The NACC database is funded by NIA/NIH Grant U24 AG072122. NACC data are contributed by the NIA-funded ADRCs.

**ADVANCED MULTIMODAL DATA INTEGRATION AND SHARING**

NACC is developing and transitioning to the new NACC Data Platform (NACC DP), a modern and secure multimodal data integration, harmonization, and sharing platform. The new NACC DP will ingest and integrate existing (UDS, Neuropathology, non-standard MRI/PET) and new data streams (Digital Biomarker, Digital Neuropathology, EHR/CMS), and expanded partner metadata such as standard MRI/PET computed data from SCAN, biospecimen sample assay data (e.g., blood-based biomarker data) from NCRAD, and genetic/genomic data from NIAGADS. The use of standardized NACC identifiers supports integration of all ADRC data streams, enabling researchers to quickly search, build cohorts, and access all data modalities via the Data Front Door (DFD).

The NACC DP is designed to make ADRC data as findable, accessible, interoperable, and reusable (FAIR) as possible. It is scalable to new data streams, interoperable with other data repositories, and provides secure sandbox options for collaborative data analysis to support AI-driven discovery. The DFD will enable researchers to tackle new questions in the field and will accelerate Alzheimer’s Disease and Related Dementia (AD/ADRD) discovery. Together, this modernization will also position NACC and the ADRCs at the leading edge of NIA's new Data Management and Sharing Policy (released Oct 2020) enabling them to amplify their impact and better keep pace with rapid changes in biomedical research and information technology moving forward. Learn more at [www.naccdata.org](http://www.naccdata.org).

**PROGRESS AND GOALS**

The NACC DP modernization is underway and is transforming how NACC: 1) collects data from ADRCs; 2) integrates and harmonizes existing and new data streams; 3) ensures data quality; and 4) makes all ADRC data searchable, accessible, and visualizable to ADRCs and AD/ADRD researchers around the world.

NACC has already transferred the current ADRC data to the new NACC DP/secure AWS Cloud and will be launching the ADRC Portals, SCAN dashboard, and expanded Quick Access Files in the summer of 2023. NACC is also making steady progress toward launching a new electronic data capture system in collaboration with the ADRC Electronic Data Capture (EDC) Workgroup.
NACC has developed an ADRC Portal prototype and is actively conducting user testing with ADRC representatives. Each ADRC will have their own private ADRC Portal within the NACC DP that is only accessible to designated ADRC representatives. NACC is using User Centered Design to develop dashboards to adapt the ADRC Portal interface to the ADRC program's unique needs.

**Current Data Streams**
- Harmonized Phenotypic Data (UDS)
- Neuropathology Reports
- Non-Standard MRI/PET

**New Data Streams**
- Participant Diversity Dashboard
- ADRC Standard MRI/PET (SCAN) Dashboards
- Specimen / Marker / Genetic Metadata

**Data Front Door**

**Quick Access Files**

**Cohort Selection**

**SCAN Public Dashboard**

**One-Stop-Shop for ADRC Data**

NACC is making progress on developing the Data Front Door, a one-stop-shop for all ADRC data for all audiences that access Alzheimer's research datasets. This tool will be freely accessible to researchers around the world via the NACC Data Platform and will allow for data sharing via Quick Access Files, an innovative cohort selection tool (powered by Leaf), and the SCAN Public Dashboard.

**Progress and Goals**

NACC has collaborated closely with NCRAD, NIAGADS, SCAN, ADRCs, and ADRD researchers to begin to define requirements for the Data Front Door cohort selection tool and is planning to hold focus groups and conduct prototype testing to gather additional input from stakeholders and iteratively improve design features. This tool will eventually provide advanced cohort data discovery, analytics, and even machine learning capabilities to data.

**Easy Access Portals**

The ADRC Portals will provide ADRCs with self-service access to view, download, and audit their real-time data. These portals will replace inefficient static monthly reports with modern real-time ADRC-specific data portals (ADRC Portals), fulfilling an emergent request from ADRCs to have better access to their data submissions.

The ADRC Portals will allow ADRC's to access six core data/metadata types:
- UDS
- Neuropathology
- Non-standard MRI/PET
- Standard MRI/PET (SCAN)
- Biospecimen (NCRAD) and Genetic/genomic (NIAGADS)
- Participant Diversity Metrics

**Progress and Goals**

NACC has developed an ADRC Portal prototype and is actively conducting user testing with ADRC representatives. Each ADRC will have their own private ADRC Portal within the NACC DP that is only accessible to designated ADRC representatives. NACC is using User Centered Design to develop dashboards to adapt the ADRC Portal interface to the ADRC program's unique needs.

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