

LIBRARY TIPS #13

RESEARCH DATA MANAGEMENT 101



What is "research data"?

All **information collected, observed, generated or created during the research** process that provides evidence to answer the study's research questions.

What is "research data management"?

Research data management (RDM) is the **organized handling of research data throughout its lifecycle**, from creation to preservation.

Why is RDM important?

- To ensure **data integrity, reproducibility, and transparency**, which are critical in health sciences for trust in results.
- To align with **funder and editor requirements, and institutional policies**.

What are the "FAIR Principles"?

A set of **guidelines** that make research data easily...

Findable
Accessible
Interoperable
Reusable

How to manage data properly?

To better manage your data, **think of it as moving through a lifecycle**: from planning and collection to active use, long-term preservation, and eventual reuse. Effective RDM means applying simple, consistent **practices at each of these stages** so that your data stays safe, understandable, and reusable over time.

1 PLAN

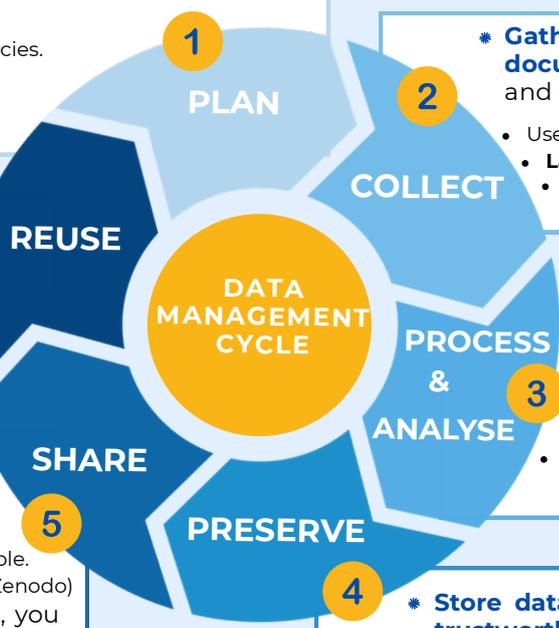
- * Decide **what data will be created, who's responsible** for it, **how it will be stored, shared and preserved**, and the **time and costs** involved.
- Learn about your institutions/funders RDM policies.
- Create a **Data Management Plan (DMP)**, a short document outlining how you will collect, organize, store, and share your data.

2 COLLECT

- * **Gather data** in a consistent, **well-documented way** so it stays accurate and complete.
- Use open and recommend **formats**.
- Label** your files consistently.
- Add **metadata**.
- Keep at least one **backup** of active data.

3 PROCESS & ANALYSE

- * **Clean, transform, analyse, and visualise data**, often with statistical methods, programming languages, and specialised software.
- Document** your decisions for later reproducibility.



4 PRESERVE

- * **Store data** and documentation safely in **trustworthy locations and formats** for as long as they are needed.
- Format migration** and **software updates** are needed to make sure data does not become outdated or obsolete.

5 SHARE

- * **Choose a suitable repository** to deposit your data.
 - Use a **discipline-specific repository**, if possible.
 - If not, use a trusted general repository (e.g.; Zenodo)
- It is not mandatory to "open" your data, you can opt for restricted or closed access.
- Follow the principle "**as open as possible, as closed as necessary**" to balance discoverability with legal, ethical and privacy needs.

6 REUSE

- * **Prepare the data so it can be reused** by other researchers.
- Choose a license (CC-BY recommended) to clarify data usage **permissions**.
- Make sure there is sufficient metadata to **context** your data.

Multidisciplinary teams improve RDM

RDM is a **team effort**, combining the expertise of...

- * Researchers & PIs
 - * Data stewards or librarians
 - * IT specialists
 - * Data Protection Officers (DPO)
 - * Ethics Committee
 - * Research Office
 - * ...
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Check these tools & resources

Create a **DMP**

Find a suitable **repository**

Choose a **license**

Make your data FAIR (**OpenAIRE checklist**)