Creating a Data Management Plan for Federal Funders

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University research funding (FY15)

Federal Funding: 61.5%
Non-Federal Funding (e.g., State): 10.5%
Private Funding: 28%

$754M

Source: OVPR Annual Report 2015
OSTP Memo Responses
Basic Memo Elements

**Articles**
- Applies to unclassified research published in peer-reviewed publications
- Articles and associated metadata should be stored long-term for preservation and publicly accessible to search, retrieve, and analyze.
- Agencies may allow for up to 12-month post-publication embargo.
- No access charges.

**Data**
- Applies to digital scientific data resulting from unclassified federal funded research (wholly or in part).
- Resulting data should be "stored and publically accessible to search, retrieve, and analyze."
- Agencies must:
  - Protect confidentiality and personal privacy
  - Ensure appropriate attribution
  - No access charges
  - Require Data Management Plans
Non-Compliance

- Agencies plan to use progress reports to monitor compliance with the DMP
- What happens if a project is non-compliant?
  - "enforcement actions, including the withholding of funding" (NIH)
  - "may serve as grounds to terminate the contract or cancel the grant" (FDA)
  - "will negatively influence future funding opportunities" (USDA)
By any other name...
Data Management Plans

Typically includes:

1. Types of data
2. Standards for documentation
3. Plans for sharing
4. Access use and rights
5. Plans for long-term preservation
1. Data Types

What counts as data?

Data are…
- observational information
- laboratory results
- computer simulation
- survey results
- textual analysis
- physical artifacts or relics

Data are NOT…
- preliminary analyses
- drafts of papers
- plans for future research
- trade secrets
- commercial information
- personal and medical private information
1. Data Types

Specify all data created/used in grant

- Consistency is key - all data in grant application should appear in the DMP
- Why?
  - Evidence of feasibility, have thought through how research will happen
  - Important for eventual sharing/preservation, as later decisions hinge on types of data
2. Documentation

Describe strategies for keeping track of all the data and materials created

- File naming, directory structure, lab notebooks, codebooks, study documentation
- Why?
  - Promotes reproducibility of research
  - Ensures research can be understood later
3. Data Sharing

Describe plans for making data available, including how and when data will be shared

- Shared as widely as possible and appropriate
  - How will data privacy/sensitivity and intellectual property rights be handled?
- Why?
  - Reuse/dissemination of data
  - Replication of results
A side note...

Data Use or Data Security Agreements

- Required for researchers applying to use restricted/private data
- May need to generate for DMPs that plan to share this kind of data
3. Data Sharing

Need to ensure:

- Data sharing does not conflict with participant agreements
  - Don’t restrict language in IRB informed consent
  - Especially important for interview/focus groups
- Data are protected appropriately before sharing
  - Storage, password/encryption, backup
  - Coordination between PIs/study sites
Sharing Post-Project

• Repositories (preferred by funders)
  – Subject repositories (check call to see if one is required/suggested)
    • NIH Data Sharing Repositories
    • Inter-university Consortium for Political and Social Research (ICPSR)
  – Institutional Repositories
    • Data Repository for the University of Minnesota (DRUM)
Sharing considerations

• Any intellectual property or commercialization potential? If so, talk to OTC beforehand
• When will the data be released?
• How can citation be encouraged?
• What are the terms and conditions of access? Of deposit?
Sharing Post-Project

• Repositories (preferred by funders)
  – Subject repositories (check call to see if one is required/suggested)
  – Institutional Repositories

• Self-sharing (Ok, but…)
  – Lots of work!
    • Maintain website, answer emails, upgrade file formats, etc.
Long-term Preservation/Archival

• How will you ensure the data will be around beyond the life of the project?
  – How long? (“forever” is not a realistic plan)
  – How will you do it? (“keep it indefinitely on hard drive/server” not enough)

• Components of preservation
  – File formats being open/accessible, making sure files don’t become corrupt (checksums, filerot, storage media doesn’t last forever), obsolescence
Repositories that archive

Repositories that share

Repositories to use
Resources to help

University Libraries
- Data Management website
- Contact form
- Contact local library liaison

College of Liberal Arts LATIS
- Social Science research support

Collegiate IT Offices
Office for Information Technology
- Storage & Data Protection services
- Information Security
Questions?