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## Best Practices for Research Data Management

### PLAN:

- Use your research question to think through:
  - what data you need to collect
  - who will handle it
  - how you will store it
  - where you can preserve and share it.
- DOCUMENT your choices in a data management plan.
- A tool like DMPTool.org can help!
- Taking the time to plan will save you time down the road.

### DOCUMENT

- DOCUMENT your variables by creating data dictionaries or codebooks
- DOCUMENT file naming conventions by creating README files
- Be mindful that an abbreviation in a filename or variable that seems obvious now, may be incomprehensible later on
- Create forms to help standardize data input.
- Stick to standardized formats for things like dates (YYYY-MM-DD)

### SECURE

- Consider HIPAA compliant storage options like OneDrive and REDcap
- Make a plan for backing up your data.
- Remember 3-2-1
  - 3 copies of your files
  - 2 different media
  - 1 copy off site
- Use trusted open file formats or well-supported proprietary formats to avoid reliance on software which may become obsolete.

### SHARE

- Well-documented and organized data is a great benefit to you and the scientific community overall.
  - Increases the impact and visibility of your research.
  - Contributes to verification and reproducibility of research
  - Encourages collaboration
  - Promotes new research
- Deposit your data in a trusted repository that is well supported in your discipline.
- Create unique identifiers for yourself (ORCID) and your data (DOI).

### HELPFUL LINKS

HSHSL Center for Data and Bioinformation Services: [www2.hshsl.umaryland.edu/cdabs/](http://www2.hshsl.umaryland.edu/cdabs/)HSHSL guide to Research Data Management: <https://guides.hshsl.umaryland.edu/data>Request a consultation: <https://www2.hshsl.umaryland.edu/cdabs/consult.cfm>REDcap at UMB: <https://www.umaryland.edu/ictr/investigator-resources/data-and-data-handling/data-management-/redcap/>SecureXfer service, Secure File Transfer <https://securexfer.umaryland.edu/>DMPTool: <https://dmptool.org/>NIH Data Sharing Plan: [https://grants.nih.gov/grants/policy/data\\_sharing/](https://grants.nih.gov/grants/policy/data_sharing/)

NIH Data Repositories:

[https://www.nlm.nih.gov/NIHbmic/nih\\_data\\_sharing\\_repositories.html](https://www.nlm.nih.gov/NIHbmic/nih_data_sharing_repositories.html)