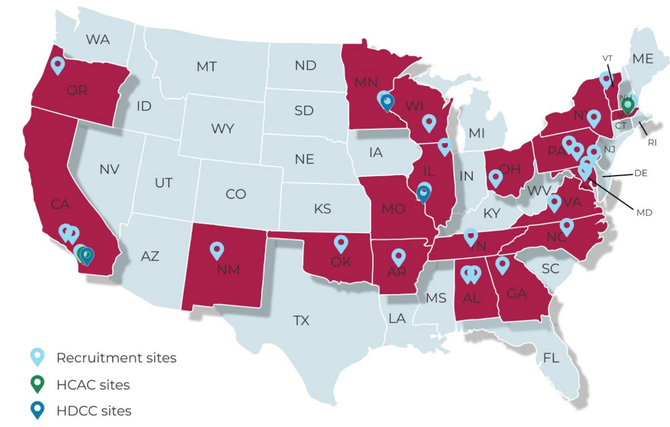
HEALthy Brain and Child Development (HBCD) Study
Initial Data Release

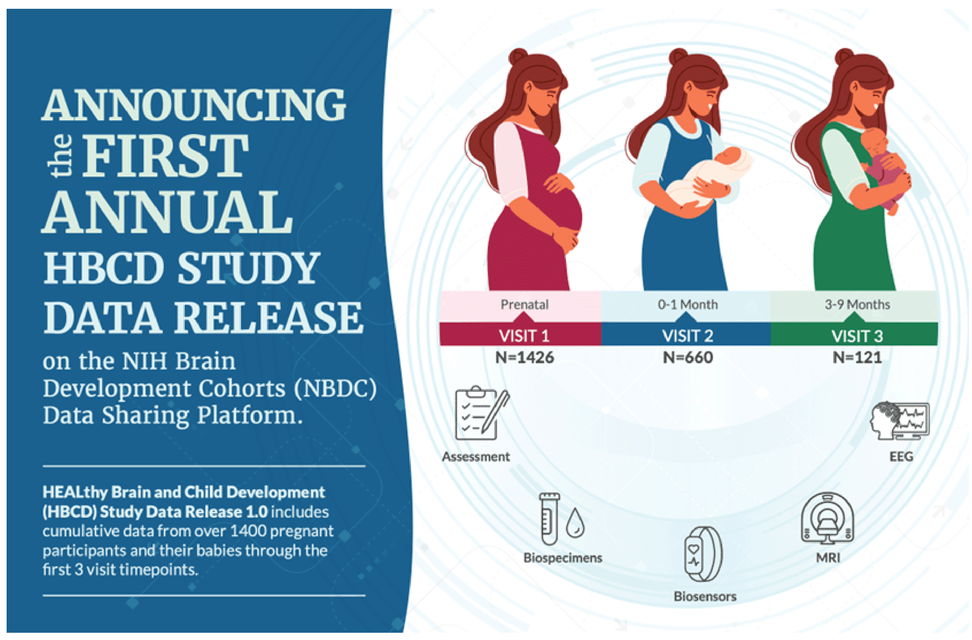
HEALthy Brain and Child Development
Babies • Brains • Bright Futures

HBCD Study

- Largest long-term study of early brain and child development in the U.S.
- Enrolling over 7,000 participating families from 27 recruitment sites and following them from pregnancy through early childhood.
- Long-term goal is to better understand how child development is affected by exposure to social and environmental experiences and conditions.
- Knowledge gained from this NIH-supported research will have lasting impacts on future generations of children.



Data Release



Access & Download Data

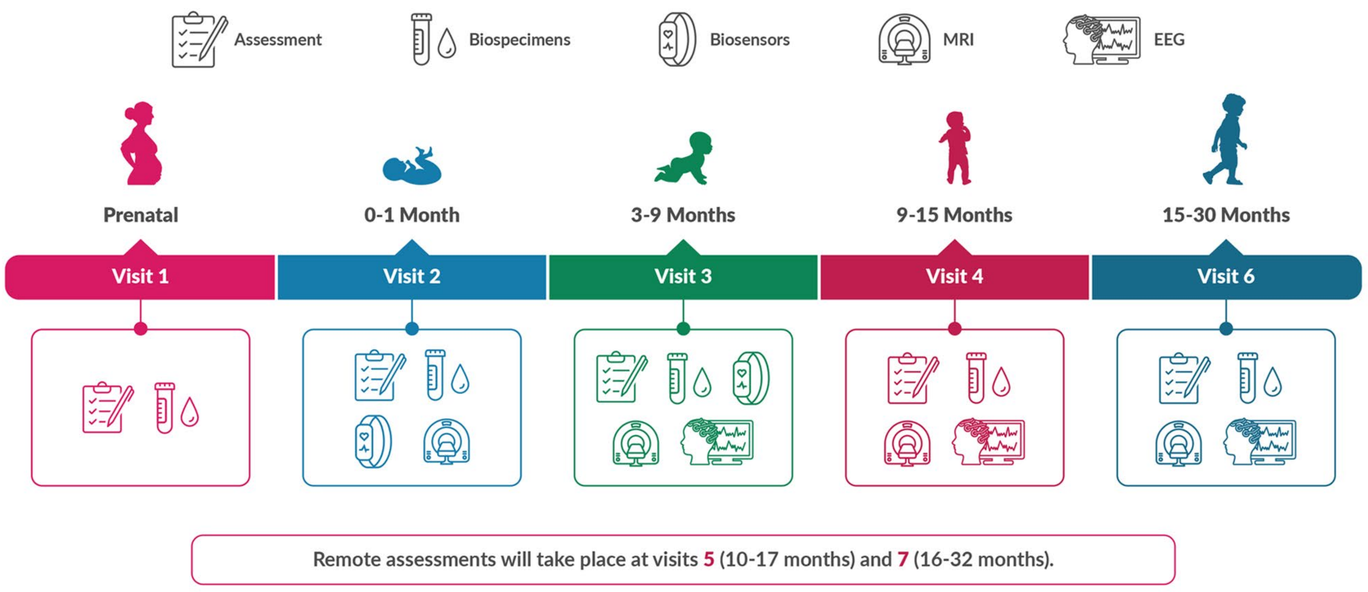
NBDC
NIH BRAIN DEVELOPMENT COHORTS

- Submit a Data Use Certification (DUC) through the NBDC Data Hub
- Responsible Use Training: Complete training on responsible data and biospecimen use prior to data access approval
- Two main platforms for exploring, querying, and downloading data

LASSO DEAP

- Tabulated data
  - Standardized table format with one table provided for all participant data per measure and instrument data (e.g., demographics) and data derived from the file-based data.
- File-based data
  - Imaging and biosignal data provided in varied formats depending on the modality.

Procedure



Visit 1: Prenatal

- Maternal Health
- Substance Use
- Biospecimens
- Social & Environmental Determinants

Visit 2: 0-1 month

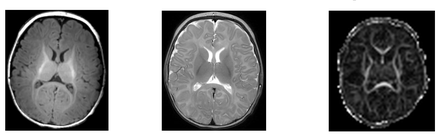
- All Visit 1 measures plus:
- Transitions in care
- Infant physical health
- Wearables
- Brain imaging

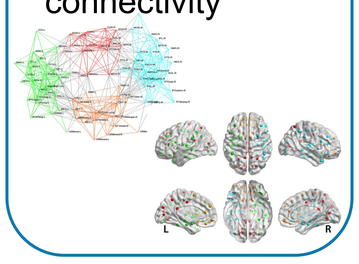
Visit 3: 3-9 months

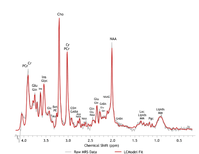
- All Visit 1 & 2 measures plus:
- Brain activity
- Neurocognition & Language
- Behavior and
- Caregiver-Child
- Interactions

MRI

Structure	Function	Metabolic
T1w, T2w, Diffusion, Quantitative/Relaxometry	fMRI	MRS
•Volume, Cortical Thickness •Surface Area, Surface mapping •Scalar measures (e.g., FA) •Tractography •Structural Connectivity •Quantitative T1/T2/PD maps	•Functional network measures •Functional connectivity	•Oxidative stress •GSH •GABA •Glutamate







EEG

Faces & Objects	Upright & Inverted Faces, Objects
Auditory Oddball	Mismatch Negativity
Video Resting State	3 min; 1 continuous silent video
Visual Evoked Potential	Checkerboard A, Checkerboard B