

The CANDLE Study: Measurement Collection Timeline

Conditions Affecting Neurocognitive Development and Learning in Early Childhood

Maternal Measurements

Prenatal & Birth	M1	M2	M3	HV1	CV1	CV2	HV2	CV3	CV4
Maternal Baseline Enrollment Data Form <i>Includes BMI measurements, substance abuse history, OB/GYN history, medical history, sexual history</i>	✓								
L&D Updates and Complications Form <i>Includes complication history, type of labor, delivery classification</i>			✓						
L&D Summary Form			✓						
Neonatal Summary Form <i>Includes birth status, infant gender, discharge diagnosis</i>			✓						

Demographics	M1	M2	M3	HV1	CV1	CV2	HV2	CV3	CV4
Demographics Survey <i>Includes gender, language, age, race, ethnicity, income, education, insurance status, marital status, paternal information</i>	✓				✓	✓		✓	✓

Biological Samples	M1	M2	M3	HV1	CV1	CV2	HV2	CV3	CV4
Blood	✓	✓	✓						
Urine	✓	✓	✓						

Nutrition	M1	M2	M3	HV1	CV1	CV2	HV2	CV3	CV4
Food Frequency Questionnaire	✓			✓					
Choline Inhibitor Questionnaire	✓			✓	✓		✓	✓	
Infant Feeding Practices Questionnaire (IFQ)				✓	✓		✓	✓	
Food Program Questionnaire				✓	✓		✓	✓	
24 Hour Food Recall				✓	✓		✓	✓	
Comprehensive Feeding Practices Questionnaire									✓

Health	M1	M2	M3	HV1	CV1	CV2	HV2	CV3	CV4
Family Health History <i>Includes family history of substance abuse, developmental/learning disabilities, dementia, Autism, psychiatric disorders, cardiovascular health, obesity and related complications</i>					✓				
CAGE Substance Abuse Screening Tool								✓	
Maternal Exam									✓
Residence Establishment and Lead Risk Assessment				✓	✓		✓	✓	

Mental Health	M1	M2	M3	HV1	CV1	CV2	HV2	CV3	CV4
Temperament Evaluation (TEMPS)	✓					✓			
Brief Symptom Inventory (BSI)		✓			✓	✓		✓	✓
Rosenberg Self-Esteem Questionnaire		✓				✓			
Edinburgh Post-Natal Depression Scale (EPDS)				✓	✓				
NEO Personality Inventory								✓	
State Trait Anxiety Inventory (STAI)								✓	
Center for Epidemiological Studies Depression Scale (CESD)									✓

Cognitive	M1	M2	M3	HV1	CV1	CV2	HV2	CV3	CV4
Wechsler Abbreviated Scale of Intelligence III: Subscales					✓				
Wechsler Individual Achievement Test III-Word Reading								✓	

Psychosocial	M1	M2	M3	HV1	CV1	CV2	HV2	CV3	CV4
Conflict Tactics Scale - 2S		✓				✓			✓
Traumatic Life Events Questionnaire		✓						✓	
Social Support Questionnaire - 6		✓				✓			
Knowledge of Infant Development Inventory (KIDI)		✓				✓			
Household Questionnaire <i>Includes who lives in the home, feelings about neighborhood</i>				✓			✓	✓	✓
Child Abuse Potential Inventory (CAPI)					✓	✓		✓	
Parenting Stress Index (PSI)					✓	✓		✓	✓
Child Care Arrangements Questionnaire (CCI) <i>Includes who cares for child, location, type of child care (e.g. organized day care)</i>					✓	✓		✓	
HOME Inventory							✓		
Parental Incarceration									✓
Parenting Relationship Questionnaire									✓

Child Measurements

Prenatal & Birth	M1	M2	M3	HV1	CV1	CV2	HV2	CV3	CV4
L&D Complications Form			✓						
L&D Summary Form			✓						
Neonatal Summary Form			✓						

Biological Samples	M1	M2	M3	HV1	CV1	CV2	HV2	CV3	CV4
Umbilical Cord Blood			✓						
Placental Tissue			✓						
Blood			✓						✓

Hair					✓	✓		✓	✓
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Nutrition	M1	M2	M3	HV1	CV1	CV2	HV2	CV3	CV4
Food Frequency Questionnaire	✓			✓					
Choline Inhibitor Questionnaire	✓			✓	✓		✓	✓	
Infant Feeding Practices Questionnaire				✓	✓		✓	✓	
Food Program Questionnaire				✓	✓		✓	✓	
24 Hour Food Recall				✓	✓		✓	✓	
Comprehensive Feeding Practices Questionnaire									✓

Health	M1	M2	M3	HV1	CV1	CV2	HV2	CV3	CV4
Child Health Update Form <i>Includes hospitalizations, illnesses, weight</i>				✓	✓		✓	✓	
Child Exam					✓	✓		✓	✓
Brief Infant Sleep Questionnaire (BISQ) <i>Asked at CV1 "Where does your child sleep at night?"</i>					✓		✓	✓	
Child Sleep Habits									✓
Asthma and Environment Questionnaire									✓
Atopy History									✓
Children with Special Health Care Needs Screener <i>Includes medications; medical, behavioral, or health conditions; educational services; PT, OT, speech therapy; anthropometry measurements</i>					✓	✓		✓	

Cognitive	M1	M2	M3	HV1	CV1	CV2	HV2	CV3	CV4
BAYLEY Scales of Infant Development III					✓	✓		✓	
Bracken School Readiness Assessment - 3								✓	
Stanford-Binet 5									✓
Behavior Rating Inventory of Executive Functioning - Preschool (BRIEF-P)									✓

Socioemotional	M1	M2	M3	HV1	CV1	CV2	HV2	CV3	CV4
Brief Infant-Toddler Social and Emotional Assessment (BITSEA)					✓	✓			
Scales of Independent Behavior - R					✓	✓		✓	✓
Modified Checklist of Autism in Toddlers (MCHAT)						✓			
Archenbach Test Observation Score								✓	
Child Autism Rating Scale (CARS)								✓	
Child Behavior Checklist (CBCL)								✓	✓

Miscellaneous Measures (collection in progress)

Externally Linked Data	M1	M2	M3	HV1	CV1	CV2	HV2	CV3	CV4
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Child Opportunity Index									
Geocoded and Census Data									
TennCare Participation									
Insurance Status (e.g. WIC, SNAP)				✓	✓				

Phone Visit Measures

Measurement	PV1	PV2	PV3	PV4	PV5	PV6	PV7	PV8	PV9
Sleep Questionnaire	✓	✓	✓		✓			✓	✓
Edinburgh Post-Natal Depression Scale (EPDS)		✓							
Choline Inhibitor Questionnaire	✓	✓	✓		✓			✓	✓
Lead Risk Assessment	✓	✓	✓		✓			✓	✓
Child Health Update	✓	✓	✓		✓			✓	✓
Nutritional Data System for Research (NDSR)	✓	✓	✓		✓			✓	

Phone Visit Data collected at 3, 6, 9, 15, 18, 21, 27, 30, 33, 42, 48, and 56 months

Timepoint Details

Timepoint	Detail	Age
M1	Enrollment Clinic Visit	16-26 weeks pregnant
M2	3rd Trimester Clinic Visit	27-42 weeks pregnant
M3	Birth	newborn
HV1	Home Visit	4 weeks
CV1	Clinic Visit	12 months
CV2	Clinic Visit	24 months
HV2	Home Visit	24 months
CV3	Clinic Visit	36 months
CV4	Clinic Visit	48-60 months