How to prepare a budget for your data management plan

DataWorks! Salon December 15, 2022
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2023 NIH Data Management and Sharing Policy

- Submission of a Data Management and Sharing Plan (DMSP)
- Request funds for data management and sharing
- Compliance with the awardee’s plan as approved by NIH ICO
Budgeting for Data Management & Sharing

- Reasonable, allowable costs:
  - Curating data
  - Developing supporting documentation
  - Formatting data according to community standards or repository
  - De-identifying data
  - Preparing metadata to foster discoverability, interpretation, and reuse
  - Local data management considerations
  - Preserving and sharing data through established repositories

- All allowable costs submitted in budget requests must be incurred during the performance period

Source: Budgeting for Data Management & Sharing
Budgeting for Data Management & Sharing

- Unallowable costs:
  - Infrastructure costs that are included in institutional overhead
    - Facilities and Administrative costs: facilities operation and maintenance costs, depreciation, and administrative expenses
    - The organization is responsible for the management and accounting of costs consistently
  - Costs associated with the routine conduct of research
    - Costs associated with collecting or gaining access to research data
  - Costs that are double charged or inconsistently charged as both direct and indirect costs

Source: Budgeting for Data Management & Sharing
Budget Pages

- **R&R Detailed Budget**
  - Requests for direct costs to support the DMS activities must be reflected as a single line item under Other Costs titled “Data Management and Sharing Costs”
  - NIH instructs that personnel costs related to DMS activities should be included in this Other Costs line item rather than the Personnel section
  - It is suggested that all effort for the PI(s) and Senior/Key Personnel must remain in the Personnel section

- **Modular Budget**
  - Costs associated with DMS activities referenced in the Additional Narrative Justification

Source: Budgeting for Data Management & Sharing
R&R Budget Justification/
Additional Narrative Justification

- A summary of the DMSP and a description of the associated requested costs
- Brief summary of type and amount of scientific data to be preserved and shared and the name of the established repository(ies) where they will be preserved and shared
- Indicate general cost categories such as curating data and developing documentation, preserving and sharing data through established repositories, etc., including an amount for each category and a brief explanation
- The recommended length is no more than half a page

Source: Budgeting for Data Management & Sharing
Data Management and Sharing Plan as an Indicator of Allowable Costs

1. **Data Types**: Costs for data collection, acquisition, storage
2. **Related Tools, Software, Code**: Costs for data access, security
3. **Common Data Standards**: Costs for data documentation
4. **Data Preservation, Access, Timelines**: Costs for data preservation
5. **Access, Distribution, Reuse**: Costs for data availability, reuse
6. **Oversight of Data Management**: Costs for operationalizing
### Budget Categories

#### Category: Preparing

**Activity:** Make a Data Management Plan

- Make a DMP before you start creating data to help make decisions about managing your data.
- Check if there is a department within your organization to support data management planning.

**Costs:** 2 hrs to 2 days, depending on the complexity of your project and how much you have prepared ahead of time

**Start early!** There may be some standard language you can develop for use across projects

#### Category: Data Collection

**Activity:** Acquiring External datasets

- Do you plan to use existing (commercial or open) data?
- Your library may be able to help you acquire a license to a crucial database.
- In research data repositories, data can be available at no or low costs.

**Costs:** No cost to $200–300K or more, depending on the repository and whether the data is obtained from proprietary sources

**Confirm if the dataset can be capitalized or if it should be included in the MTDC base for F&A recovery

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**Source:** [How to identify and assess Research Data Management (RDM) costs](#)
Budget Categories

Category: Data Documentation

Activity: Data description and metadata
- Is data in a spreadsheet or database clearly described with variable and value labels, code descriptions, etc.?
- Are validated questionnaires and standard coding used?

Costs: 4 hrs per single experiment (120 measurements) filling in 60 required metadata fields, with assistance of a data manager (salary range $80,000-$100,000)

** If data description is carried out as part of data creation, data input has lower or no additional cost

Category: Data Sharing & Reuse

Activity: Data sharing
- Will you deposit data in a repository?
- Find out what the cost are of data deposit and/or long-term storage per year cost in time and effort needed to prepare data for sharing & preservation

Costs: Dryad charges $120 per data submission to cover costs of curating and preserving data, plus $50 for each additional 10GB (over 50GB)

**Completing a data deposit form (e.g. Zenodo a free repository) may take 15 min to 4 hrs

Source: How to identify and assess Research Data Management (RDM) costs
Data Repositories

Domain-specific Repositories

Generalist Repositories

Institutional Repositories

LARGER RESEARCH DATA SHARING ECOSYSTEM
Disciplinary Repositories

- Domain-specific Repositories
- Generalist Repositories
- Institutional Repositories

[Logos: NIMH]
NDA Data Submission Cost Estimation Tool

Here is a table showing the estimated costs based on different factors:

<table>
<thead>
<tr>
<th>Questions</th>
<th>Sample Answers</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How many subjects will be included in the research project?</td>
<td>100</td>
<td>NDA experts to receive data for all subjects from whose data were collected including affected individuals, controls, intervenors, and siblings.</td>
</tr>
<tr>
<td>2. How many sites will collect data from subjects in this project?</td>
<td>2</td>
<td>NDA data submissions occur biannually. Submissions are expected every 6 months over the life of the grant. Please refer to the NIH Data Archive Data Sharing Hergen site (<a href="https://nda.nih.gov/nda/sharing-ergen.html">https://nda.nih.gov/nda/sharing-ergen.html</a>) for specific data repository submission cycle dates.</td>
</tr>
<tr>
<td>3. How many times will data from this project be submitted to NDA?</td>
<td>12</td>
<td>NDA data submissions occur biannually. Submissions are expected every 6 months over the life of the grant. Please refer to the NIH Data Archive Data Sharing Hergen site (<a href="https://nda.nih.gov/nda/sharing-ergen.html">https://nda.nih.gov/nda/sharing-ergen.html</a>) for specific data repository submission cycle dates.</td>
</tr>
<tr>
<td>4. How many data structures will be submitted?</td>
<td>12</td>
<td>Data structures refer to each measure/data collection instrument within a research project's data dictionary, which will be formatted to NDA standards. These should individually reference the Informed Sharing Plan.</td>
</tr>
<tr>
<td>5. How many unique endpoints (e.g., unique EEG, eye tracking, MRI) will be conducted in the study?</td>
<td>5</td>
<td>Investigations must create a NDA data set that describes the demographics for each unique exposure or measure in the study. NDA experts will need to review the enrollment data collection.</td>
</tr>
<tr>
<td>6. How many publications analyzing human subjects data are expected for this project?</td>
<td>3</td>
<td>Researchers are expected to share analyzed data using the NDA Study feature which links data submitted to NDA to published results. See <a href="https://nda.nih.gov/nda">https://nda.nih.gov/nda</a> manuscripts preparation.html for more information.</td>
</tr>
<tr>
<td>7. What is the hourly rate charged for the Principal Investigator?</td>
<td>$200</td>
<td>Hourly rate in U.S. Dollars.</td>
</tr>
<tr>
<td>8. Will the project have a Data Manager?</td>
<td>$65</td>
<td>Click the cell and use the drop-down arrow to select &quot;yes&quot; or &quot;no.&quot;</td>
</tr>
<tr>
<td>9. What is the hourly rate charged for the Data Manager?</td>
<td>$45</td>
<td>Hourly rate in U.S. Dollars.</td>
</tr>
</tbody>
</table>

Total Cost: $13,130

Source: [https://nda.nih.gov/contribute/contribute-data.html#cost](https://nda.nih.gov/contribute/contribute-data.html#cost)
NIH Generalist Repository Ecosystem Initiative

- Domain-specific Repositories
- Generalist Repositories
- Institutional Repositories

Link:
Data Curation Services: Harvard Dataverse

<table>
<thead>
<tr>
<th>Service Name</th>
<th>Description</th>
<th>Service Components</th>
<th>Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Curation Services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free consultation and assessment</td>
<td>Triage level + Office hours Follow-up with recipients of support letters and consultation clients</td>
<td>Demonstrations of software Consult on projects size and scope and fit for Harvard Dataverse</td>
<td>Up to 3 hours</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Up to 2 hours</td>
</tr>
<tr>
<td>Extended consultation services</td>
<td></td>
<td>● Demonstrations of software</td>
<td>$100/hour</td>
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<tr>
<td></td>
<td></td>
<td>● Deidentification consult</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>● Dataverse organization consult</td>
<td></td>
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<td></td>
<td></td>
<td>● File organization consult</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>● Replication verification consult</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>$200/hour per “collection” plus $100 minimum per dataset</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$4000 per “collection” plus $200 minimum per dataset</td>
<td></td>
</tr>
<tr>
<td>Dataverse set-up and dataset and data file ingest</td>
<td>Establish data curation infrastructure and organization enabling data owners to self-curate their data.</td>
<td>● Extended Consultation</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>● Dataverse creation and customization</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>● Dataset creation</td>
<td></td>
</tr>
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<td></td>
<td></td>
<td>● Data file ingest</td>
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<tr>
<td></td>
<td></td>
<td>● Metadata enrichment of dataset and data files</td>
<td></td>
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<td></td>
<td></td>
<td>● Documentation for use of final product</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>$2000 per “collection” plus $100 minimum per dataset</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$4000 per “collection” plus $200 minimum per dataset</td>
<td></td>
</tr>
<tr>
<td>Ongoing dataverse administration and curation services</td>
<td>Ongoing maintenance of Dataverse and datasets</td>
<td>● Extended consultation services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Continuous updates of dataverse and datasets as needed to reflect software upgrades and sharing standards</td>
<td>● Dataverse set-up services and dataset and data file ingest</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Maintenance of dataverses and datasets within Harvard Dataverse</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$10,000/year plus $100 minimum per dataset</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$20,000/year plus $200 minimum per datasets</td>
<td></td>
</tr>
<tr>
<td>Custom services for existing dataverse</td>
<td>One time curation services This includes: file-upload metadata enhancement (bi-directional linking), linking affiliated datasets Documentation Digitization of audio/paper/content for sharing purposes</td>
<td>$100/hour</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>$200/hour</td>
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</tr>
</tbody>
</table>

Source: [https://support.dataverse.harvard.edu/curation-services](https://support.dataverse.harvard.edu/curation-services)
Typical Questions

- Where are you planning to store the data while the project is active? Is there an associated fee?
- Is there a fee associated with tools or software you are planning to use to collect or analyze the data?
- Do you have subrecipients?
  - If yes, will they be responsible and need to budget for data management and sharing activities?
  - If yes, who will be responsible for depositing into each selected repository or be responsible for covering the associated fees?
- Is there a deposit fee for any of the repositories you are planning to use? If yes, will they allow you to pre-pay prior to the end of the period of performance?
- Will you need dedicated staff time or the services of a core or vendor to support any of the following data management and sharing activities to meet repository requirements?
  - Data curation?
  - Developing supporting documentation?
  - Formatting data according to accepted community standards or for transmission and storage at selected repository?
  - Preparing metadata?
  - De-identifying data?
Resources for Budgeting

- NIH Allowable Costs for Data Management and Sharing
- National Academies' report on Life-Cycle Decisions for Biomedical Data: The Challenge of Forecasting Costs
- OpenAIRE (EU) Estimating Costs RDM Tool
Thank You!

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Katie Mika, Data Services Librarian
Melissa Korf, Senior Director, Research Contracts, Data & Security