# Standard Operating Procedures for Clinical Research Departments

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A set of standard operating procedures (SOPs) provides a clinical research department with clear roles, responsibilities, and processes to ensure compliance, accuracy, and timeliness of data. SOPs also serve as a standardized training program for new employees. A practice may have an employee that can assist in the development of SOPs. There are also consultants that specialize in working with a practice to develop and write practice-specific SOPs. Making SOPs a priority will save a practice time and money in the long run and make the research practice more attractive to corporate study sponsors.

**KEY WORDS:** Clinical research; standard operating procedures; data quality; research investigator; research staff; training.

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Writing and reading about the need for standard operating procedures (SOPs) is almost as exciting as creating, implementing, and tracking a set of SOPs. Do not worry. There are many consultants and possibly members of a practice's current staff that have the ability to create a set of SOPs for conducting clinical research. However, as a clinical research investigator and/or clinical research staff/practice, one must know and understand the importance of standardized procedures and make establishing them a priority. This article will help investigators and practice management personnel understand the need for SOPs, and it will also identify and guide the reader through the process of developing basic SOPs for a clinical research department.

*Creating SOPs for the clinical research staff provides written guidance and training for investigator and staff.*

The U.S. Food and Drug Administration (FDA) does not specifically require that a study investigator have SOPs; however, to comply with 21 CFR 312.53 (g), which states that "[investigators] will ensure that all associates, colleagues, and employees assisting in the conduct of the study(ies) are informed about their obligations . . . ," an investigator needs to have a process to document that all clinical research staff members have been trained on their roles and responsibilities and understand the regulations that apply to clinical research.

Whether a clinical research investigator is participating in government-, industry-, institutional- or practice-sponsored clinical research, the investigator and the research staff should have SOPs in place to ensure compliant, accurate, timely, and nonbiased data. Creating SOPs for the clinical research staff provides written guidance and training for investigator and staff. This guidance is another way to ensure that the researchers are complying with local and federal research regulations.

An SOP is a written process of how tasks are completed and who is responsible. The SOPs that a clinical research practice need will depend upon the type of research the practice is conducting and the clinical research department staff.

Applicable clinical research SOPs may include, but are not limited to:

- Creating clinical research study files;
- Creating source documents templates;
- Following study recruitment procedures;
- Following the informed consent process;
- Enrolling qualified study subjects;
- Scheduling patients for follow-up appointments;
- Documenting and reporting protocol deviations;
- Documenting and reporting adverse events;
- Clinical research study invoicing;

- Tracking investigational devices;
- Tracking and managing subject compliance; and
- Preparing and submitting institutional review board (IRB) documents.

An experienced clinical research associate should be able to assist the investigator in writing the majority of the SOPs. There are seven basic steps to creating an SOP: identify the task, identify the purpose, identify the responsible person(s), write a high-level set of instructions, list relevant and related documents, title and assign a revision number or letter to the document, and review and approve the document.

Below is a development process of an SOP for clinical research study files using the seven steps:

**Step One:** Identify a clinical research task that is repeated during the clinical research process or for each study conducted: Clinical Research Study Files.

**Step Two:** Identify the purpose of the SOP: To identify the study files that must be created and maintained for a clinical research study per The International Conference on Harmonisation Regulations Guideline for Good Clinical Practice.

**Step Three:** Identify the person(s) responsible for the creation, maintenance, and management of the clinical research study files: Study Investigator(s), Director of Clinical Research, Clinical Research Regulatory Associate, Clinical Research Coordinator, Clinical Research Assistant, and Data Entry/Filing Clerk. (A clinical research department may not have all the above-listed members. The point is to include all persons in the clinical research department whose responsibilities include the creation, maintenance, and management of the clinical research study files.)

**Step Four:** Write high-level instructions for completing the task, but make them specific enough for the task to be completed in a standard way each time the task is required: The following study files must be created by the clinical research investigator or a member of the clinical research staff for clinical research studies that require study files:

- Signed protocol and amendments (if applicable) and sample case report forms;
- Regulatory body approval to conduct the study;
- Signed study agreement among all involved parties;
- IRB approvals: initial and subsequent;
- Approved informed consent: blank, current, and archived;
- IRB roster;
- *Curriculum vitae*: signed and dated, current and archived;
- Patient brochure: approved;
- Investigator's brochure (where required);
- Financial disclosure form: signed and dated, current and archived;
- Device or drug accountability;
- Monitoring visit reports;
- Correspondence;
- Subject screening log;
- Subject ID code list;
- Subject enrollment log;
- Signature sheet; and
- Interim or annual reports.

These files will be kept in a binder that is labeled with the study information. The binder will have a tab for each required file. The binder will be kept in a secure location that the investigator and the clinical research coordinator both have access to at all times. If a document such as the study agreement is filed in a place other than the study file binder, a memo is to be filed as a place holder that indicates exactly where the document is filed and how it can be accessed. The data entry/filing clerk will review, date stamp, and file all documents in the proper location in the study file binder.

The clinical research coordinator will ensure all the study documents have been created and/or received and that all documents are current.

The clinical research investigator will ensure that the clinical research coordinator and filing clerk complete their tasks accurately and in a timely manner and will provide any information or documentation that is required for the clinical research staff to complete the study file binder.

**Step Five:** List any other SOPs, work instructions, or forms that may be related to this SOP: Form Clinical Research Study File Checklist

**Step Six:** Ensure that the header and footer information are correct and include the following information:
Title of SOP: Clinical Research Study Files
Revision Letter: Rev. A
Effective Date: 01 Jan 2012

**Step Seven:** Have the SOP reviewed, signed, and dated by a member of the research department that has the ability to approve SOPs (this will generally be a research director, practice manager, or the investigator): It is good to have at least two people signing off on SOPs to ensure that compliance.

Once an SOP is created and released, each person on the clinical research staff that has a responsibility related to that particular SOP must be trained on the SOP. Training can be as simple as ensuring that a staff member has read the document. After a person has been trained on an SOP, be sure that the person documents that he or she has received training on his or her personal SOP training log.

When you are implementing an entire set of SOPs for the first time, the SOPs can be implemented gradually in stages. Address the most pressing/relevant SOPs first.

There are several advantages of having a full set of clinical research SOPs, which include documentation of

consistent training across employees, improved quality of the data a site provides for a study, and a more attractive site for a sponsor to work with on large studies.

One obvious advantage is that SOPs serve as training tools for new employees. Most departments, companies, hospitals, and schools are understaffed and do not have resources available to have a dedicated trainer or to send each new employee through a training program. This results in new employees having to be quick learners with little to no access to training. With a set of SOPs, new employees can get up to speed on their own by reading research procedures that apply to them. In a busy research department, the investigator or clinical director may not have the several hours needed for explaining the basic clinical procedures of the practice to new employees, but may have time to answer specific questions.

## *SOPs can help build a practice through single-center research.*

The proper SOPs can also improve the quality of the data by improving the process in which the data are collected to limit the amount of data classified as permanently missing. SOPs lend themselves to systems and processes. An SOP can require that the research coordinator administer a patient questionnaire before the patient sees the investigator for his or her physical examination. This has several advantages: (1) The research coordinator has time to ensure that the questionnaires have been completely filled out before the patient leaves; (2) the data provided on the patient questionnaires will be more accurate and unbiased because the patient has not spoken to a physician at this point in his or her visit; and (3) the investigator has a chance to review the patient questionnaire and can address high or low pain scores with the patient during the visit and provide more information in the dictation to explain the high pain scores.

In addition to making research easier for a research staff to complete once standard procedures are in place and understood, SOPs can help build a practice through single-center research. Standard procedures will also automatically support single-center retrospective studies within an investigator's practice. If it is your standard process to collect patient pain questionnaires on every patient preoperatively and postoperatively through 24 months, an investigator has a data set that a company may be able to support the collection of for a single-center study article.

## *Sponsors search and seek out investigators and research departments that can provide high enrollment and quality data.*

The greatest advantage of a set of SOPs may be that clinical research sponsors desire to work with research investigators that take clinical research seriously enough to invest time and money into creating processes to ensure that the data being collected are of the highest quality from qualified subjects. Sponsors know that a clinical research investigator that has processes in place understands research regulations; and if the SOPs are followed, the investigators will successfully complete an FDA audit. This makes a site an asset not a liability. Sponsors have invested millions of dollars developing a new technology or medication. Sponsors search and seek out investigators and research departments that can provide high enrollment and quality data.

In summary, a clinical research department and investigator can benefit from a set of SOPs. The creation of SOPs can grow the practice by showing study sponsors that the practice is serious about research and is willing to invest time and resources into the development and training of procedures. It can also ensure compliance, accuracy, and timeliness of data. SOPs create structure and consistency within the research department and give the research staff guidance and training. SOPs can be developed by a member of the research staff that is familiar with the procedures that are currently being followed or a consultant that specializes in generating SOPs can be hired.