


Data Management Plan Bootcamp

 **Sherman
Centre**
for Digital Scholarship

Tuesday, May 12, 2026 from 1:00pm - 4:00pm

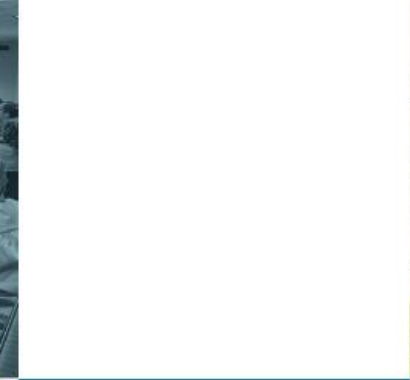
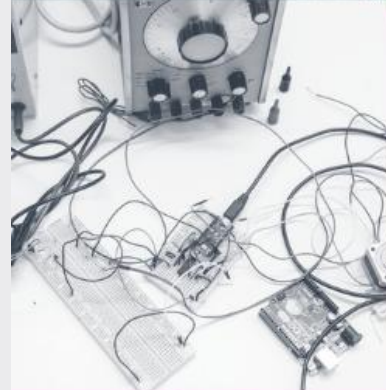
Sherman Centre for Digital Scholarship

Data Management Plan Bootcamp

Isaac Pratt, PhD and Danica Evering, MA

May 11, 2026

Content provided by McMaster Research Data
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<https://www.rdm.mcmaster.ca>. CC-BY.





 **Land
Acknowledgement**

McMaster University is located on the traditional territories of the Mississauga and Haudenosaunee Nations. Settlers have responsibilities under the Silver Covenant Chain Wampum, part of the 1764 Treaty of Niagara.

Georgia Kirkos, "Spring flowers behind University Hall," May 3, 2024, McMaster University, Hamilton, Ontario, Canada
<https://mcmaster.assetbank.app/assetbank-mcmaster/action/viewAsset?id=76751&index=1&total=1000&view=viewSearchItem>



Certificate Programs

The Sherman Centre for Digital Scholarship Certificate of Attendance

The Sherman Centre's certificate program recognizes attendance at our workshops. It complements degree training, supports the development of critical competencies in data analysis, research data management, and digital scholarship, and formalizes core skills fostered by our workshops.

Participants are invited to collect **seven** workshop points to receive a certificate of attendance. To verify your participation in today's workshop, we will provide a code and additional instructions at the end of the session.

You can learn more about the certificate program at scds.ca/certificate-program

The Canadian Certificate for Digital Humanities

This workshop is also eligible for the Canadian Certificate for Digital Humanities. To learn more about the certificate, visit ccdhhn.ca. You can also contact local liaison Alexis-Carlota Cochrane at scds@mcmaster.ca.

Research Data Management Services

PhD in Anatomy
and Cell Biology,
member of
MREB - can help
with data
management for
sensitive data



Isaac Pratt, PhD

MA in Media
Studies, excited
about data justice,
community research,
+ connecting with
curious disciplines!



Danica Evering, MA



Bootcamp Expectations

Unlike our webinars, this bootcamp is **very hands on**, with lots of engagement. This has a few purposes:

1. **“body double”** with other researchers
2. **dedicate time** to work on your DMP
3. let us **drop by your table** to answer questions about each section

We are not recording this session.
Most of it will be people quietly working on their projects. We will share slides still.

Body doubling doing tasks with a buddy



helps focus on task

helps with getting started

boosts motivation

provides gentle accountability

makes the task more enjoyable

feeling you are “in this together”

less anxiety over task

models good productive behavior



Outline



Goal Setting + Introductions [20 mins]



Data Management Plans (DMPs) Overview [15 mins]



Working Session [5 mins intro, 20 mins work time]

- **Responsibility** – Ethical, legal, and commercial
- **Data Collection** – Describe sources and formats
- **Documentation** – Make data understandable and reproducible
- **Active Data Management** – Store, secure, and back up data
- **Long-Term Data Management** – Preservation, discovery, accessibility



Next Steps – Sharing, Review, Use [15 mins]

Who are you?

Hands up if you are... a faculty member? On a team as research staff? A postdoc? A graduate student? Some other role?

What's your goal for today?

Hands up if you are... creating a DMP in preparation for a grant? To streamline lab practices? To organize your graduate research? Some other reason?

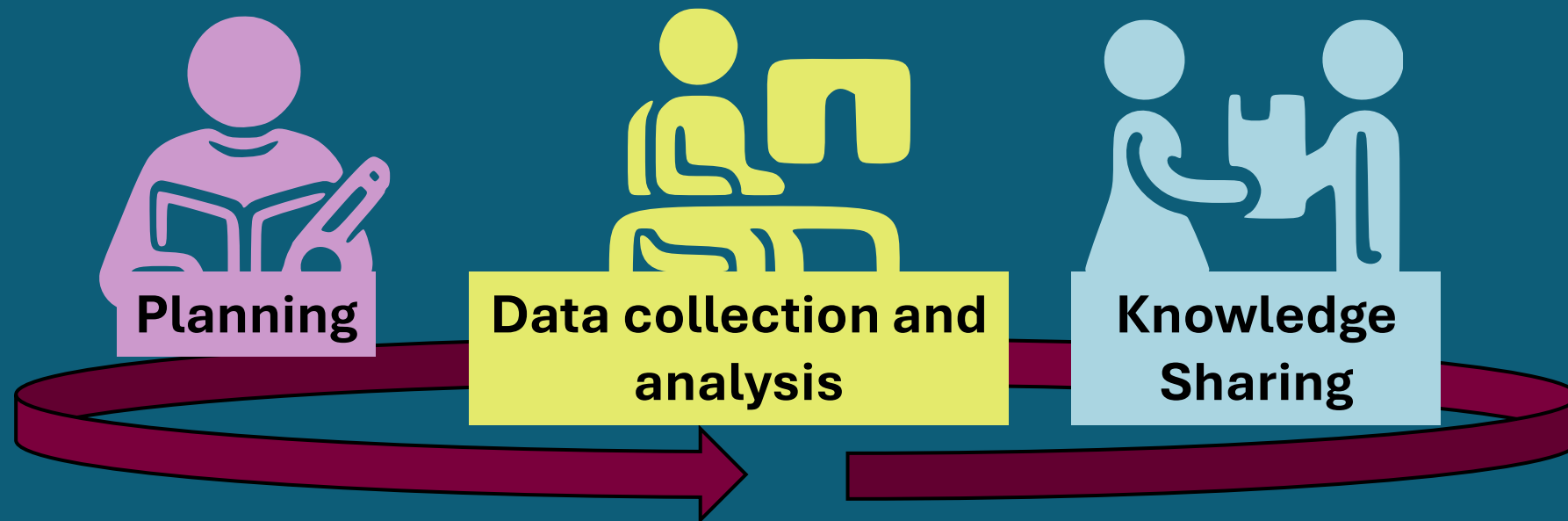
Introduce yourself to your table.

Give a short intro to the research project you're making a DMP for today, and any concerns or questions you have had so far.



“YYZ - Toronto International Airport,” by Vmzp85 via Wikimedia Commons, CC-BY 4.0.

What is Research Data Management?



What are our goals with RDM?



Be prepared



Avoid losing data

University of Manitoba Psychology



Be organized
and efficient



Increase access
to knowledge

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Research Data Management activities



Planning

- Creating a **data management plan**
- **Finding** existing data
- Obtaining systems and software for managing data



Data collection and analysis

- **De-identification** of information
- **Organizing** data efficiently
- **Documenting** data effectively
- **Storing** data securely



Knowledge Sharing

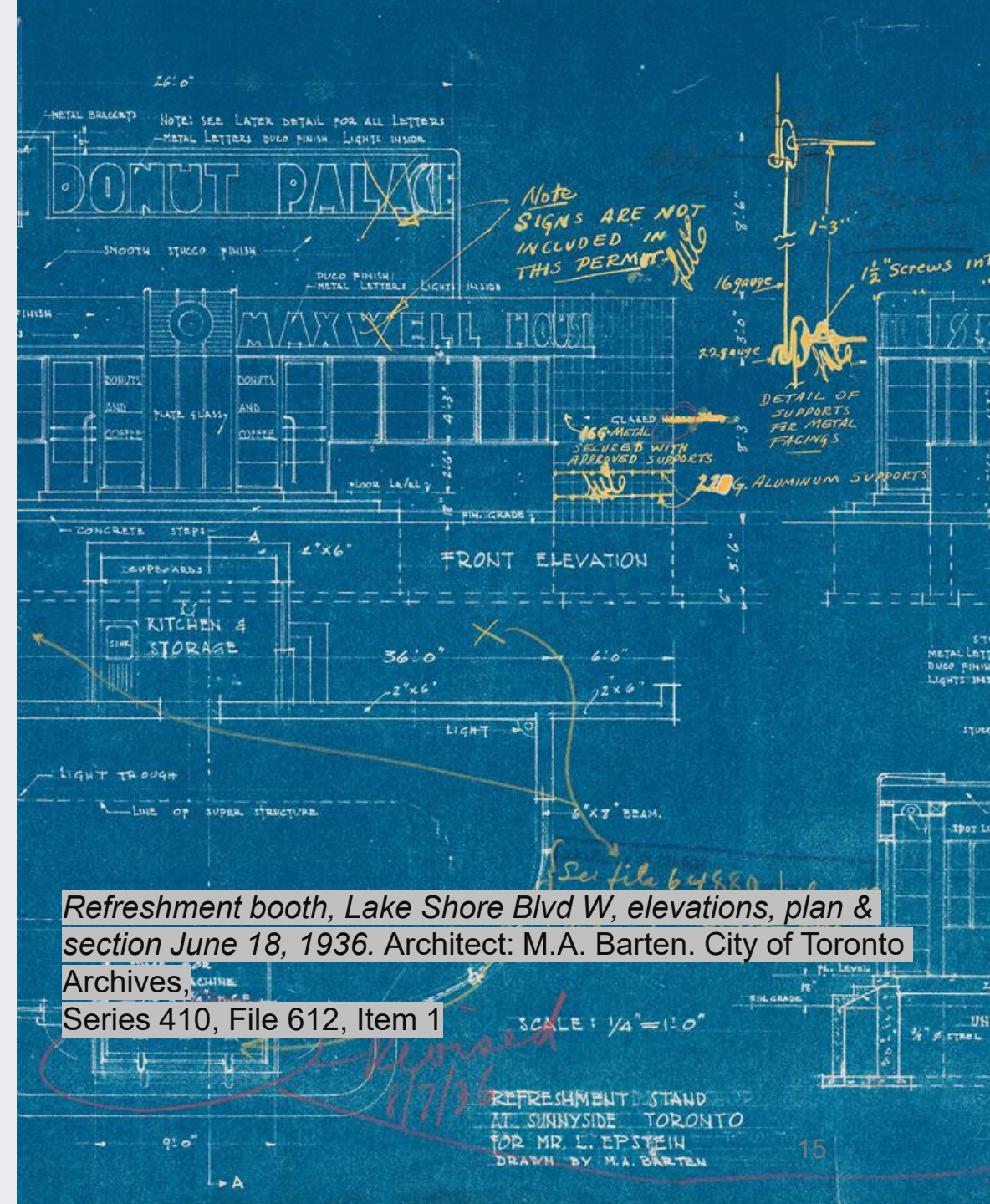
- Preparing data for **archival** and sharing
- **Publishing** data and providing access to participants and other researchers

Data Management Plans: Set up a system for best practices for your project

A Data Management Plan (DMP) is a document about how you will care for your research data throughout the project.

- A chance to think things through in advance
 - Make sure resources and tools are in place
 - Mitigate problems – data loss, duplication of effort, security breaches.
- An opportunity to engage your research team, partners, and collaborators in an **ongoing conversation** about how you will be managing research data.

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Refreshment booth, Lake Shore Blvd W, elevations, plan & section June 18, 1936. Architect: M.A. Barten. City of Toronto Archives, Series 410, File 612, Item 1

What goes in a Data Management Plan?



DMPs support **collaboration** within your lab or research team

- Implement consistent data practices for a lab.
- Plan your storage and security practices, with timelines for backups, transfers, and updates.
- Write out responsibility charts and contingency plans for unexpected events – illness, moving universities, ransomware attack.

Photo by National Cancer Institute on Unsplash.

Data Management Plans should not be a box-checking measure

Data Management Plan: Testing DMP Assistant

Project Details Contributors Plan overview Write Plan Research Outputs Share Request feedback Download

expand all | collapse all 0/5

Responsibility - Consider ethical, legal, and commercial responsibilities (0 / 1)

Consider how you will manage data throughout the lifecycle of the project, including how you will safeguard information, protect potentially sensitive data, support potential long-term data stewardship, and meet requirements, including those set forth by funders, research ethics boards, or other obligations, as applicable. Some notable key considerations include:

- How will you support long-term data stewardship, including data deposit and appropriate sharing? Note - research involving human participants will very often require both informed consent and ethics approval with respect to data sharing.
- How will data deemed as being sensitive be effectively safeguarded and protected across the lifecycle of your research project?
- Depending upon the nature of your project, you may want to consider how parts will be shared through knowledge translation/mobilization, or through technology transfer if you develop new technology.

What considerations will you take into account with respect to ethical, legal, or commercial issues?
Describe any applicable ethical, legal, or commercial considerations related to your project and data. This includes research involving Indigenous communities and knowledges, human subjects, legal and commercial considerations/agreements, partnerships or data with a high level of risk associated with it.

Guidance Documents

McMaster University

These decisions should align with your Research Ethics Board requirements with [\[Hamilton Integrated Research Ethics Board \(HiREB\)\]](#) for Health Sciences research, and the [\[McMaster Research Ethics Board\]](#)

Comments & Guidance

B I [List Icon] [List Icon] [Link Icon] [Grid Icon]

Image: ritvsihu45, Citizen delegates participated in moderated discussion groups, CC-BY-SA 2.0, https://commons.wikimedia.org/wiki/File:Citizen_delegates_participated_in_moderated_discussion_groups.jpg





Data Management Plans (DMPs) are required by funders across the world

Why? Ensuring good data quality leading to research excellence, responsibly and securely managing research data, and avoiding data loss.

- National Institutes of Health (NIH), Canadian Foundation for Innovation (CFI), Horizon Europe, etc. Tri-Agencies
- **CIHR:** Selected Network Grants, Team Grants, Operating Grants
- **SSHRC:** Partnership Grants
- **NSERC:** Alliance Society, Subatomic Physics
- *Funding stage, brief plan (2-3 pages)*

Data Management Plan Levels

Research Group DMP

20-50 pages

Outlines **research group** practices in detail to get researchers, collaborators, and participants on the same page about how data is managed.

Often includes detailed protocols, SOPs, and are great tools for onboarding new team members.

Project DMP

2-3 pages

Created for **specific projects** using the Research Group DMP as a starting point. Each project is unique but needs to align with the group's data management practices as a whole.

Usually short, may be written for a funding application.

Some things to keep in mind while writing



Make sure your practices as written are what you will do.



What is the scope of your DMP?



Be comprehensive – your data may live in many places.



Who should be involved in writing or reviewing the DMP?

Examples and Templates

DMP Examples Database:

rdm.mcmaster.ca/dmps

We will follow the Women's Advanced Risk-Assessment in Manitoba (WARM) Hearts Example DMP from the Digital Research Alliance of Canada.

Hay, J. L., Ducas, J., & Duhamel, T. (2023). Women's Advanced Risk-Assessment in Manitoba (WARM) Hearts. Zenodo.

<https://doi.org/10.5281/zenodo.11074529>



DMP Assistant



- Freely available to all researchers in Canada
- Add collaborators and partners
- Templates and institutional guidance on creating your plan
- Export plans as .docx, .pdf, etc
- Send to RDM Services for review
- Link: dmp-pgd.ca/plans

A screenshot of the DMP Assistant web application interface. The top navigation bar includes tabs for 'Project Details', 'Contributors', 'Plan overview', 'Write Plan', 'Research Outputs', 'Share', 'Request feedback', and 'Download'. The main content area is titled 'Alliance Simplified Template (Funding Application Stage)'. Below the title, there is introductory text explaining the template's origin and purpose. A 'Write plan' button is visible on the right side. The page lists sections: 'Instructions', 'Introductory Guidance' (with a sub-item 'Introductory Guidance'), and 'Plan Questions' (with three sub-questions). The first question asks about ethical, legal, or commercial considerations, and the second asks about data collection.

Today's Template: Alliance Pre-funding Template

- Simplified and condensed DMP Template focusing on the funding application stage
- Developed by the Digital Research Alliance of Canada's Data Management Planning Expert Group (DMPEG)
- In DMP Assistant you will find it called the
 - **Alliance Simplified Template (Funding Application Stage)**



**Can anyone not log in? Please
put your hand up!**





1. Ethics and Legal Compliance

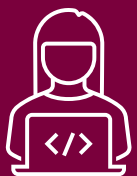
What considerations will you take into account with respect to ethical, legal, or commercial issues?

- Describe any applicable ethical, legal, or commercial considerations related to your project and data.
- Does your research involve Indigenous communities and knowledges, human subjects, legal and commercial considerations/agreements, partnerships or data with a high level of risk associated with it?

Ethical, Legal, Commercial

- Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans: [TCPS 2 Core web course](#)
- Information on de-identifying data, encryption, and other security measures: [[RDM Website – Secure](#)]
- [MREB Data Storage and Security Tools](#)
- [Current Best Practices for Generalizing Sensitive Species Occurrence Data](#)
- [McMaster Industry Liaison Office \(MILO\)](#)
- [McMaster Privacy Office](#)

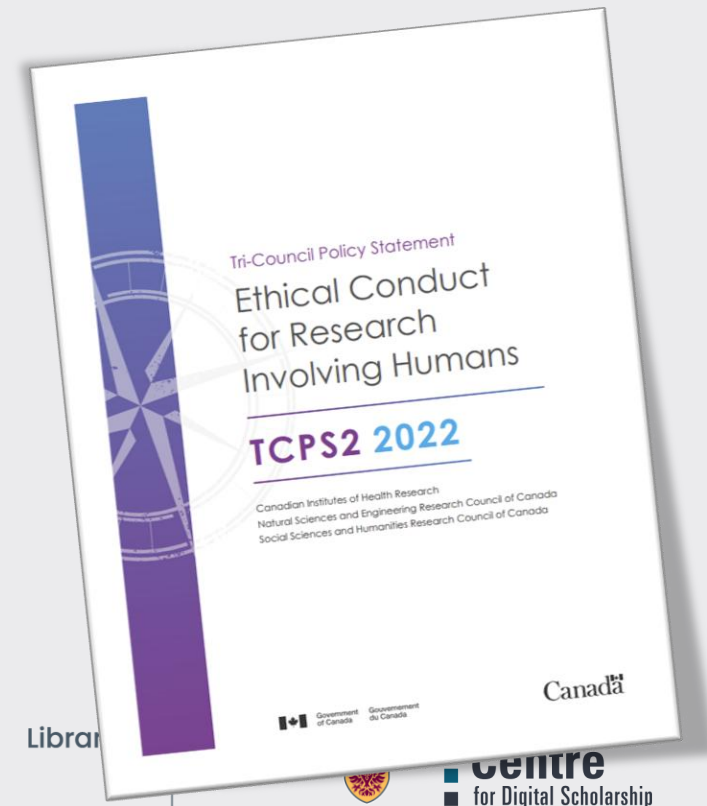
Learn more:



Sensitive Data Management - environmental, commercial, health, personal

<https://learn.scds.ca/intro-rdm/sensitive.html>

education orientation id code
card postal date age sex status
place name gender birth email stud
program number ethnicity birthdate
license phone address marital stud
employment sexual
health



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Indigenous Data Sovereignty

Research by and with Indigenous researchers and communities has responsibilities for data management practices that support Indigenous data sovereignty. Principles should be guided by the group you are working with, and can include:

- First Nations Information Governance Centre's [OCAP®](#) principles
- [Principles of Ethical Metis Research](#)
- [Inuit Qaujimajatuqangit, ᐃᐅᐃᑦ ᑕᐱᓃᑦ ᑲᐱᑕᐱ \(Inuit Tapiriit Kanatami\) National Inuit Strategy on Research](#)
- Global Indigenous Data Alliance's [CARE](#) principles.
- [McMaster Indigenous Research Primer](#)

How will you uphold your responsibilities, in detail? Not “I will comply with OCAP®” but “Six Nations will retain ownership of the data on this server.”

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Georgia Kirkos, “Indigenous Circle,” June 28, 2021, McMaster University, Hamilton, Ontario, Canada - [\[Link\]](#)

Responsibility

Study participants were provided with an opportunity to **consent** that their data and biological samples could be shared with collaborators. For those participants who provided this consent, their data and biological samples will be made available to collaborators following the creation of a **Data Sharing Transfer Agreement** or a Material Transfer Agreement, respectively.

Data obtained through linkage to administrative records are kept at the MCHP. This data is only accessible at the MCHP. Individual-level data will not be shared with anyone outside of that organization.

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Responsibility

Administrative analyses provided by MCHP are covered by their security and confidentiality policy/processes.

All study staff will protect participant **confidentiality** as a condition of their employment.

Study staff must complete and adhere to the PHIA and Tri-Council Policy Statement. All research staff must complete PHIA and Course on Research Ethics (CORE) **training** provided through the University of Manitoba and the Government of Canada, respectively.

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Responsibility

The main **data security risk** of this study is the potential for participants' confidential personal health information to be unintentionally disclosed to third parties... The risk of unintentionally disclosing confidential personal health information is considered adequately **mitigated**. Nevertheless, during the consent process, **participants are made aware** that, despite these precautions, a possibility of unintentional disclosure exists. In light of this, participants are welcome to decline or withdraw consent.

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2. Data Collection + Access

What data will you collect or otherwise bring into your project under this plan?

- List all the different data you are collecting, generating, acquiring, etc
- What **types** of data do you have? (e.g., image data, tabular data, etc)
- What **format** is your data in?
- If secondary data is being used, what is the source of that data?
- Indicate if any of the data is, or may be, considered sensitive
- Indicate if any of the data is specifically about indigenous people, communities, and/or knowledges and information.

Data Collection

Data Type	Data Sources	File Formats	Relevant Software	Size
Qualitative data	Interviews	.wav (pre-transcribed), .docx (post-transcribed) OneNote (interview notes)	Zoom (conducting interviews and transcription), Taguette (analyzing data)	30 interviews, 30 minutes each, 35 GB
Spreadsheet	Secondary data from Statistics Canada – Research Data Centre	.xlsx (active research), .csv (active research, archiving)	Excel (data cleaning) R (data analysis)	200 KB

We have guidance on [*File and Folder Organization!*](#)

Secondary Data:

- If your project is using secondary data, you should clearly identify:
 - The source of the data,
 - What the conditions were to access the data, and
 - What format the data is in (.csv, .dta, etc).
- **Where to find Data**
 - Lunaris (national, Canada-based) - <https://www.lunaris.ca/en>
 - OpenAIRE Explore (European, AI-driven) - <https://explore.openaire.eu/>
 - Google Dataset Search (Global) - <https://datasetsearch.research.google.com/>
 - Statistics Canada Microdata through McMaster's RDC <https://rdc.mcmaster.ca/>
 - McMaster Library Data Services - <https://library.mcmaster.ca/services/data-services>

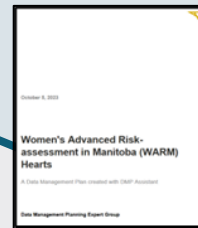


Data Collection

Quantitative data

1. Participant metadata
 - Content from the consent form including consent to be contacted for future studies, Personal Health Information Numbers (PHINs), and contact information
2. Demographic data, such as education and gender identity
3. Data from self-completed questionnaires, including detailed indicators of reproductive history
4. Data from in-person health assessments:
5. Data extracted from blood samples, including clinical biochemistry
6. Data obtained through linkage to administrative records, including demographic and socioeconomic information from the administrative record and frequency/type of health care utilization over 5 years

A **complete itemized list** of the variables collected/generated for this study is tracked in a study codebook.

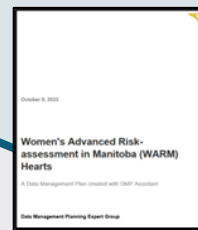


Data Collection

Open and proprietary data formats will be collected. Additionally, some data is gathered in paper, whereas others are collected via devices or samples. All data collected via paper will be transcribed to REDCap, and any proprietary format will be saved as open formats in addition.

Further description, including all file formats matched to data types described earlier, is included in **internal documentation** available to the research team.

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3. Documentation

How will you document data for future re-use or validation?

- Describe how you will document your data to ensure that it is easily read and interpreted correctly throughout the research process.
- If applicable, specify any data and/or metadata standards that are being used to support your research project.



Documenting + Notetaking

- Take notes as you do things - **Don't rely on your memory**
- Tristan Bomberry: *A story that carried me with it*
 - "Decisions Log" - what did I do and why
 - "Field and Feeling Notes" – context of numbers and what the data can't hold
- Any decisions during data collection or analysis that weren't in your plan, what went wrong?
- Keep track of your progress - when/where/who collected data and where is it kept
- **Notes:** Electronic notes are searchable - we use [OneNote](#), Andy Roddick gave a great talk on [using Obsidian](#).

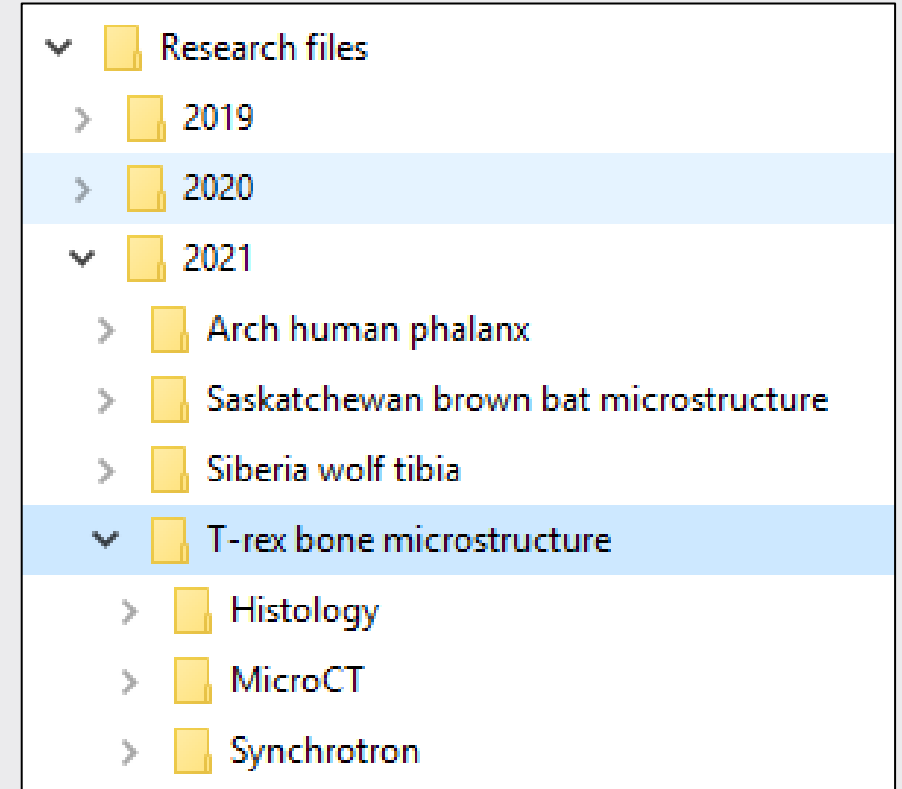
Files + Folders

A good file organization system should be **descriptive, standardized, and implemented consistently**. *You should know what's in a file without opening it up!*

Folders: Organize by project, researcher, experiment type, date, some combo (*year -> project*)

Files: Names can have date, project name, short description, initials of researcher, version number, and other metadata (like location).

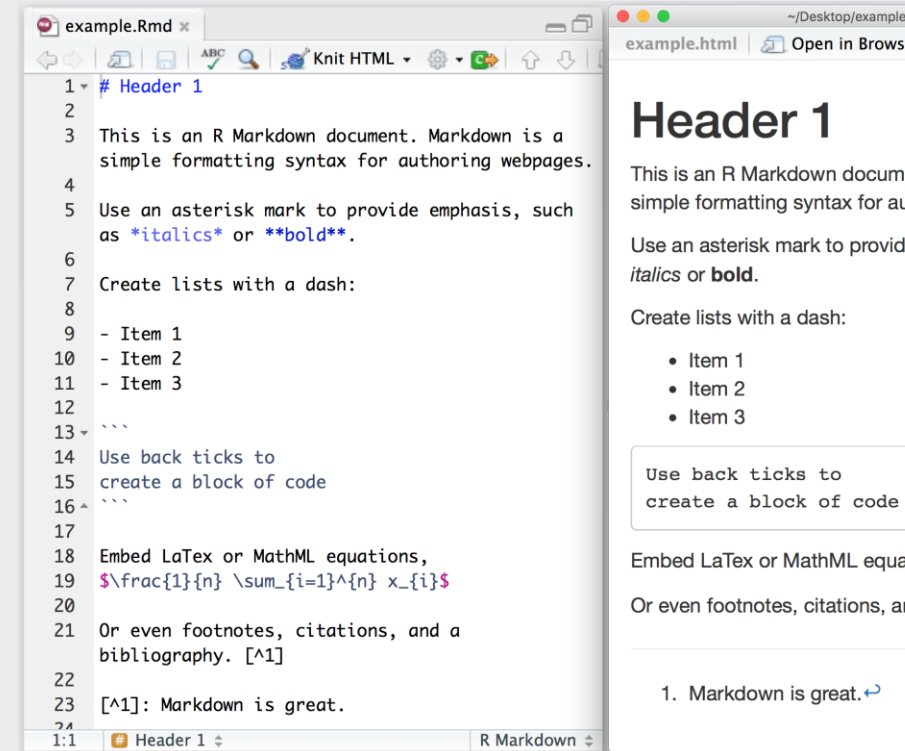
2025-10-30_YOGuelph_StaffFG_TM.wav



Date: 2025_10_30 (collection date)
Project Name: Youth Outreach Guelph
Short Description: Staff Focus Group
Name: TM (Tracy MacDern)

Documenting Data

- **Codebooks + Data Dictionaries:** Explain layout and structure, define variables and elements, define ranges for units of measurement, acceptable ranges of values.
- **Code annotations + commit tags:** Describe what you're doing in your code and commits. Comments should be informative and current.
- **READMEs** can be helpful descriptions of files and organization
- When you're ready, learn about [metadata and standards](#) to make data findable and interoperable.
- **Open Science Framework (OSF)** is a free open platform for research collaboration. OSF provides a place to manage files, data, code, and protocols in one centralized location.
- *Dr. Antonio Paez – Reproducible Research Workflow with GitHub and R: <https://github.com/paezha/Reproducible-Research-Workflow>*
- *Dr. Jeremy Freese – Key principles for transparent social science code: <https://www.boydetective.net/workflow/>*



The screenshot displays an R Markdown document editor. The left pane shows the source code for 'example.Rmd', and the right pane shows the rendered 'example.html' output.

```
1 # Header 1
2
3 This is an R Markdown document. Markdown is a
  simple formatting syntax for authoring webpages.
4
5 Use an asterisk mark to provide emphasis, such
  as italics or bold.
6
7 Create lists with a dash:
8
9 - Item 1
10 - Item 2
11 - Item 3
12
13 ...
14 Use back ticks to
15 create a block of code
16 ```
17
18 Embed LaTeX or MathML equations,
19 
$$\frac{1}{n} \sum_{i=1}^n x_i$$

20
21 Or even footnotes, citations, and a
  bibliography. [^1]
22
23 [^1]: Markdown is great.
```

The rendered HTML output on the right shows the following structure:

Header 1

This is an R Markdown document. Markdown is a simple formatting syntax for authoring webpages.

Use an asterisk mark to provide emphasis, such as *italics* or **bold**.

Create lists with a dash:

- Item 1
- Item 2
- Item 3

```
Use back ticks to
create a block of code
```

Embed LaTeX or MathML equations

Or even footnotes, citations, and a bibliography.

1. Markdown is great.

Documentation & Metadata

Folder naming conventions

- Folders are named according to data type.
- Examples: Blood Results, 6 Minute Walk and HRV Data, Accelerometer Data

File naming conventions

- REDCap exports are saved using the following naming convention:

WARMHeartsStudy_DATA, year-month-day, time, file extension.

- Example: WARMHeartsStudy_DATA_2020-04-28_1844.CSV



Documentation & Metadata

The **Call Log** and **Participant Log** are needed to review contacts with study staff, and participant details such as appointment dates, contact information and study participation details.

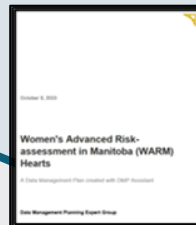
The WARM Hearts REDCap database is documented in the data dictionary and study codebook. These documents would be shared with any data made available for subsequent use.

The REDCap **data dictionary** is a .CSV file that represents the detailed structure of the database and is used to program its functionality.

The REDCap **study codebook** is a human-readable data dictionary version that allows quick reference to the variables and functionality detailed by the data dictionary.

Notes capturing **miscellaneous documentation** of special cases in the data are recorded on Case Report Forms to participant files and comments, which are subsequently transcribed into REDCap.

Biobank samples will be maintained in accordance with the **Standard Operating Procedures (SOPs)** developed by the Duhamel lab



Documentation & Metadata

Data quality assurances are conducted on a rolling basis, with 10% of the entered participant data checked against the original data collection source for accuracy.

SOPs are developed for data collection and processing steps that are to be performed by more than one individual. These SOPs are kept on an online repository that RAs may access and review at any time.

As part of routine practice, the SC will **audit** a random selection of consent forms and CRFs for accuracy and completeness. Additionally, all RAs conducting data entry into REDCap will report any irregularities they find to the SC during the completion of their data entry duties. The SC will issue query reports to the RAs, who will work to resolve identified irregularities, and then return the reports to the SC, who will retain them for documentation purposes.

PWA data will use the metadata standard of Hypertension Management Software Client Server, version 5.2, and accelerometer data will use the metadata standard of ActiLife 6, version 6.13.4. Biobank analyses will use in-house standards. These data will be incorporated into existing documentation at the point of data sharing or archiving.





4. Active Data Management

How will data be stored, accessed and worked with?

Describe where and how data will be stored, accessed, and worked with during the active phases of your research including as applicable:

- All versions of data (e.g., raw, source, study, analytic, de-identified)
- All activities (e.g., data collection, processing, analysis, dissemination)
- All software and platforms
- Who will have access to what data, including security measures (e.g., Investigators, research staff, collaborators, partners)
- How data will be backed up to prevent data loss

Active Data Management

Data Storage:

- **Local Storage** – on your computer or an external drive. Available offline, but you need to make sure it's backed up. They can be dropped or lost!
- **Cloud Storage** – on someone else's computer. They have automated backups and file synchronization. However privacy and ownership can be shady!
- **McMaster Research Data Storage Finder**

Backup:

3

Copies of your data (at least!)

2

Copies are on-hand (easily accessible) on different systems (internal hard drive, cloud storage, etc.)

1

Copy is in another location (“off-site”) from the others with a **trusted** service provider

Step 1: Answer these questions to narrow down storage provider options.

Clear Answers

1. What risk level is your data? ⓘ

- Low
- Medium
- High

2. What type of data storage are you looking for? ⓘ

- Active research
- Backup
- Archival & Open data sharing

3. Are you collaborating with other researchers? ⓘ

- Other McMaster researchers
- Specific researchers external to McMaster

Step 2: Select data storage providers you would like to compare

Select All Clear Selection

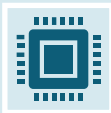
Alliance Advanced Research Computing Research computing, storage, and software from the Digital Research Alliance of Canada	Alliance NextCloud Cloud storage from the Digital Research Alliance of Canada	CSU Research Computing Cluster Advanced Research Computing facility for Faculty of Health Sciences	CSU Server On-premises cloud server for Faculty of Health Sciences researchers	Federated Research Data Repository (FRDR) Publish and preserve Canadian Research Data
Github Distributed version control system for software code	MacDrive File synchronization, storage, and sharing solution	MacDrive with Encrypted Data Store sensitive data in MacDrive by manually encrypting files	McMaster Dataserve Store, share, publish and discover research data!	McMaster based custom solution Contact AskResearch for help with complex projects
Microsoft OneDrive (institutional) Save all your work and files to	Microsoft OneDrive (institutional) with Encrypted	Microsoft SharePoint (institutional) Communication and document storage	Microsoft Teams (institutional) Create a group space for your	Open Science Framework (OSF) Open platform for

<https://rdm.mcmaster.ca/finder>

Data Security Basics



Passwords: Use password managers (try Bitwarden) with a different complicated password for each service and device.



Update Software and Hardware: Don't put off updates—there are often important security settings.



Multi-Factor Authentication (MFA): This added layer of security should be enabled on all platforms.



Sensitive Data: De-identify data as soon as possible. Use encryption on storage and devices connected to the internet.

Active Data Management

It is expected that the study will generate, at most, **a terabyte** of digital data for one complete copy of the dataset. Similarly, the paper documents generated (consent forms, CRFs, PHINs) are expected to fill 3 large, locked filing cabinets.

Paper documents will be retained at the PI's facilities at the University of Manitoba Fort Garry campus for a maximum of 10 years after data collection ceases.

Digital data will be kept on the PI's allocation of the University of Manitoba and St. Boniface Hospital Research Centre data servers, and the backup devices for the study, for a maximum of 10 years after data collection ceases.

Approximately 210 boxes, or less than 13 cubic feet, will be required to store the biological samples in the freezer (-80°C).



Active Data Management

The Research Electronic Data Capture (**REDCap**) **database**. REDCap is a web-based program designed to support electronic data capture for research data management. It meets the Personal Health Information Act (PHIA) database requirements for audit trails of data access. The REDCap server is housed within the Secure Research Environment of the Rady Faculty of Health Sciences, University of Manitoba. However, the REDCap database can be accessed from anywhere through the internet because the Secure Research Environment is a virtualized system maintained by the Medical Information Technology team of the Max Rady College of Medicine. A security token is required to access the REDCap database.

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Libraries



Active Data Management

Backups will also be held on two additional devices, with copies held in different secured locations. The **primary backup** device is an encrypted 4-terabyte external hard drive housed in the PI's locked lab at the University of Manitoba Fort Garry campus. The **secondary backup** is an encrypted 1-terabyte external hard drive held in the PI's locked lab at the St. Boniface Research Centre. In order to minimize the possibility of theft or mechanical failure, these external drives are kept in locked filing cabinets and are only connected to laboratory computers when in use.



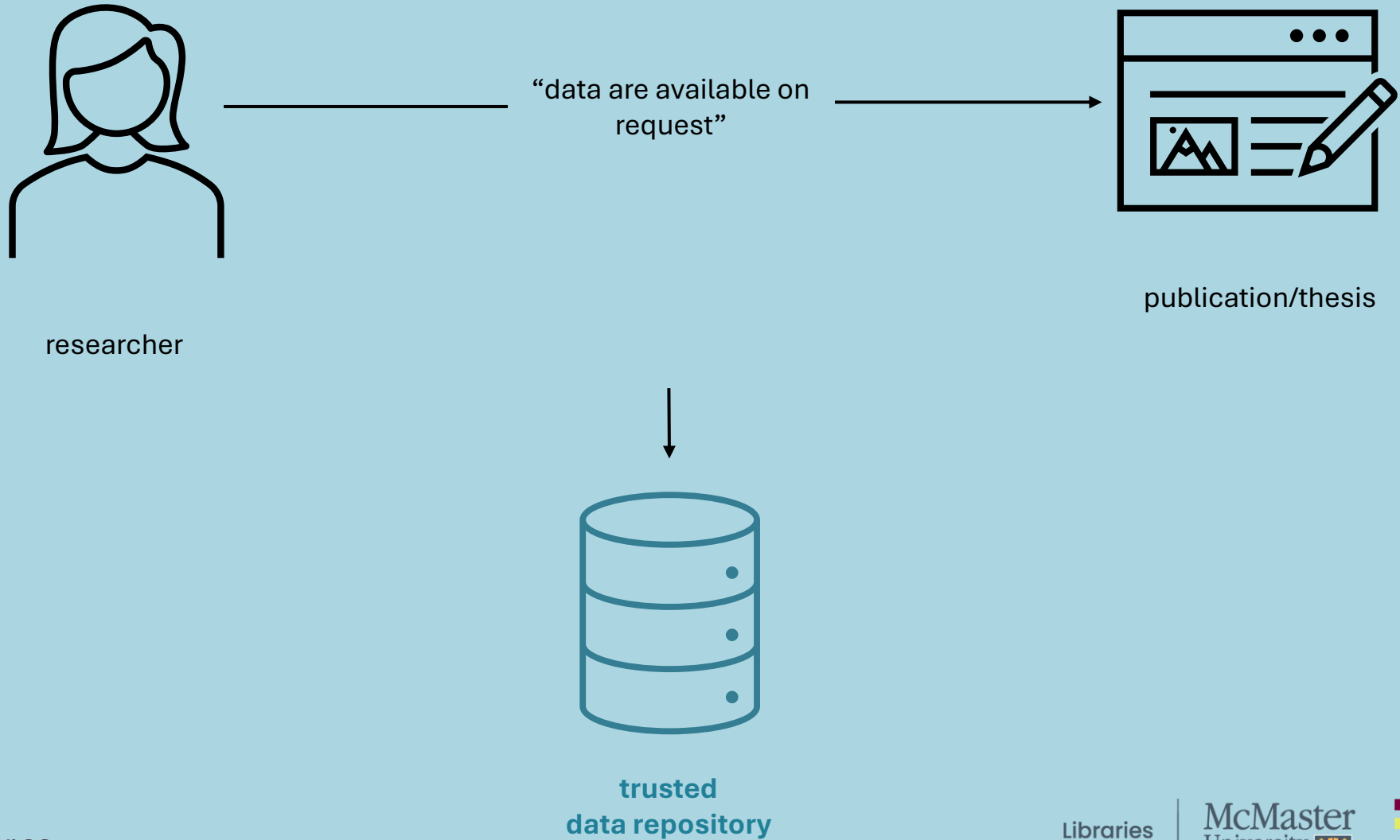


5. Long-Term Data Management

How will data be managed, discoverable, and accessible over the long term?

- Describe plans for long-term management of your data, including potential data deposit and sharing. Consider and describe as applicable plans for:
 - All versions of data deposited (raw, master, analytic, published)
 - All activities (e.g., curation, preservation, ethical compliance, publishing etc.)
 - All software and platforms (e.g., data repositories)
- Will you deposit or share any data?
- Are there any requirements from funders, publishers, ethics boards, research participants that impact this?

What does data deposit look like?



Long-Term Data Management

Publishing data in a reputable data repository is the best way to share and archive data.



Domain Specific Repositories

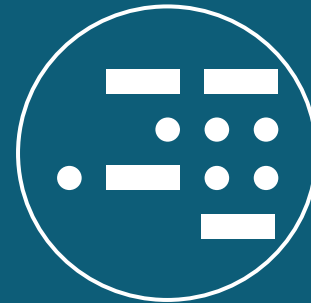
Focus on certain types of data such as genomic information or astronomical information.

<https://www.nature.com/sdata/policies/repositories>



General Repositories

Accept broader types of research data. ex. *McMaster Dataverse (part of Borealis) and Canada's Federated Research Data Repository (FRDR).*



Code Repositories

There are also code-specific repositories like Github, Gitlab, BitBucket, SourceForge



Controlled Access

For sensitive or qualitative data look at Vivli (Clinical Data), Qualitative Data Repository, Inter-university Consortium for Political and Social Research (ICPSR)

Long-Term Data Management

Paper documents will be retained for a maximum of 10 years after data collection ceases. At that point, it will be confidentially shredded.

Digital data will be kept for a maximum of 10 years after data collection ceases. At this point, it will be deleted, and the storage devices deleted and reformatted.

We will use the University of Manitoba **Dataverse** to make our research data **available to collaborators** at the end of our study. Dataverse is a university-administered and controlled access repository that facilitates research data creation, management, and dissemination. The University of Manitoba version of Dataverse is locally hosted.

Before research data or biological samples are shared, the PI must consult with the University of Manitoba Office of Research Services to request their involvement in creating a **Data Sharing Transfer Agreement**

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Long-Term Data Management

Where possible, all data will be stored in **open or industry standard file types** (i.e., .CSV or .XLS). The original data collected will be **retained in its original pre-processed format** (i.e., accelerometer .GT3X files).

- Data kept in the REDCap databases are exported as .CSV text files
- Accelerometry activity/sleep and HRV data are collected using ActiGraph wGT3X+ and wGT3X-BT accelerometers, respectively. Accelerometer data are downloaded using software proprietary to ActiGraph (ActiLife 6, version 6.13.4) and saved as proprietary file formats (.AGD and .GT3X). Data can then be exported into non-proprietary .CSV formats, i.e., either in raw accelerations (g) or epochs (range selected can be 1 –60 second). We chose this flexibility as there is no gold standard approach.
- Heart rate data are exported from ActiLife 6 and saved in the .CSV file format and then cleaned, assessed, and processed using open Kubios software.
- Pulse wave velocity data are exported from the Hypertension Management Software Client Server, version 5.2, and saved on Microsoft Excel (.XLS) files.
- Data generated from biobank blood and stool samples will be kept on Microsoft Excel (.XLS) files



Reflection: did you learn anything surprising today? Was there something you didn't realize you didn't know about your data? Any lingering questions?

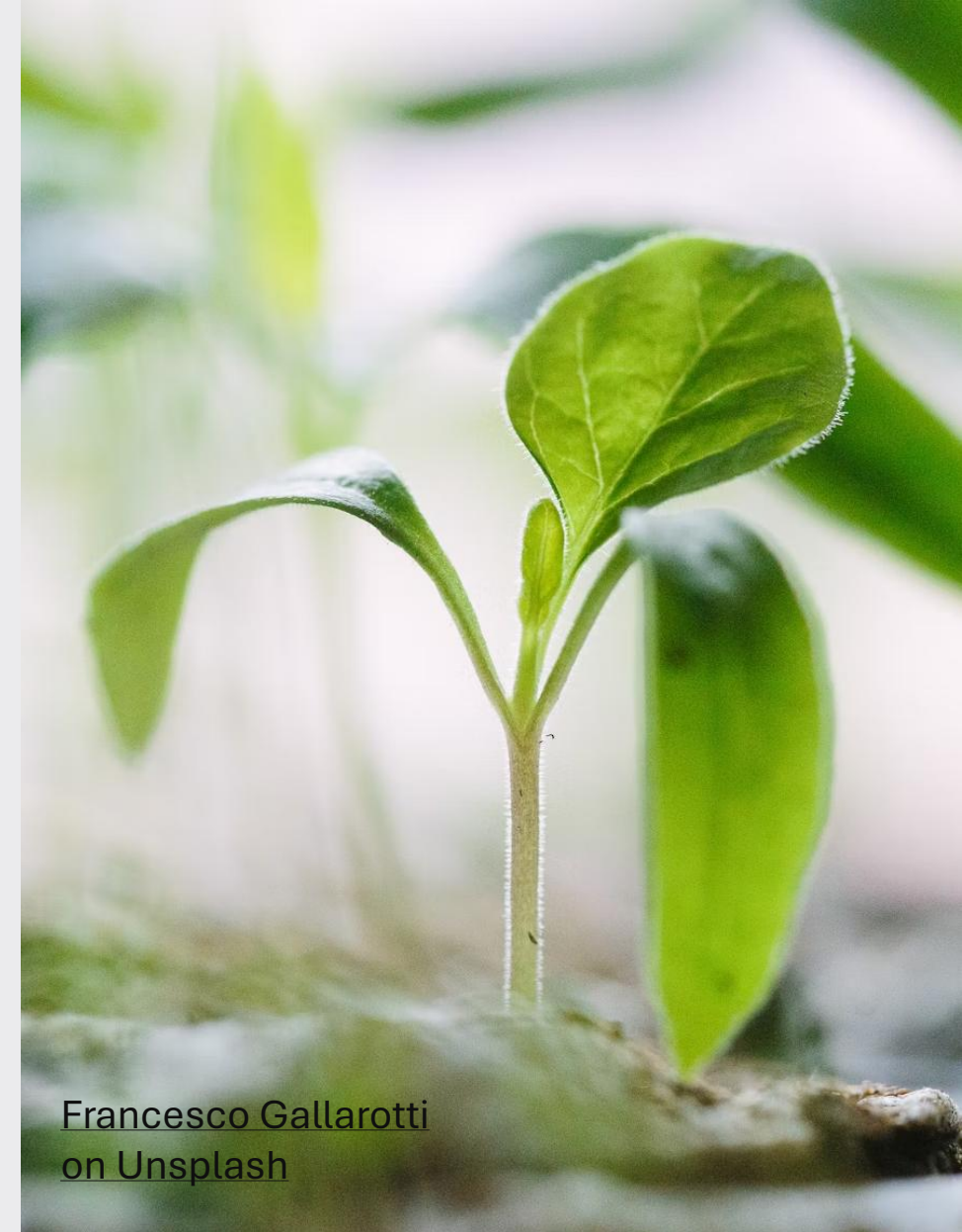
Next steps

Request feedback

- When you finish your DMP, consider making it public in DMP Assistant or contributing it to our [DMP Database](#)
- We can provide feedback if you click the Request feedback button in DMP Assistant or email rdm@mcmaster.ca
- If you have more questions, [set up an appointment](#)

DMPs are **living documents**

- Set up a review schedule for your new data management plan
- If it's for a funding application, how will you fill out the details for a more in-depth research plan
- Share it and talk about it with your students, supervisors, partners, and collaborators!



Francesco Gallarotti
on Unsplash

Fall-Winter 2025: Upcoming Workshops

Data Analysis Support Hub

November 27: Visualizing Bibliometric Networks with VOSviewer

November 27: Microdata Analysis with Python using Statistics Canada Data

Digital Research

January 21: Tracking the Impact of Non-Traditional Research Outputs

February 11: Visualizing Bibliometric Networks with VOSviewer

Research Data Management

January 14: Best Practices for Managing Data in your Research

January 27: Streamline Your Research Materials Photos with Tropy

Do More with Digital Scholarship

November 26: Making and Querying Databases in SQL with DuckDB

February 6: Create a Digital Exhibition with Omeka S

February 9: Rethinking “Good” Data: Power, Vulnerability, and Queer Data Care

Register for Upcoming Workshops: <https://u.mcmaster.ca/scds-workshops>

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Research Data Management Links

Send RDM Services an email:

rdm@mcmaster.ca

Review resources on our webpage:

<https://rdm.mcmaster.ca>

Join our Community of Practice:

<https://u.mcmaster.ca/rdm-community>

Make an appointment:

<https://u.mcmaster.ca/rdm-appointments>

SCDS Links

Send SCDS an Email:

scds@mcmaster.ca

Subscribe to our Newsletter:

<https://u.mcmaster.ca/sign-up>

Register for a Workshop:

<https://u.mcmaster.ca/scds-workshops>

Schedule a Consultation:

<https://libcal.mcmaster.ca/appointments>

