Usage Guidelines:

Please refer to usage guidelines at http://researchonline.lshtm.ac.uk/policies.html or alternatively contact researchonline@lshtm.ac.uk.

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RESEARCH DATA MANAGEMENT Policy

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Amendments: Text revised to improve clarity and provide additional guidance on how researchers can fulfil their data management obligations. References added to the RCUK Concordat on Open Research Data and various LSHTM policies & procedures written since the first version.

Related Policies & Procedures: See References section

1. SCOPE (i.e. who does this affect)

1.1 This Policy applies to all individuals conducting research or carrying out related duties on behalf of LSHTM. This includes, but is not limited to, employed and honorary staff, research students, and visiting academics. Collaborative research partners should also be made aware of this policy. The group to whom the Policy applies are collectively referred to as ‘Researchers’.

1.2 Researchers are responsible for making themselves familiar with requirements at the local, national, and international level that apply to their research and data. This includes requirements set out in LSHTM policies and procedures, research funder contractual requirements, country-specific legal obligations, and other applicable sources.

1.3 Primary responsibility for ensuring data management practice fulfils necessary requirements rests with the senior researcher associated with the research project, typically the Principal Investigator or Supervisor. Responsibility for implementation may be delegated to a named researcher as necessary. If all researchers associated with the project have left LSHTM, data management responsibility will devolve upwards, resting with the Head of Department in the first instance.

1.4 Where research is conducted with other institutions and/or external researchers, School researchers are responsible for the management of research data that are under their own control.

1.5 Exemption to specific expectations will be granted in circumstances where compliance will breach external obligations. Authorisation can be sought from the Research Data Manager based within the Library & Archives Service in the first instance. The decision will be escalated to the Research Governance Committee in more complex cases.

2. PURPOSE AND OVERVIEW

The London School of Hygiene & Tropical Medicine (LSHTM) considers research data to be a valuable asset that forms the basis for rigorous scientific enquiry, serves as evidence of research conduct, and has the potential to enable new and innovative research in public health.

To protect the intellectual investment made into its creation and ensure it is handled in compliance with ethical, contractual, legal, and regulatory requirements, research data should be managed in accordance with good research practice.
This Research Data Management Policy (henceforth RDM Policy) sets out expectations that LSHTM researchers should meet to ensure the research data with which they work are managed in accordance with good research practice and relevant ethical, contractual, and legal obligations.

The RDM Policy establishes LSHTM’s commitment to complying with the Concordat on Open Research Data, a framework for best practice within UK HEIs with respect to research data management. It forms a component of LSHTM’s research governance framework and should be read in conjunction with the policies and procedures outlined in the References section.

3. POLICY

The London School of Hygiene & Tropical Medicine defines the following principles to be followed by researchers in order to ensure research data are managed and disseminated in accordance with good research practice.

Guidance on addressing the principles can be found on the LSHTM ServiceDesk (https://lshtm.topdesk.net/) and intranet (https://lshtm.sharepoint.com/Research/Research-data-management/). One-to-one support is available from the Research Data Manager based within the Library & Archives Service.

3.1. School-led research projects working with research data must possess a Data Management Plan

Data management should be considered when planning a research project to ensure that adequate resources are allocated to achieve the designated objectives.

School-led projects working with research data are expected to prepare a Data Management Plan before the commencement of research, even if not required by their research funder. This should outline the requirements (ethical, legal, contractual, etc.) to be met, actions to be performed to achieve them, and any resources necessary (staff time, hardware/software, finances).

A Data Management Plan should be written at the following stage:

- Public and private funded research projects: write a Data Management Plan prior to submission of a funding application (if required by the funder) or within the first 3 months of project funding.

- PhD/DrPH students: agree a Data Management Plan with your Supervisor and submit it as part of their Upgrading or Review Report.

- Researchers that are unfunded, working with 3rd party data only, performing consultancy, or undertaking an MSc project solely in pursuit of a qualification are encouraged to prepare a Data Management Plan, but are not covered by this mandate.

All members of a research project must be made aware of and abide by the Data Management Plan covering their research.

This document should be reviewed annually during the project life to ensure adherence and continued relevance to the research.

Funder-specific templates and guidance for writing a Data Management Plan should be followed, where applicable. If no funder template exists, LSHTM provides an institutional template.
3.2. Data management costs should be recovered from the research funder, where permitted

Research data management costs incurred during the project lifetime and following its completion should be considered at the earliest opportunity, preferably when preparing the research application so that suitable arrangements can be made.

Researchers should review research funder guidelines on allowed costs and, where permitted, write these into the justification of resources and budget of the research application.

Common examples of data management costs include: hardware and software purchases, data-related training course attendance, staff time needed to prepare data for analysis and sharing, and use of third party web services.

3.3. Data rights should be recognised and agreed at the earliest opportunity

Research data are produced with input from multiple groups, including research participants, consortium collaborators, host institutions, and country governments. To ensure the Data Management Plan can be implemented, it is essential that the contribution provided by each rights holder are recognised and appropriate permission obtained at the earliest opportunity.

Research participants must be provided with information sufficient to understand and influence how their information will be stored and used during the study lifetime and following its completion, so that they can provide explicit consent. Further information on data ethics can be found in the LSHTM Standard Operating Procedure on Informed Consent (LSHTM-SOP-005).

Research partners should agree on a collaboration agreement that clearly describes the rights they possess and permissions they provide to enable research data to be used for current and future research. Rights will often be owned by the host institution(s) in which researchers are based, rather than the researcher themselves, therefore it is important that this agreement is reviewed and approved by the institution's legal team. Advice on preparing collaboration agreements and sample templates can be obtained from the Legal Office.

Exclusive rights to ownership or use of research data should not be handed over to a third party, unless it is a condition imposed by contractual or other obligations, without first consulting the Research Data Manager based within the Library & Archives Service in the first instance. Instead, Researchers are encouraged to apply a non-exclusive licence that enables research data to be accessed and used by many parties.

Researchers that have not obtained explicit consent to share data within participant informed consent forms and/or collaboration agreements and who are subsequently required to make data available should seek advice from the Research Governance & Integrity Office and/or Research Data Manager based within the Library & Archives Service.

3.4. Research data must be stored in a managed environment throughout the period it is kept

Research data must be kept for a minimum of 10 years following project completion in accordance with LSHTM's Records Retention and Disposal Schedule, with the recognition that a longer retention period may be specified by third parties. Data provided by third parties on condition that they are held for a shorter time period are exempt from this requirement.

During this time, research data must be stored in a managed environment that is backed-up on a regular basis and offers security functionality sufficient to comply with legal, regulatory, contractual, or other obligations during the time period that it must be retained. The managed environment may be operated by LSHTM and/or a trusted third party.
In circumstances where institutional storage is not available (e.g. when working in the field), the researcher must take all reasonable steps to ensure adequate measures are in place to ensure research data are stored safely and securely, and not held in a jurisdiction that offers lower levels of protection than available in the UK. The research data must be transferred into a managed storage environment at the earliest opportunity.

3.5. Research data created or captured by researchers must be registered with LSHTM, irrespective of whether it is hosted there or elsewhere

Research data intended for sharing must be registered with LSHTM on completion of funding or at the point when research findings based on the data are published, whichever is sooner.

This requirement applies to all School-led research grants and those in which LSHTM has been assigned formal responsibility for data collection or data management in a contract or sub-contract. Researchers working on consultancy work are encouraged to register details of their research data within the same catalogue, if it does not breach confidentiality, contractual or other obligations imposed by a third party.

Metadata describing the research data should be submitted and published in LSHTM’s research data repository, LSHTM Data Compass (or its successor) under normal circumstances. The Principal Investigator may request that metadata is withheld for a designated time period. E.g. to allow time to obtain a patent, publish research findings, or comply with contractual obligations. Decisions on whether to approve requests will be made based on criteria specified by the Research Governance Committee.

3.6. Research data that underpins findings should be made available at the earliest opportunity using appropriate access methods

Research data that underpins findings should be made available within 12 months of the grant closure or at the point when research findings based on the data are published, where feasible. Funder policies and community practices that stipulate more rapid data sharing supersede this requirement.

Access mechanisms should be appropriate to the research data being made available. Prior to release, an impact assessment should be performed to identify and assess the risks associated with data release (e.g. research participants being re-identified) and steps taken to minimise risks. This may include: de-identification and redaction of content, use of access controls, and use of a data transfer agreement. Further information can be found in the LSHTM Standard Operating Procedure on Confidentiality and Anonymisation of Research Data (LSHTM-SOP-036-01) and LSHTM Data Access Procedures.

3.7. Documentation should be sufficient to understand and analyse the research data

Research data must be accompanied by documentation sufficient to access, understand and use it to verify findings and develop them further. Documentation may take the form of survey questionnaires, codebooks, Standard Operating Procedures, informed consent forms, processing scripts, software code, workflows and other resources. The FAIR Sharing portal (see section 6) provides examples of documentation standards relevant to scientific research.

3.8. Adopt standards and formats that support reuse

To ensure research data remains accessible and usable over time, particularly across changing technological environments, researchers are encouraged to adopt open file formats and well-documented standards applicable to their research field to store their data, where these exist.

The FAIR Sharing portal (see section 6) provides examples of well-documented, domain standards and open file formats applied to specific areas of scientific research.
3.9. Research data that are made available must include details of institutional affiliation, funder, and author identifiers (ORCID)

Researchers must use the correct institutional affiliation when publishing research data to which they have contributed so that it may be identified as an institutional output and included in relevant bibliometric measurement. This will be ‘London School of Hygiene & Tropical Medicine’ for many researchers; ‘Medical Research Council Unit The Gambia at the London School of Hygiene & Tropical Medicine’ for researchers associated with the research unit in The Gambia; or ‘Medical Research Council/Uganda Virus Research Institute and London School of Hygiene & Tropical Medicine Uganda Research Unit’ for researchers associated with the Uganda research unit.

Metadata associated with research data must clearly acknowledge any funding source(s) and grant or programme number(s), in order to demonstrate that grant conditions have been met and enable research outputs to be clearly linked to the appropriate project(s) and funder(s).

Researchers are strongly encouraged to create and use an ORCID identifier to enable robust linking between research outputs and their creators. Support on the creation and management of an ORCID identifier is available from the Library & Archives Service (library@lshtm.ac.uk).

3.10. Research data used during the research process should be acknowledged in research outputs

Good research practice is built upon the recognition of all source material used in the research process, including research instruments, data, software code, scripts, and other resources.

Good citation practice should be followed, where appropriate standards exist. For instance, by citing the Digital Object Identifier (DOI) of research outputs in a Data Access Statement or reference list.

4. CONTACTS

Questions related to the Research Data Management Policy and its implementation should be directed to the Research Data Manager based within the Library & Archives Service (researchdatamanagement@lshtm.ac.uk).

5. DEFINITIONS

- **Data Enclave**: A secure environment used for storage of confidential data that can be accessed by authorised users only.

- **Data Repository**: A system for storing, managing and, in some cases, sharing data. LSHTM Data Compass is an example of an institutional data repository.

- **Research Funder**: An agency responsible for the financial support of research activities.

- **Non-Exclusive Licence**: A licence that grants the same rights to an intellectual property to several licensees. This differs from an exclusive licence, which assigns rights to a specific licensee, to the exclusion of others.

- **Principal Investigator**: The lead researcher or scientist for a project.

- **Researcher**: Any person conducting research or involved in the creation, collection, or generation of Research Data, for or on behalf of LSHTM. This may include, but not be limited to employed staff, research students, and honorary staff.
• **Research Project**: A unit of work performed by one or more researchers that has been established for the purpose of addressing specific aims and objectives.

• **Retention Period**: The time period for which the research data must be kept. The time period is influenced by several factors, including institutional, legislative, regulatory, and contractual obligations. The LSHTM RR&D Schedule state that research data must be retained for a minimum of 10 years following project completion, with the recognition that third party requirements that have a longer retention period will take precedence.

6. **REFERENCES**

- **Concordat on Open Research Data**

- **FAIRsharing.org** [https://fairsharing.org/](https://fairsharing.org/)

- **LSHTM Data Management Plan for research projects** [https://doi.org/10.17037/PUBS.03716765](https://doi.org/10.17037/PUBS.03716765)

- **LSHTM Data Classification and Handling Policy** - [https://www.lshtm.ac.uk/aboutus/organisation/information-management-and-security](https://www.lshtm.ac.uk/aboutus/organisation/information-management-and-security)

- **LSHTM Data Protection Policy**
  [https://www.lshtm.ac.uk/aboutus/organisation/information-management-and-security](https://www.lshtm.ac.uk/aboutus/organisation/information-management-and-security)

- **LSHTM Good Research Practice Policy**
  [https://www.lshtm.ac.uk/sites/default/files/Good_Research_Practice_Policy.pdf](https://www.lshtm.ac.uk/sites/default/files/Good_Research_Practice_Policy.pdf)

- **LSHTM Information Management and Security Policy**
  [https://www.lshtm.ac.uk/aboutus/organisation/information-management-and-security](https://www.lshtm.ac.uk/aboutus/organisation/information-management-and-security)

- **LSHTM Records Retention & Disposal Schedule**

- **LSHTM Standard Operating Procedures**
  [https://lshtm.sharepoint.com/Research/Research-Governance/Pages/standard-operating-procedures-%28sops%29.aspx](https://lshtm.sharepoint.com/Research/Research-Governance/Pages/standard-operating-procedures-%28sops%29.aspx)

- **RDM Policy support document - Data Access Procedures**
  [https://doi.org/10.17037/PUBS.00612422](https://doi.org/10.17037/PUBS.00612422)