

SOP Writing for Clinical Research

Write down what you do, do
what is written down!



Module 6 Topic 1_1

What we will cover

- The differences between SOPs and MOPs
- Importance, Benefits, and Limitations of SOPs
- The 8-Fold SOP Process
 - Process Mapping
 - Authoring
 - Format & Language
 - Editing
 - Authorizing
 - Training
 - Implementing
 - Revising & Archiving
- II part: An exercise on SOP making



SOP vs.MOP

Definitions:

- Standard Operating Procedures: Detailed, written instructions to achieve uniformity of the performance of a specific function. (ICH GCP 1.55)

Manual of Operations:

- A handbook of instructions designed to guide the research team to successfully carry out aspects of a research study according to study protocol



SOP vs.MOP

- Founded in federal regulations and guidance, Good Clinical Practice guidelines, and institutional policies and guidance
- General processes common to running all studies
- Infrequent changes
- Established in a grant, protocol, and/or IRB application
- Study-specific processes to gather data for one study's research aims
- Changes throughout the life of the study (updated with each new Modification)



SOPs

Importance Benefits Limitations



Importance of SOPs

- Manage compliance obligations
- Incorporates regulations, GCPs, and institutional requirements
- Create operational efficiency
- Ensures processes have been examined and optimized
- Training staff
- Acts as a resource to keep everyone on the same page at all times



Benefits of SOPs

- Creation of:
- Ensures the team knows their regulatory obligations and how to best meet them using available resources
- Implementation of:
- Standardizes common processes amongst all studies
- Provides a level of formal accountability for team members
- Prevents noncompliance on a systemic level



The 8-Fold SOP Process

- Process Mapping
- Authoring
- Format & Language
- Editing
- Authorizing
- Training
- Implementing
- Revising & Archiving



Step 1: Process Mapping

Start with the regulations, guidance, and institutional policy:

- Regulations
 - New Drug rules 2019
 - OHRP: 45 CFR 46, and FDA: 21 CFR 50, 56, and 312
- Guidance
 - ICH GCPs
 - OHRP and FDA Guidance
- Institutional Policy



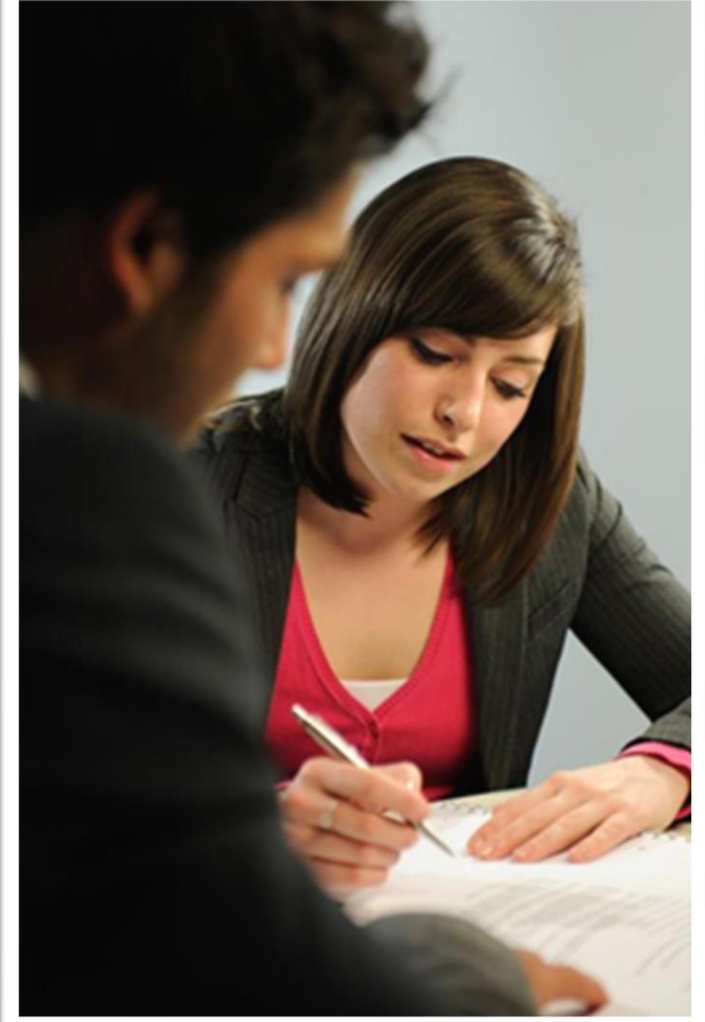
Step 1: Process Mapping

- Next, set up a meeting with everyone involved in the process
- Think about your experience with the process
- Present regulatory background and your experience at the meeting
 - Talk with the group about their experiences with the process
 - Choose the best author for the process
 - Set up a future meeting to finalize the SOP, with a draft SOP to be circulated in advance by the author



Step 2: Authoring

- Who's the best person to write what you do?
 - The person who does it



Step 3: Format & Language

- Design a template format that includes at least the following elements:
 - SOP title
 - Purpose statement
 - Policy statements, definitions, etc.
 - Steps to complete process
 - Version # and effective date
 - Author signature and date
 - Authorizer signature and date
 - References

Version X, Effective Date y/m/d

<<Title>> Procedure

PURPOSE:
To describe the process of <<insert action>>.

<<If applicable, POLICIES/DEFINITIONS, ETC.:>>
Insert policy statements, definitions, other relevant details not part of instructions/procedures.>>

PROCEDURE:
1. <<Insert step-by-step instructions using simple language and sentence structure. Feel free to insert tables, diagrams, flow charts, narratives, bulleted lists, footnotes, etc.>>

REFERENCES:
<<Insert applicable international, federal, state, and/or institutional regulations, policies, and/or guidance.>>

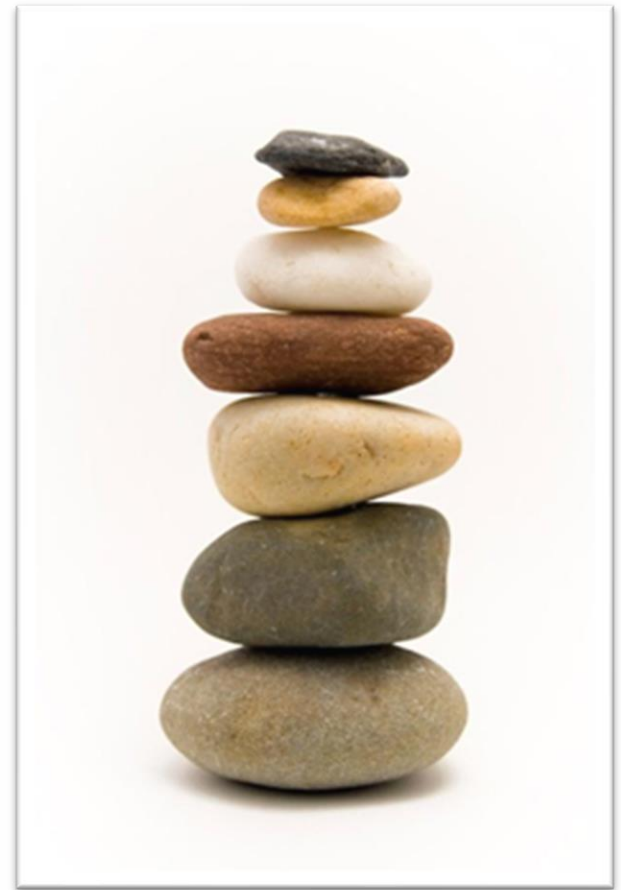
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|----------------------------------|--|-------|--|
| Author name: | | Date: | |
| Author signature: | | Date: | |
| Authorizing Signature: | | Date: | |
| Replaces previous version dated: | | | |

Page 1 of 1



Step 3: Format & Language

- When writing, be sure to:
 - Put tasks in correct **order**
 - Use **titles**, not names
 - **Limit** number of steps per page
 - Include **timelines** for completion of tasks
 - Reference associated **forms** and **templates**



Step 3: Format & Language

Documenting, Resolving, and Reporting Protocol Deviations and Violations Procedure

PURPOSE:

To describe the process of documenting, resolving, and reporting protocol deviations and violations.

POLICY:

According to federal regulations and ICH Good Clinical Practice guidelines, a research team should not implement any deviations from the IRB-approved research plan without documented approval from the sponsor and IRB, except where necessary to eliminate an immediate hazard to research participants. The research team should document and explain any deviations from the approved research plan. If the deviation is done to eliminate an immediate hazard to research participants, research team should document and explain the deviation to the sponsor, IRB, and, if applicable, regulatory authorities.

DEFINITIONS:

The University of Maryland's Human Subjects Division provides the following applicable definitions:

1. **Protocol violation** is an event or incident that occurs off protocol, without the permission of the sponsor, which has a significant or potentially significant impact on the subject.

Example: A follow-up letter to a subject participating in a study on illegal drug use is sent to the wrong address. The person who received the letter by mistake opens it. The letter clearly identifies the subject by name and the contents of the letter provides information about the subject in an illegal drug use. The subject's loss of confidentiality significantly impacts the subject in a negative way because the subject could be reported to the police for illegal drug use.

2. **Protocol deviation** is an event or incident that occurs off protocol, with or without the permission of the sponsor, but has minor or no impact on the subject.

Example: Follow-up study was conducted 1 day out of the "window of time" described in the protocol, but was due to the subject's inability to travel due to work during the window of time, but had minor or no impact on the safety of the subject.

PROCEDURE:

1. **Identification:** If an event occurs outside of the IRB-approved research plan and meets one of the two above definitions, identify the event as a protocol deviation or violation.
2. **Documentation:** Record the event in immediately in the participant's chart and in the regulatory files on the Protocol Deviation Log, including the following information:
 - a. Date of event

Version X, dated x/x/x/xx - Approved

- b. Description of the event including involved participant's study ID, relevant contributing factors for the event
 - c. Description of resolution of the event including the date, action taken to minimize harm (if any) to the participant, maintain data integrity, and prevent recurrence (i.e., changes to research procedures, consent forms, recruitment materials).
 - d. Date reported to sponsor (if applicable)
 - e. Date reported to IRB
 - f. Action required by sponsor and/or IRB (if any) if no action required
3. **Reporting:** Notify the sponsor of the event (if necessary) within the working days of learning of the event. Complete the IRB's Modification Form with accompanying Supplemental Form: Report of Other Problems (document H-324) and submit to the IRB within the working days.
 - a. **NOTE:** If complete resolution of the event takes more than the working days from learning of the event, reporting can be done prior to resolution. If reporting the event without resolution, the first report is the initial report, and a follow-up report is submitted upon resolution.

REFERENCES:

- 45 CFR 46.103(b) (6) (ii)
- 21 CFR 312.63(b) (6)
- ICH GCP 4.5.2-4.5.4
- University of Maryland's Faculty Handbook, Volume 4, Part 2, Chapter 2, Section 5.E.
- UMD Human Subjects Division Form "Report of Other Problems," document H-324
- ITMG Research Resolutions Protocol Deviation Log

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|-----------------------------------|--|-------|--|
| Author name: | | | |
| Author signature: | | Date: | |
| Authorizing signature: | | Date: | |
| Replace a previous version dated: | | | |



Step 3: Format & Language



| Principal Investigator: | | | | | |
|-------------------------|--|---|--------------------------------------|----------------------|--|
| Study Title / Number: | | | | | |
| Date(s) of Deviation | Deviation Description (including involved subject(s) study ID) | Deviation Resolution Description (including date of resolution) | Date Reported to Sponsor (if funded) | Date Reported to IRB | Action Required by Sponsor and/or IRB (state "none" if no action required) |
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Step 4: Editing

- Who should edit the draft SOP?
 - The group who originally met
- Process:
 - Circulate the draft pre-meeting
 - Reach group consensus about the draft changes
 - Take good notes about agreed upon changes
 - Revise the draft
 - Recirculate to the group and ask for feedback by a firm date



Step 4: Editing

- Process (con't):
 - After recirculating, incorporate feedback to **finalize SOP**
 - If necessary, **reconvene** for another meeting
 - Have another team member edit the SOP using a **Quality Assurance Checklist**

SOP Quality Assurance Checklist

Check each box to confirm the following statements:

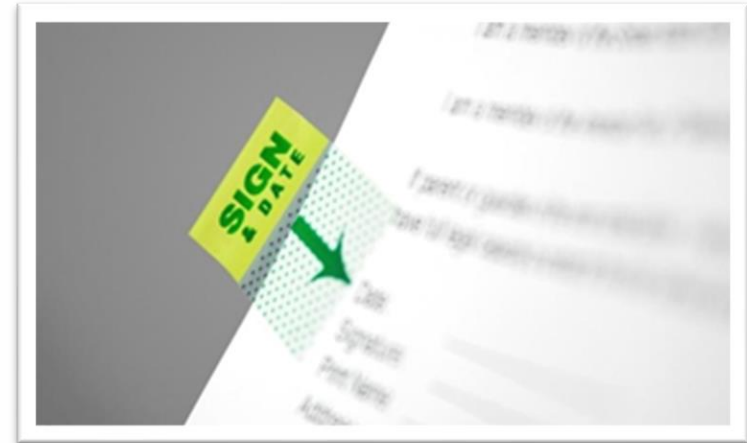
- ☐ The title is accurate and descriptive of the SOP.
- ☐ The purpose of the SOP is accurate.
- ☐ The version and date are accurate.
 - ☐ If a revision, these been updated.
- ☐ SOP is in active voice (not passive voice).
- ☐ Language is simple.
- ☐ Ordering of tasks make sense and includes all necessary steps to complete process.
- ☐ If appropriate, alternative formats (flow charts, diagrams, narratives, tables, bulleted lists, footnotes) are utilized effectively.
- ☐ Sources and references provided are accurate.
- ☐ Spell check is complete.
- ☐ The author signed the SOP.
- ☐ The person authorizing the SOP signed the SOP.

Name of person completing checklist: _____ Date: _____



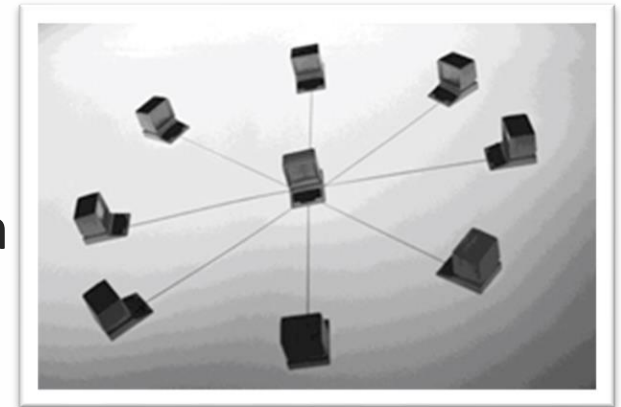
Step 5: Authorizing

- Since the **Principal Investigator** is ultimately responsible for the conduct of the study, he/she should be the one who **authorizes all SOPs**
 - The author should **sign and date** the original SOP, and so should the PI



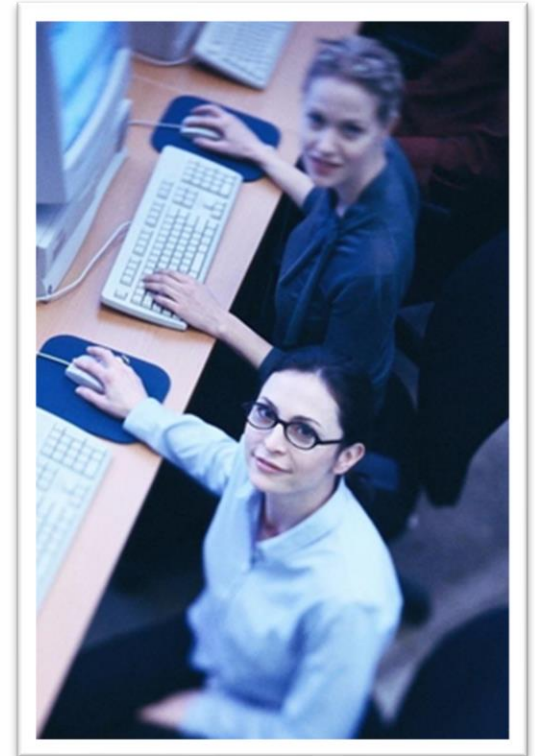
Step 6: Distributing

- **PDF** the signed original.
- Place the **hard-copy signed original** in an SOP binder.
- Keep the **electronic original** in a secure location.
- Choose a place to **post PDF SOP** for reference:
 - Internet / Intranet
 - Server
 - Email



Step 7: Training

- **The most important step!**
 - If training doesn't happen effectively, the SOPs are useless
- Choose the best training approach for the SOP:
 - One-on-one
 - Group



Step 7: Training

- Have the **author train** other team members on the SOP
- **Document** team members' training completion
 - ITHS Study Team Training Log



The form is titled "ITHS Research Resources Study Team Training Log". It includes fields for "Principal Investigator" and "Study Title / Number". Below these is a table with four columns: "Name of Team Member", "Role in Study", "Description of Training", and "Date Training Completed". The table has 10 rows for data entry.

| Name of Team Member | Role in Study | Description of Training | Date Training Completed |
|---------------------|---------------|-------------------------|-------------------------|
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Step 8: Revising & Archiving

- What happens if a mistake is found, or if the regulations or policies change?
 - You must have a **formal revision process** that includes:
 - A **designated** member of the study team to manage this process
 - A secured **document management system** (create audit trails, use track changes)
 - A policy on whether revisions are done on a **rolling basis** or **at established time points**, or both



Step 8: Revising & Archiving

- When SOPs are updated, the **old versions** need to be **archived** for historical reference.
 - Keep all hard-copy **signed originals** in the SOP binder
 - **Label** superseded versions as “**Archived**” (stamp or handwritten)
 - **Remove** superseded **PDF** versions from circulation

