INN User Policy and Data Overview for HCP Lifespan Dataset

Summary: This document contains user policies that INN researchers must follow when accessing the Human Connectome Project (HCP) Lifespan dataset. By accessing the dataset, you agree to follow the INN's NIMH Data Use Certification (DUC) and any additional requirements outlined in this policy document. Failure to comply with this policy will result in removal from the INN Group Access for the HCP Lifespan dataset and may affect other data use agreements you may have with the INN. An overview of the dataset and useful links are also included below.

The following are notable items from the INN's NIMH DUC for the HCP Lifespan dataset. Users are responsible for consulting the complete DUC document for other policy items.

1. **Data will be used for research.** Researchers agree to use data for scientific investigation, scholarship or teaching, or other forms of research and research development.
2. **No distribution of data.** Researchers agree to retain control over data and to not distribute, sell, or move data to any other individual, entity, or third-party system except to authorized collaborators (i.e., individuals specified in the Data Use Certification).
3. **Collaboration with shared data.** Recipients may distribute (share) data from the NIMH Data Archive with authorized researchers (collaborators) who are listed on a non-expired DUC for the same Permission Group and have agreed to the terms in this DUC, for the purpose of collaboration on research projects only. Recipients are responsible for ensuring that collaborators are authorized researchers.
4. **Compliance with applicable human subjects' protection and institutional requirements.** No re-identification of subjects. Compliance with all federal and institutional regulations.
5. **Acknowledgments.** Researchers shall acknowledge the appropriate NIMH Data Archive data repository and the relevant DOI, in any oral and written presentations, disclosures, and publications from any analyses of data.

INN Group Access Policy:
A group access request was made to obtain the HCP Lifespan dataset. Only individuals listed in this request are permitted access. To request an amendment to include new users, please email: **inn@sfu.ca. Users are expected to seek their own REB approval for secondary use of data when relevant.**

Data Management:
The data management plan for the downloaded HCP Lifespan data can be found here. The downloaded dataset is stored centrally at SFU on /ctb-rmcintos and managed by INN personnel. Users will be provided read-only access to the centrally-stored data. Users are expected to store and manage their own derived data and are strongly encouraged to create data management plans for their lab-specific workflows.

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Overview of dataset: The Lifespan HCP Release 2.0 contains both the HCP Aging (HCP-A or HCA) and HCP Development (HCP-D or HCD) datasets. The HCP-A cohort includes 725 subjects (36-100+ years) while the HCP-D cohort includes 652 subjects (5-21 years) with neuroimaging data collected using 3T MRI.

The Lifespan **HCP-A** Release 2.0 includes the following cross-sectional visit 1 (V1) data:

- unprocessed imaging data (structural MRI, high-resolution hippocampal T2, resting state fMRI, task fMRI, diffusion, and arterial spin labelling)
- preprocessed rfMRI and tfMRI
- processed sMRI and fMRI data
- non-imaging demographic and behavioural data

The Lifespan **HCP-D** Release 2.0 includes the following cross-sectional visit 1 (V1) data:

- unprocessed imaging data (structural MRI, resting state fMRI, task fMRI, diffusion, and arterial spin labelling)
- preprocessed rfMRI and tfMRI
- processed sMRI and fMRI data
- non-imaging demographic and behavioural data

The centralized INN copy of Release 2.0 was downloaded on February 5, 2023.

Notes on data exploration and management: Copying either of the full datasets is highly discouraged as they are extremely large (~22 TB each). If processing and/or analysis are to be performed on Cedar, users may read the centralized copy of the data directly and store derived outputs in their own storage allocations. If processing and/or analysis are to be performed elsewhere, users are encouraged to identify only the files that are necessary for their research purpose for copy. Users are encouraged to explore the example subjects provided in /hcp-lifespan/example_subjs in combination with documentation listed below to aid in the identification of relevant files.

Useful links:

1. Extending the Human Connectome Project across ages: Imaging protocols for the Lifespan Development and Aging projects (Harms et al., 2018)
2. The Human Connectome Project: A retrospective (Elam et al., 2021)
3. HCP-Aging and HCP-Development Lifespan 2.0 Release Documentation (contains all links listed below)
4. Appendix 1: File Names and Directory Structure (lists all file names, directories, and subdirectories obtained when downloading available demographic, unprocessed, and structural preprocessed imaging data from an exemplar HCP-Aging (HCA) and an exemplar HCP-Development (HCD) subject)
5. Appendix 2: Behavioral & Clinical Instrument Details & References (lists all behavioural and clinical instrument details and how to reference them in a directory)
6. "Crosswalk" Data Dictionary for Behavioral data (Spreadsheet to translate NDA data structures/elements to HCP behavioural variables and instruments)
7. HCP-Aging Completeness CSV (Per subject imaging and behavioural completeness, QC Issues, and unrelated status in a CSV spreadsheet for HCP-A)

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8. HCP-Development Completeness CSV (Per subject imaging and behavioural completeness, QC Issues, and unrelated status in a CSV spreadsheet for HCP-D)