NIH Data Management & Sharing Plans

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Goals

• Introduce the NIH Data Management and Sharing Plan Policy and Requirements
• Briefly describe what we’re doing at CSU to support the new policy
• Share resources available through NIH and elsewhere
• Discuss questions and approaches to support
NIH Policy on Data Management and Sharing

Effective January 25, 2023

Under the DMS policy, NIH expects that investigators and institutions:

• Plan and budget for the managing and sharing of data
• Submit a DMS plan for review when applying for funding
• Comply with the approved DMS plan
Implementing the NIH Data Management and Sharing (DMS) Policy

October 2022

National Institutes of Health
Turning Discovery Into Health

Slides from:
https://sharing.nih.gov/about/learning
POLICY
APPLICABILITY
NIH has a longstanding commitment to making the results of research available. Data Management and Sharing Policy will create a **consistent minimum expectation** for all research supported by agency.
# Policy Effective Dates

The DMS Policy applies to all NIH funding mechanisms

<table>
<thead>
<tr>
<th>Extramural</th>
<th>Competing applications submitted for Jan 25, 2023, and subsequent receipt dates</th>
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<tbody>
<tr>
<td>Contracts</td>
<td>Proposals submitted on or after Jan 25, 2023</td>
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<tr>
<td>Intramural</td>
<td>Projects conducted on or after Jan 25, 2023</td>
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<tr>
<td>Other funding agreements (e.g., Other Transactions)</td>
<td>Executed on or after Jan 25, 2023, unless otherwise stipulated by NIH</td>
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Scope of DMS Policy

Applies to all research, funded or conducted in whole or in part by NIH, that results in the generation of "scientific data".

"Scientific data" is defined as:

"the recorded factual material commonly accepted in the scientific community as of sufficient quality to validate and replicate research findings, regardless of whether the data are used to support scholarly publications."
### Potential Examples of Scientific Data

Scientific data will vary depending on the project and the context.

<table>
<thead>
<tr>
<th>Scientific data might include:</th>
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<tbody>
<tr>
<td>Single-cell RNA sequencing (scRNA-seq) of T lymphocytes or other immune cells in a study of HIV/AIDS</td>
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<tr>
<td>Electrophysiological recordings and fMRI images in a study of a rodent model of PTSD</td>
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<td>Step activity from a wearable device in a study of cardiovascular health</td>
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Exclusions from the DMS Policy

Scientific data do not include:

- Data not necessary for or of sufficient quality to validate and replicate research findings,
- Laboratory notebooks,
- Preliminary analyses,
- Completed case report forms,
- Drafts of scientific papers,
- Plans for future research,
- Peer reviews,
- Communications with colleagues, or
- Physical objects, (e.g., laboratory specimens)
Activities Subject to the DMS Policy

APPLIES TO...

All research generating scientific data, including but not limited to:

- Research Projects
- Certain Career Development Awards (Ks)
- Small Business SBIR/STTR
- Research Centers

DOES NOT APPLY TO...

Research projects not generating scientific data or non-research projects, including but not limited to:

- Training (Ts)
- Fellowships (Fs)
- Construction (C06)
- Conference Grants (R13)
- Resources (Gs)
- Research-Related Infrastructure Programs (e.g., S06)

See Research Covered Under the Data Management & Sharing Policy
Policy Requirements

**Submission** of Data Management & Sharing Plan with all applications for funding beginning January 25, 2023

**Compliance** with the Data Management and Sharing Plan approved by the funding NIH Institute, Center, or Office
PLANNING & BUDGETING
Elements of a DMS Plan

- **Data type**
  - Identifying data to be preserved and shared

- **Related tools, software, code**
  - Tools and software needed to access and manipulate data

- **Standards**
  - Standards to be applied to scientific data and metadata

- **Data preservation, access, timelines**
  - Repository to be used, persistent unique identifier, and when/how long data will be available

- **Access, distribution, reuse considerations**
  - Description of factors for data access, distribution, or reuse

- **Oversight of data management and sharing**
  - Plan compliance will be monitored/managed and by whom

See [Writing a Data Management & Sharing Plan](#) for details
Format of a DMS Plan

- Plan recommended not to exceed 2 pages in length
- Optional format page will be available
DMS Plan Assessment

• NIH Program staff:
  • Ensure Elements of a DMS Plan have been adequately addressed and assess the reasonableness of those responses
  • Applications will only be funded when Plan is complete and acceptable

• Peer reviewers:
  • Consider if budget is reasonable

See Writing a Data Management & Sharing Plan
Resolving Plan Issues Before Award

• DMS Plan must be approved prior to award
• If additional details needed, communicate with NIH staff to resolve issues with DMS Plan
  • Will occur through standard Just-In-Time (JIT) process
  • Provide additional information and potentially a revised DMS Plan

See Writing a Data Management & Sharing Plan
Monitoring Compliance

Approved Plan becomes a Term and Condition of Award

Grantee reports progress of approved DMS Plan in RPPR*

NIH reviews compliance annually

Failure to comply may result in an enforcement action and affect future funding decisions.

*RPPR: Research Performance Progress Report (RPPR) - Annual, Interim, and Final
Data Management and Sharing Costs

ALLOWABLE COSTS:

• Curating data/developing supporting documentation
• Preserving/sharing data through repositories
• Local data management considerations
• IMPORTANT: Must be incurred during the performance period

UNALLOWABLE COSTS:

• Infrastructure costs typically included in indirect costs
• Costs associated with the routine conduct of research (e.g., costs of gaining access to research data)

See Budgeting for Data Management & Sharing for details
SHARING SCIENTIFIC DATA
Finding and Selecting a Repository

Established repositories encouraged

NIH ICs may designate specific data repository(ies)

Recommend using a data-type or discipline-specific repository if available

Other suitable options include:

- Institutional repositories
- PubMed Central (small datasets only)
- Generalist repositories

See Selecting a Data Repository for details
Finding and Selecting a Repository: NIH & Other Resources

NIH-Supported Repositories

Filterable list of 70+ NIH Repositories

Other Repository Resources

• Generalist repositories
• Nature's Data Repository Guidance
• Registry of Research Data Repositories

See Repositories for Sharing Scientific Data
When should I share my data?

As soon as possible!

No later than the time of a publication of findings in a peer-reviewed journal OR at the end of the award, whichever comes first.
Limitations on Sharing

DMS Plans should maximize appropriate sharing

Justifiable ethical, legal, and technical factors for limiting sharing include:

• Informed consent will not permit or limits scope of sharing or use

• Privacy or safety of research participants would be compromised and available protections insufficient

• Explicit federal, state, local, or Tribal law, regulation, or policy prohibits disclosure

• Restrictions imposed by existing or anticipated agreements with other parties
Scientific Data Sharing Website

Expediting the Translation of Research Results to Improve Human Health.

Featured News & Events
Recordings and Materials from 2-Part DMS Webinar Series Now Available!

Data Management and Sharing Policy
NIH has a longstanding commitment to making the results of NIH-funded research available. Responsible data management and sharing has many benefits, including accelerating the pace of biomedical research, enabling validation of research results, and providing access to high-value datasets.

Planning and Budgeting for Data Management & Sharing
Find out what NIH expects in a Data Management & Sharing plan and what costs are allowed in a request.

Data Management
Proper data management is crucial for maintaining scientific rigor and research integrity. Learn about best practices for scientific data management.

Sharing Scientific Data
Under the NIH Data Management & Sharing Policy, investigators are empowered to choose the most appropriate methods for sharing scientific data. Learn more about methods for data sharing and extending data repositories.
Frequently Asked Questions

NIH SCIENTIFIC DATA SHARING

DATA MANAGEMENT AND SHARING POLICY
GENOMIC DATA SHARING POLICY
OTHER SHARING POLICIES
ACCESSING
ABOUT

FAQs
Featured Webinars

• Implementing the New NIH Data Management and Sharing Policy: 2-part Series

• NNLM Data Management and Sharing Series

• Data Curation Network Series

• GREI Collaborative Series: Generalist Repositories

• FASEB DataWorks! Salons
Additional Resources

12 Days of Data Management and Sharing Tips & Resources

By NIH Staff
Posted November 29, 2022

As we get closer to the January 25, 2023 effective date of the new NIH Data Management and Sharing (DMS) Policy, here are 12 tips and resources we would like to gift you – but you might have to supply your own partridge in a pear tree😊

- 1-page flyer on the who, what, where, and when of the DMS Policy
- 2-part webinar series on understanding the DMS Policy and digging deeper into what’s required
- 3 key steps to implement the DMS Policy
- 4 sample DMS Plans to assist you develop a plan for your research, and an optional format page
- 5 minutes is all it takes to determine what sharing policies apply to your research with this decision tool
- 6 elements recommended for a robust DMS Plan, a key component for your funding application
- 7 examples of allowable costs for data management and sharing
- 8+ slides in our Implementing the DMS Policy slide deck
- Fewer than 9 key differences between the 2003 data sharing policy vs. the new DMS policy, illustrated on the policy comparison table
- 10 activities that generally do and do not generate scientific data, including a complete list of activity codes generally subject to the DMS Policy
- 11+ FAQs to address your questions, and who to contact for more information
- Dozens of NIH-supported data repositories and resources to help you find an appropriate repository for your research

May your days be merry and bright, and may all your submissions go right😊

Additional Resources

- NIH webinars and slide decks: [https://sharing.nih.gov/about/learning](https://sharing.nih.gov/about/learning)
- Librarian Working Group on NIH DMSP Guidance: [https://osf.io/uadxr/](https://osf.io/uadxr/)
NIH DMSP Policy at CSU

- Colorado State University:
  - Public land grant R1 university
  - > 30,000 students
  - ~2000 faculty
  - ~200 NIH grant proposals over the last 2 years (<10% total proposals)

Image from: [https://source.colostate.edu/enrollment-holds-steady-at-colorado-state-university-as-students-persist-despite-covid-era-challenges/](https://source.colostate.edu/enrollment-holds-steady-at-colorado-state-university-as-students-persist-despite-covid-era-challenges/)
The Bigger Picture

Research Integrity and Open Scholarship
DMSP part of the bigger picture

- NSF and other sponsors (federal and private) have signaled that they will also require/expand DMS Plans
  - Ensuring Free, Immediate, and Equitable Access to Federally Funded Research
  - Expands 2013 memo
  - Recommends that federal agencies, to the extent consistent with applicable law:
    1. Update their public access policies as soon as possible, and no later than December 31st, 2025, to make publications and their supporting data resulting from federally funded research publicly accessible without an embargo on their free and public release;
    2. Establish transparent procedures that ensure scientific and research integrity is maintained in public access policies; and,
    3. Coordinate with OSTP to ensure equitable delivery of federally funded research results and data.
Support and Compliance

- **Working group**
  - Recommended by General Counsel, charged by the Office of Research
  - Membership: Office of Research, Libraries, Division of IT, General Counsel, Tech Transfer
  - Met from Nov 2022 – May 2023
  - Organized communications about the requirement, information sessions
  - Next steps: advocating for a broader Open and Secure Scholarship working group

- **CSU Membership in the** [Higher Education Leadership Initiative for Open Scholarship](#)
  - 93 Institutions
  - Best Practices
  - Infrastructure
  - Retention, Promotion & Tenure Policy Reform
  - Cross-Sector Alignment
Resources at CSU

- **Libraries**: [https://lib.colostate.edu/services/data-management/data-management-plans/](https://lib.colostate.edu/services/data-management/data-management-plans/)
  - Training and consultations on DMSP development and implementation
  - Data sharing support (e.g. through Dryad)
- **Division of IT**:
  - Research computing & cyberinfrastructure: [https://it.colostate.edu/research-computing-and-cyberinfrastructure/](https://it.colostate.edu/research-computing-and-cyberinfrastructure/)
  - Data security: [https://it.colostate.edu/research-computing-and-cyberinfrastructure/security-compliance/](https://it.colostate.edu/research-computing-and-cyberinfrastructure/security-compliance/)
- **OSP (Office of Sponsored Programs)**:
  - Reviews grant proposals for the inclusion of DMSPs
  - May provide examples of successful data management plans
- **OVPR (Office of the Vice President for Research)**:
  - Consent form language that addresses data sharing – IRB
  - Education/training
- **General Counsel**:
  - Advising on legal questions
- **CSU STRATA**:
  - Advising on technology transfer and IP