    b. Privacy Office: SYSTEMPRIVACYOFFICE@geisinger.edu and Deb Beaver @ dkbeaver@geisinger.edu.

14. Recruitment materials used for your study that include the Geisinger logo will need to be reviewed and approved by the Marketing team. Contact Megan Epler and Jeff Rowe (meepler@geisinger.edu and jfrowe@geisinger.edu) for **internal communications** and Matt Van Stone (mrvanstone1@geisinger.edu) for **external communications**.

15. Submit the protocol using the Geisinger iMedRIS electronic web-based IRB application https://irb.geisinger.edu/ and any other required information to the IRB.*

* If you are using project management support from the Investigator Initiated Research Operations group, they can manage your IRB submission, data approvals and coordination with other research support cores. Contact IIRO: IIRO@geisinger.edu

Please remove these 4 pages from your protocol.

GENERAL INFORMATION:

- Protocol Number is the IRB number assigned in iRIS
- Title of the Research Proposal
- Name of Principal Investigator
- Contact Information of Principal Investigator
- Co-Investigators can be listed on the IRB application in iRIS (recommendation is to not list Co-Investigators on the protocol to reduce the need for protocol revisions)
- Version Date (to be updated with changes)

Research Protocol - ####-#### (insert protocol number)

Insert Title

Version: DD MM YYYY

Principal Investigator: Name
Address
Telephone

TABLE OF CONTENTS (REMOVE IF LESS THAN 10 PAGES)

1.0 ABBREVIATIONS USED IN THE PROTOCOL

List all abbreviations used in alphabetical order or in the order referenced in the protocol; all abbreviations should be defined at first use and then used consistently thereafter.

Abbreviation	Term
EHR	Electronic Health Record
GIRB	Geisinger Institutional Review Board
HIPAA	Health Insurance Portability and Accountability Act
IRB	Institutional Review Board
MRN	Medical Record Number
PACDC	Phenomic Analytics and Clinical Data Core
PHI	Protected Health Information
PI	Principal Investigator

2.0 ABSTRACT

Every protocol should include an abstract.

Recommended Length: ≤ ½ page

The abstract should be a summary of the most important aspects of the protocol. Detailed information should be put in the body of the protocol. For example, the synopsis should only contain the main inclusion criteria, while the body of the protocol should contain the complete list.

Be sure to define **study type**: Choose Retrospective Cohort, Case-Control or similar.

3.0 BACKGROUND AND SIGNIFICANCE

The **purpose** of the background and significance section is to state the problem to be investigated, the rationale for the proposed research, the current state of knowledge relevant to the proposal and the potential contribution of this research to the problem(s) addressed.

Summarize and synthesize the available research (including published data) to provide justification for the study. Evaluate prior research for relevance to the research question under study. When the proposed research is the first of its type to involve human participants, the results of relevant animal studies must be included. Discuss the anticipated results and potential pitfalls. Describe the significance of the research including potential benefit for individual participants or society at large. Discuss how public health and social welfare might be enhanced.

Recommended Length: Approximately 1-3 pages

The background and significance section should cover:

- The rationale for the proposed project
- The state of existing knowledge (including standard clinical practices at your institution), literature citations, and highlights of relevant data
- Gaps that the project is intended to fill
- Disease/diagnosis
- Population to be studied
- Outcomes

4.0 HYPOTHESIS AND SPECIFIC AIMS

The purpose of the study (research questions and/or study objectives) should be clearly stated. In experimental designs, objectives will be stated as hypotheses to be tested and specific aims.

The purpose of the hypothesis and specific aims is to describe concisely and realistically what the proposed research is intended to accomplish. Think of your hypothesis as the foundation of your application - the conceptual underpinning on which the entire structure rests. Choose an

important, testable, focused hypothesis that increases understanding of biologic processes, diseases, treatments, or preventions and is based on previous research. Your Specific Aims state what you plan to accomplish to test your hypothesis.

If you are working with a Biostatistician, reach out to him/her for assistance with this section.

Recommended Length: The recommended length of the specific aims is ≤ 1 page.

4.1 Hypothesis

State hypothesis. Make sure it is understandable, testable and adequately supported by citations in the Background and by data in the Preliminary Results Sections. Example: [Procedure B] will result in significantly fewer [clinical outcomes] compared with [Procedure A].

4.1.1 Specific Aim 1

State aim 1. Example: To compare [clinical outcome] using [procedure A] and [procedure B].

4.1.2 Specific Aim 2

State aim 2 as appropriate.

Add new header for each specific aim.

5.0 PRELIMINARY DATA (IF APPLICABLE)

Include pilot, unpublished or theoretical data not included in background.

6.0 STUDY DESIGN

6.1 Description

The research design should be identified and should be appropriate to answer the research question(s) under study. Describe the type of research proposed (e.g. experimental, correlational, survey, qualitative) and specific study design that will be used (e.g. pre-test /post-test control group design, cross-sectional design).

e.g., This is a retrospective cohort …
e.g., This is a case-control study …

If applicable, include matching criteria, e.g., Qualifying subjects will be matched on gender and age (±5 years). An equal number of controls will be identified (i.e., 1:1 matching).

If you are working with a Biostatistician, reach out to him/her for assistance with matching criteria.

6.2 Study Population

Target Population: Describe the general subject population such as age range, gender and ethnic background (specific inclusion/exclusion criteria will be provided below).

6.2.1 Inclusion Criteria

Inclusion/Exclusion Criteria: List the inclusion/exclusion criteria (characteristics that people must have to be included or excluded from the research).

Inclusion criteria should be used to define your study population. Be aware of confusing negatives in the inclusion criteria. For example, "Patients who have not received heparin for ≥3 hours before surgery" might be better in the list of exclusion criteria as "Patients who have received heparin <3 hours before surgery". In general, an inclusion with "no" or "not" might be appropriately restated as an exclusion criterion.

Use a bulleted list to outline criteria, e.g.:

- Hospitalized male or female patients
- ≥18 years of age

6.2.2 Exclusion Criteria

Exclusion criteria should be used to clarify what subset of patients will not be included in the study, and to define study population further from those who might meet inclusion criteria, but who are still not eligible for inclusion in the study. Be aware of confusing negatives in exclusion criteria. For example, "Patients who have had no more than 2 episodes of major hypoglycemia" in exclusion indicates you only want to include those who have had more than 2 episodes – if this is the case, better to put "Patients with more than 2 episodes of major hypoglycemia" in inclusion criteria to reduce confusion. If, on the other hand, the intention is to exclude those with

more than 2 episodes, should be restated as "Patients with more than 2 episodes of major hypoglycemia" in exclusion criteria.

Do not restate negative inclusion criteria. For example, if you have "Patients who are ≥18 years of age" in inclusion, you do not need, "Patients who are <18 years of age" in exclusion. Use a bulleted list as you did for the inclusion criteria.

6.3 Study Date Range

The study will use data collected within the date frame from MM/DD/YYYY to MM/DD/YYYY.

6.4 Approximate Number of Subjects

Define enrollment for the study and provide the number of subjects planned to be enrolled.

Approximately X Geisinger subjects will be included in this study. (This number should reflect the number of charts that will be accessed).

If study is a multi-center study, also state the number to be enrolled at all sites.
If Applicable - Describe the approximate number of subjects in each group.

6.5 Primary Outcome

The primary outcome will be XX. (example: The primary outcome will be 30-day all-cause mortality after PCI)

6.6 Secondary Outcome(s)

Secondary outcome(s) include XX.

6.7 Statistical Considerations

State who will perform the statistical analyses (e.g., Biostatistics Core). If you are working with a Biostatistician, reach out to him/her for assistance with this section.

Describe the statistical analysis plan:

- Outline analysis methods for each Specific Aim.

- If a study uses qualitative rather than quantitative methods, describe qualitative analysis.
- Describe how the data will be examined and statistically analyzed to answer study objectives.

Example language:
Descriptive statistics including mean, standard deviations, medians, and inter-quartile ranges for continuous variables, and frequency percentages for categorical variables will be presented. Baseline demographic and clinical characteristics will be compared between subjects.

6.7.1 Statistical Power and Sample Size Considerations

Provide a brief sample size calculation or description of sample size calculation. Include methods and assumptions such as loss to follow-up, anticipated evaluability rate, power and clinical justification, as appropriate.

6.8 Data and Sample Management

6.8.1 Data Collection and Storage

- **Data Management Procedures and Confidentiality**
    - Describe what will happen with the data (electronic, paper, recordings, etc.) from the time it is collected until the data are permanently de-identified or destroyed.
    - If applicable, describe who will have access to the data and how the data will be handled/maintained securely.
    - Considerations for securely storing data include:
        - Paper records are locked in a secure location.
        - Electronic records are stored on a password protected or encrypted computer as appropriate based on sensitivity of data.
        - For data sets containing Protected Health Information (PHI), a coding system will be used to store data without identifiers, with the link stored separately.
    - Provide specific information regarding where identifiable data and consent forms will be stored.

- If data will be transferred outside of Geisinger, describe procedures for data transfer. Specify where data will be sent. Indicate whether data will be identified or de-identified when transferring.
- Describe how the confidentiality of the study data will be maintained.

As appropriate provide details on how data will be collected and by whom; who creates the case report form (CRF) and/or database; how the data will be entered into the database and by whom; where data will be stored. If you collect PHI, how will the data be stored and will study ID numbers be assigned? If so, where will the "key" be stored? Describe who will have access to PHI (approved study staff and/or any organizations outside of Geisinger Clinic).

Example language:
Only IRB-approved study staff will have access to data collected for this research. Electronic data will be stored on Geisinger's secure network. Any hard copy data will be secured in a locked (area/suite/drawer/cabinet).

Example language if using Phenomic Analytics and Clinical Data Core (PACDC) for data pull:
The data will be pulled by a Phenomic Analytics and Clinical Data Core (PACDC) data broker from an institutional data warehouse. The PACDC broker will compile the final data set and send it in an Excel file to the study team. Once the data set is obtained, the research team will review it for analysis. The resulting analytic file will be stored in a password-protected database on Geisinger's secure network. Only IRB-approved research team members will have access to the data file. The research team members will review the charts and gather all the needed information. The research team plans to perform manual chart reviews to access any required data elements that are not available through the initial data pull.

Provide an overview of the data collection variables to be collected for the research. **Optional:** Indicate which elements of PHI will be accessed/recorded (e.g., MRN, name, dates, etc.). Be sure to include any sensitive information that will be collected (e.g., mental health data, HIV status, etc.). If you list the PHI elements that will be accessed/recorded in the protocol, be sure that this information is consistent with the informed consent form and the IRB application. If this data is shared externally, these documents must also be consistent with the Data Use Agreement (DUA).

Example language:
The following data, including relevant dates, will be collected:

- Names
- Medical record number
- Date of birth/date of death
- Information relevant to all encounters, admissions/discharges, clinical procedures, medications administered, problem list entries, and lab values
- Baseline demographic variables of patients (age, sex, ethnicity, tobacco use, comorbidities)
- Clinical outcomes and procedural related complications

6.8.2 Sample Collection (If Applicable)

Provide details on the types of biological samples that will be collected and explain the purpose, timing, number of samples, etc. Also indicate who will collect each type of sample, how they will be processed and where will they be stored.

Samples are being collected for purposes related to this research such as purpose(s).

6.8.3 Records Retention

Describe plans for destroying the data or other handling once study is completed. Please note the following minimum research record retention requirements:

- Study records must be kept for at least 3 years after study completion.
- Federally-funded study records must be kept as determined by the funding agency.
- Signed consent/authorization, stand-alone authorization forms or documentation of verbal authorization must be kept for 6 years to comply with HIPAA requirements.

Example language:

- Records of data/samples generated in the course of this study will/will not be de-identified and will be kept for at least XX years and then destroyed. Prior to destruction, data can be used for other IRB approved research.

- Records of data/samples generated in the course of this study will/will not be de-identified and kept indefinitely and can be used for other IRB approved research.
- Identifiable records of data/samples generated in the course of this study will be kept for at least XX years and then identifying information will be removed. A coded link will/will not be maintained for reidentification.

7.0 PROTECTION OF HUMAN SUBJECTS

7.1 Consent and HIPAA Authorization

Optional: Consent and HIPAA authorization questions are addressed in the IRB application. If you include a consent and HIPAA authorization section in the protocol, be sure that this information is consistent with the IRB application.

Describe whether the research team will be obtaining written consent/HIPAA authorization from study subjects. If your study requires obtaining consent/HIPAA authorization, refer to the Prospective Protocol Template for sample language.

Provide justification if a waiver of consent and/or HIPAA authorization is being requested from the IRB.

Example waiver justification language for retrospective data collection:

For this study we are requesting a waiver of consent and a full waiver of HIPAA authorization. As a retrospective review of previously collected patient data, it is not expected that the study will have direct harm to the patients. Only IRB-approved Geisinger research staff will have access to the PHI, and no PHI will be shared outside of Geisinger. A retrospective review of existing Geisinger Clinic electronic health record (EHR) data collected for non-research purposes poses minimal risk to the subjects. The study will not affect patients' clinical care or access to care. It would be an undue burden and possible expense to patients or patients' families to be contacted about the study and request that they mail back a consent/authorization form or travel to Geisinger to review and sign a consent/authorization form without being seen for a regular clinic appointment. Additionally, some patients may no longer be seen at Geisinger for regular clinic care. Creating an all-inclusive data set is critical to maintaining the scientific integrity of this study. Limiting inclusion to patients who provide consent results in a fatally flawed data set that would be unacceptable by all known peer review standards.

Example waiver justification language for prospective data collection study with no patient contact:

We are requesting a full waiver of consent and HIPAA authorization for the patients identified in this study. The waiver of consent/authorization does not adversely affect the patients' rights and welfare. The investigator will provide for the protection of the subjects by following all applicable regulations. The proposed study involves data collection for all patients treated or admitted to any Geisinger Clinic hospital/location. The waiver is being requested for both retrospective and prospective data extraction, including PHI. Patient burden would be greatly heightened and, in some cases, impossible if we were required to consent the patient. Some patients that would be included in the retrospective data extraction may have moved away or have died and thus are not reachable for consent. Patients being seen may be lost to follow-up that is, they come in due for emergent care and are not followed in the Geisinger system post-visit or post-surgery. Therefore, their ability to sign a consent/authorization form may be compromised.

If the research study is not all inclusive, then it will have no research worth. For example, meaningful research cannot be conducted on a given health condition if all patients for whom consent could not be obtained were excluded. This would entail a cohort in which patients who died early in the hospital course, who were obtunded without immediate family available, who could not give consent because of delirium, etc., were not included. The resulting data would be fatally flawed and unacceptable by all known peer review standards. Inclusion of the patients in this study is an organizational task. The data collected is already or will be contained in the medical record and the research study represents a scientific ordering and accumulation of existing information.

The scientific and ethical equipoise for waiver of consent/authorization for this and similar type research is that these patients are receiving standard of care treatments and that identifiable data can only be used after IRB approval of this research proposal. The design, inception and consent/authorization waiver for this study has been validated throughout the country in numerous similar types of research studies. Thus, this application does not appear to be novel and does not establish or challenge current methodology or accepted ethical norms.

7.2 Potential Risks/Benefits and Protection of Human Subjects Against Confidentiality Risks

Potential Risks

State any physical, psychological, social, economic, or legal risks and assess their likelihood and seriousness.

- The following examples of information to include should be in paragraph format:
    - Is there potential for loss of confidentiality and how serious would loss of confidentiality be? Describe the risks related to loss of confidentiality (e.g., loss of insurance or employment, etc.) and the precautions taken to minimize the risks (e.g., password protected files, encryption, locked cabinets). Consider breach of confidentiality or privacy as a risk for all study participants.
    - Could the research create potential social stigmatization or legal action by authorities if research information became known outside of the research team?
    - Are there potential risks to the participants related to the political, social, or economic context in which they live?
- State the plan for preventing or minimizing risks (e.g., screening to assure appropriate selection of participants, sound research design, and de-identification of data).

Example language for precautions taken to minimize risks related to loss of confidentiality:
All electronic study data will be kept in password-protected computer files and hard copy data will be stored in a locked environment that is accessible only to the study team members. Data will be coded by linking a unique study identification number to patients' medical record numbers. Analysis will be performed using the coded data. Only aggregate data without personal identifiers will be included when presenting results or submitting manuscripts for publication.

Benefits

Typically, there is no direct benefit for subjects in this type of research (data/sample collection).

Example language:
There will be no direct benefit to patients who are included in this study. We hope that what is learned from this study will help others in the future.

8.0 PUBLICATION PLAN (OPTIONAL)

You may choose to provide plans for meeting abstract submissions, grant applications, and/or journal publications.

Example language:

We plan to submit a scientific abstract to upcoming meetings and to publish the data as a manuscript in a peer-reviewed journal.

9.0 REFERENCES

Include a reference list of literature cited to support the protocol

Citation format from American Medical Association (AMA) Manual of Style, 9th edition shown below – may be modified based on requirements/preference. Use either RefWorks or Insert/Reference/Endnote function in Word to add references.

Contact Health Sciences Library for RefWorks training. http://geisinger.libguides.com/hslhome

1 **Book - single author**

Shepard TH. Catalog of Teratogenic Agents. 7th ed. Baltimore, Md: Johns Hopkins Press; 1992.

2 **Book - more than one author (list all authors if six or less, otherwise list first three followed by "et al.")**

Baselt RC, Cravey RH. Disposition of Toxic Drugs and Chemicals in Man. 4th ed. Foster City, Calif: Chemical Toxicology Institute; 1995.

3 **Book - with editors**

Armitage JO, Antman KH, eds. High-dose Cancer Therapy: Pharmacology, Hematopoietins, Stem Cells. Baltimore, Md: Williams & Wilkins; 1995.

4 **Chapter from a book**

Degner LF, McWilliams ME. Challenges in conducting cross-national nursing research. In: Fitzpatrick JJ, Stevenson JS, Polis NS, eds. Nursing Research and its Utilization: International State of the Science. New York, NY: Springer; 1994:211-215.

[5] **Article from journal - single author**

Moldofsky H. Sleep, neuroimmune and neuroendocrine functions in fibromyalgia and chronic fatigue syndrome. Adv Neuroimmunol. 1995;5:39-56.

[6] **Article from journal- - more than one author (list all authors if six or less, otherwise list first three followed by "et al.")**

Raux H, Coulon P, Lafay F, Flamand A. Monoclonal antibodies which recognize the acidic configuration of the rabies glycoprotein at the surface of the virion can be neutralizing. Virology. 1995;210:400-408.

[7] **Monographic series**

Davidoff RA. Migraine: Manifestations, Pathogenesis, and Management. Philadelphia, Pa: FA Davis; 1995. Contemporary Neurology Series, No. 42.

[8] **Online journals with volume and page information**

Simon JA, Hudes ES. Relationship of ascorbic acid to blood lead levels. JAMA [serial online]. 1999;281:2289-2293. Available from: American Medical Association, Chicago, Ill. Accessed August 24, 1999.

[9] **Online journals without volume and page information**

Gordon GF. Bypassing heart surgery. Alternative Medicine [serial online]. July 1999;issue 30.

[10] **Online web site**

Terre Haute Center for Medical Education. The THCME Medical Biochemistry page. Available at: http://web.indstate.edu/thcme/mwking/home.html. Accessed August 24, 1999.

10.0 ATTACHMENTS

10.1 Attachment 1: Title

This section is optional and can be removed if not applicable.

Copy and paste the sub-header above (i.e., 10.1 Attachment 1) to make attachments automatically number. Attachments should be numbered in the order they are mentioned in the protocol. Attachments should not be mentioned in the synopsis.

11.0 APPENDIX

11.1 Management of Multi-Site Research Where Geisinger/AtlantiCare is the Lead Site

Remove this section if not applicable.

Describe study activities that will be conducted at each site if they differ between sites.

Describe the plans for management of study activities, reporting requirements, and communication across sites. For example:

- Unanticipated problems involving risks to participants or others
- Modifications to study protocol, procedures, documents
- Interim study results