

Overview of Add Health for New Data Users



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Add Health
The National Longitudinal Study of Adolescent to Adult Health

National Longitudinal Study of Adolescent to Adult Health

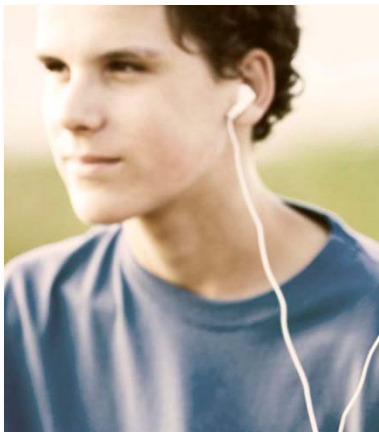
- On-going program project that began in 1994.
- Developed in response to a congressional mandate to fund a study of adolescent health.
- Funded by the National Institute of Child Health and Human Development (NICHD) with co-funding from 23 other federal agencies and foundations.
- Fifth follow-up wave 2016-2018.

Key Features of Add Health

- Nationally representative study that explores the causes of health and health-related behaviors of adolescents and their outcomes in young adulthood.
- Multi-survey, multi-wave inter-disciplinary design.
- Direct measurement of the social contexts of adolescent life and their effects on health and health behavior.
- Unprecedented racial and ethnic diversity and genetically informed sibling samples.

Initial Goal:

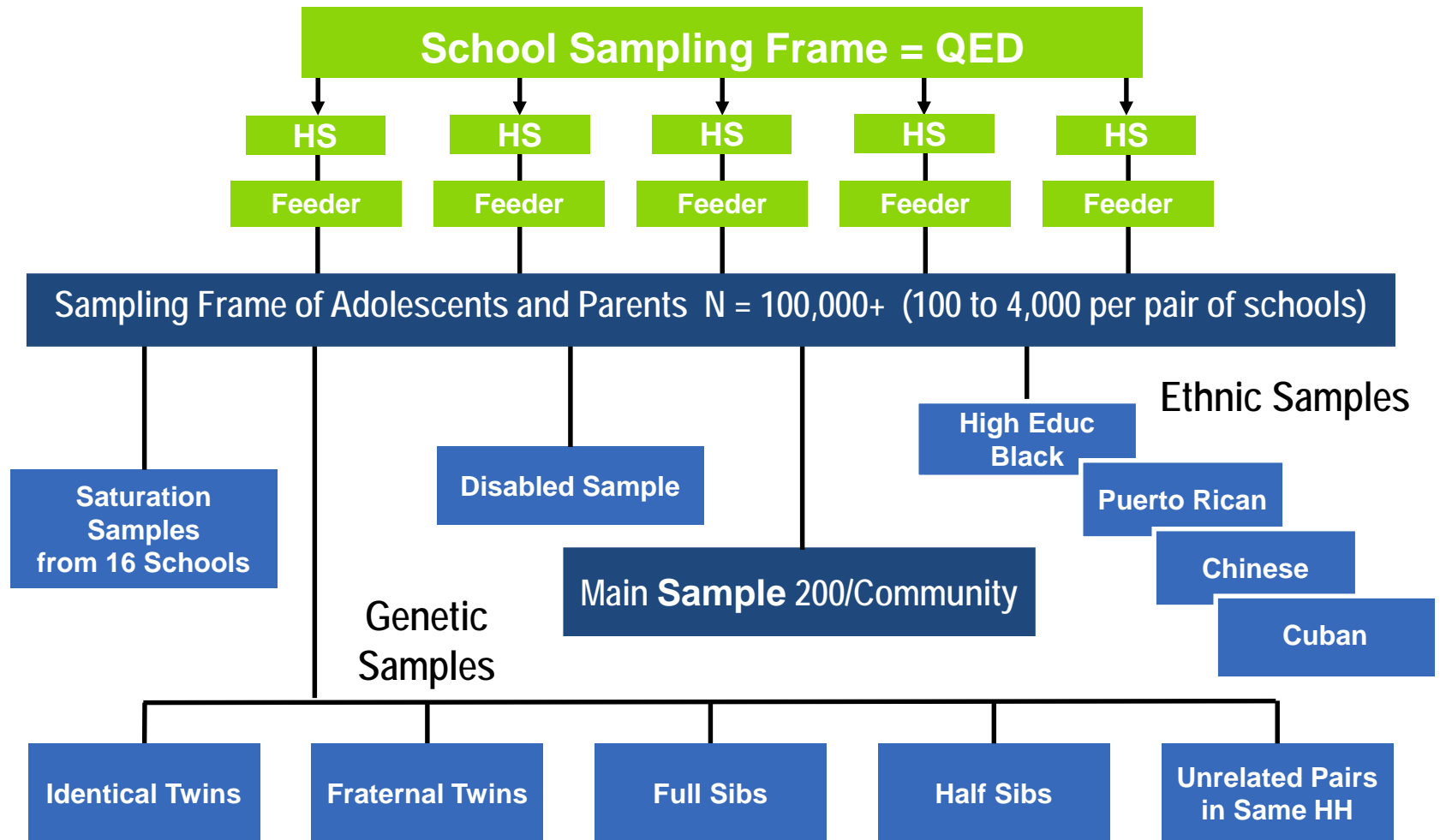
Putting the Individual Into Context



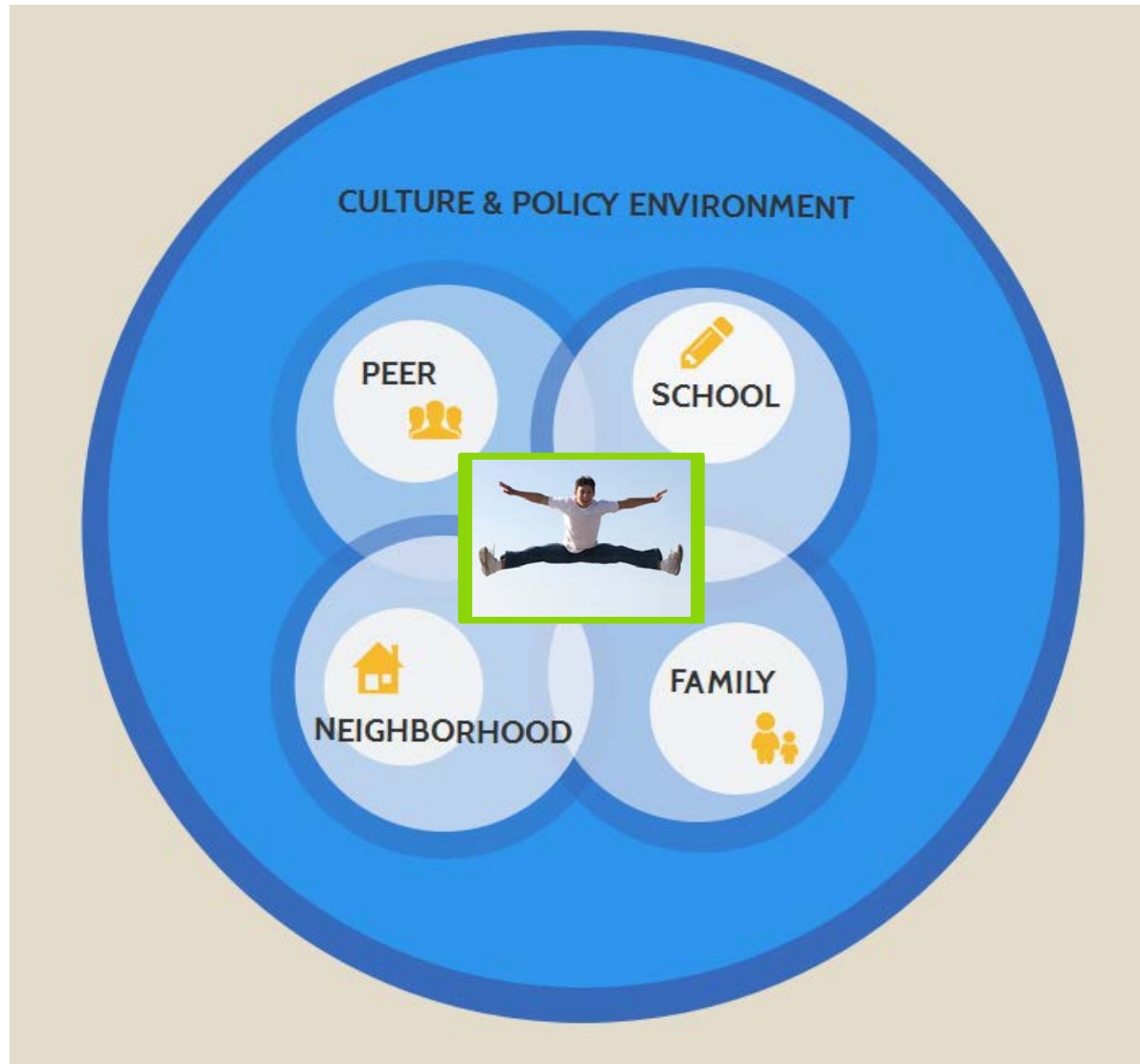
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 **Add Health**
The National Longitudinal Study of Adolescent to Adult Health

Sampling Structure

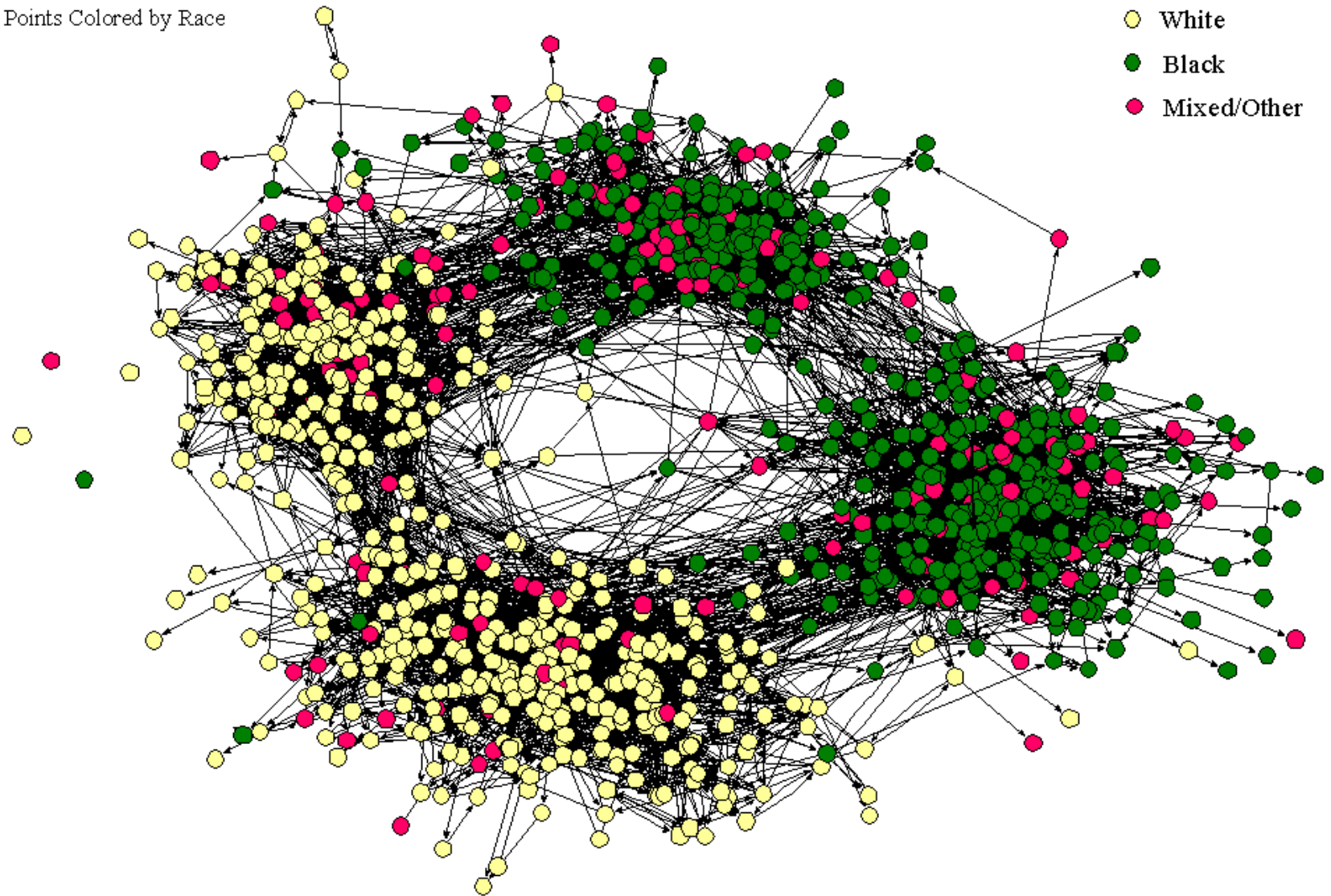


Add Health Contextual model



The Social Structure of “Countryside” School District

Points Colored by Race



Source: Moody, 2001, *American Journal of Sociology* 107: 679-716

Unique Features of Study Design

- Ethnic oversamples produce
 - unprecedented diversity in race and ethnicity in a representative population of adolescents
 - large numbers of youth in immigrant families
- Embedded genetic sample enables researchers to sort out genetic from environmental effects and explore gene-environment interactions.

Race and Ethnic Diversity in Add Health

Race/Ethnicity	N	%
Mexico	1,767	8.5
Cuba	508	2.5
Central-South America	647	3.1
Puerto Rico	570	2.8
China	341	1.7
Philippines	643	3.1
Other Asia	601	2.9
Black (Africa/Afro-Caribbean)	4,601	22.2
Non-Hispanic White (Eur/Canada)	10,760	52.0
Native American (non-Hispanic)	248	1.2
Total N	20,686	100.0

Missing on race/ethnicity=59



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Diversity in Add Health: Immigrant Status

Immigrant Status	N	%
1st generation	1,707	8.34
2 nd generation	2,987	14.59
3 rd generation +	15,774	77.07
Total N	20,468	100.0

Diversity of Family Forms at Wave I

Family Structure	N	%
2 biological parents	10,339	53.3
2 adoptive parents	403	0.7
Bio Mom/Step Dad	2,756	13.6
Bio Dad/Step Mom	591	2.6
Single Mom	4,520	20.4
Single Dad	637	3.1
Surrogate parent(s)	1,499	6.3
Total	20,745	100.0

In-School
Administration



Survey
Administration

Wave I
1994-1995
(79%)

Students
90,118

School
Admin
144

Adolescents
in grades 7-12
20,745

Parent
17,670

Wave II
1996
(88.6%)

School
Admin
128

Adolescents
in grades 8-12
14,738

Wave III
2001-2002
(77.4%)

Partners
1,507

Young Adults
Aged 18-26
15,197

Wave IV
2008
(80.3%)

IIV Study
≈ 100

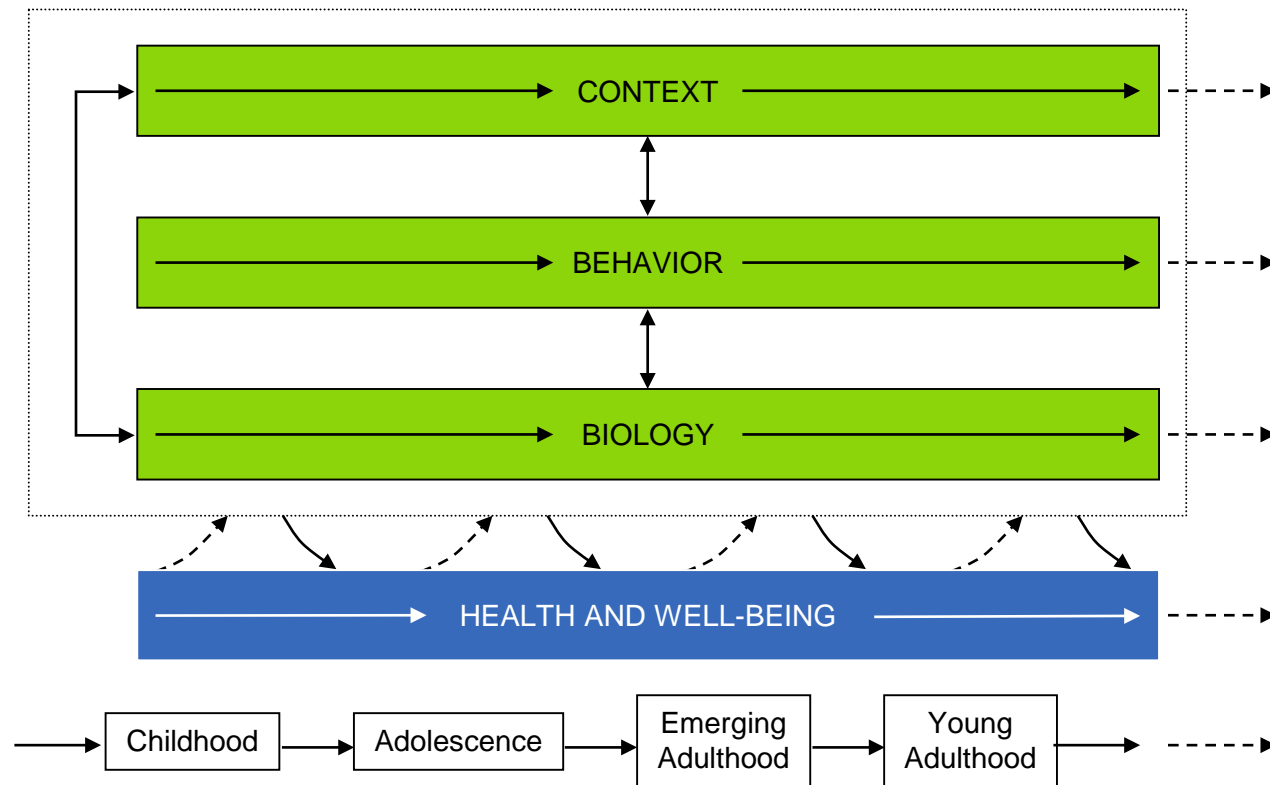
Adults
Aged 24-32
15,701

Wave V
2016-18

Adults
Aged 32-42
Target: 19,800

Parent
4,000

Integrative Life Course Theoretical Framework



Questionnaire Content Across Waves

Waves I, II

Demographic
Family, siblings, friends
Education, **work**
Physical and mental health
Daily activities and sleep
Relationships
Sexual, & fertility histories
Substance use
Delinquency and violence
Attitudes, religion
Economics, expectations
Psychological, personality

Wave III

Demographic
Family, siblings, friends
Education, work, **military**
Physical and mental health
Daily activities and sleep
Relationships
Sexual, & fertility histories
Substance use
Involmnt w/criminal justice sys
Attitudes, religion
Economics, expectations
Psychological, personality
Children and parenting
Civic participation
Gambling
Mentoring

Wave IV

Demographic
Family, siblings, friends
Educ, work, **military (records)**
Physical and mental health
Daily activities and sleep
Relationships
Sexual, & fertility histories
Substance use and abuse
Involmnt w/criminal justice sys
Work attitudes and chars, relig
Economics, expectations
Big 5 Personality, stressors
Children and parenting
Civic participation
Cognitive function
Psychosocial factors

Wave V

Demographic
Family, siblings, friends
Educ, work, military
Physical and mental health
Daily activities and sleep
Relationships
Sexual, & fertility histories
Substance use and abuse
Involmnt w/criminal justice sys
Work attitudes and chars, relig
Economics, expectations
Personality, Stressors
Children and parenting
Civic participation
Cognitive function
Psychosocial factors
Retrospective childhood health & SES


Physical and Social Contextual Data

- Census
- CDC (STD prevalence)
- FBI crime statistics
- National Center for Health Statistics
- National Council of Churches
- Questionnaire-based social context data
 - In-School Network Data
 - Adolescent Romantic Pair Data
 - In-School Friendship Nominations
 - In-Home Friendship Nominations
 - Family Context (Parent Interview, sibling information)
 - Wave III Married, cohabiting, and dating couples (“couple context”)

Physical and Social Contextual Data

- Ancillary studies
 - ONEdata - Obesity & Neighborhood Environment Database
 - Waves I, III, and IV
 - E.g., parks, street connectivity, sidewalks, presence of fast food restaurants
 - The Adolescent Health and Academic Achievement Study
 - Analysis of respondents' high school transcripts
 - detailed measures of academic progress and high school curriculum

Biological Data Across Waves

Adolescence	→ Transition to Adulthood	→ Young Adulthood	→ Adulthood
Wave I-II (Ages 12-20)	Wave III (Ages 18-26)	Wave IV (Ages 24-32)	Wave V (Ages 32-42)
Embedded genetic sample of ~3,000 pairs			
Physical development 			
Height, weight	Height, weight	Height, weight, waist	Height, weight, waist
	STI tests (urine)	Metabolic	Metabolic
	HIV test (saliva)	Immune function	Immune function
	Genetic (buccal cell DNA)	Inflammation	Inflammation
		Cardiovascular	Cardiovascular
		Genetic (buccal cell DNA)	Genetic (whole blood)
		Medications	Medications
			Renal

Social and Biological Longitudinal Data in Add Health

Adolescence  Adulthood

Wave I-II (12-20)	Wave III (18-26)	Wave IV (24-32)	Wave V (32-42)
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Social environmental data:

school	college	college	work
family	family	family	family
romantic rel	romantic rel	romantic rel	romantic rel
neighborhood	neighborhood	neighborhood	neighborhood
community	community	community	community
peer	peer		

Biological data:

Biological resemblance to siblings in household on 3,000 pairs

height	height	ht, wt, waist, BMI	ht, wt, waist, BMI
weight	weight, BMI	BP, pulse	BP, pulse
BMI	STI test results	immune	immune
	HIV test results	inflammation	inflammation
	DNA	diabetes	diabetes
		DNA	kidney disease
		GWAS	

Wave IV Biospecimen Participation

- 96% of respondents consented to provide saliva for DNA
- 94% consented to provide blood spots
- For each specimen, 81% of those consenting to collection also consented to archiving
- Approx 12,200 DNA samples available for further testing
- GWAS data will be deposited into dbGaP in 2016.

Wave V Overall Goals

- Re-interview Add Health cohort members to collect social, environmental, behavioral, and biological data with which to track the emergence of chronic disease.
- Build on the life course history of respondents by adding and refining early-life measures of their birth and childhood:
 - Retrospective questions about birth and early childhood in Wave V survey
 - Birth records of respondents born in a subset of states
- Bring these data together with existing longitudinal data to create a 40-year life course record to test hypotheses about developmental origins of health and disease.

Wave V Interview 2016-2018

- Wave I respondents who will be moving through their 4th decade of life (32-42 years)
- Collect the following data:
 - survey data reflecting longitudinal and new information
 - longitudinal and new biological data and specimens
 - geographic locations for longitudinal spatial data
 - consent to obtain birth records of Add Health respondents born in a subset of six states
- Main study fieldwork began June 6, 2016

Wave V Data Collection

- Mixed mode survey design:
 - Web/mail with in-person and phone non-response follow up



Wave V mixed mode

- Collect biological measures and specimens using Examination Management Services, Inc. (EMSI) for in-home examination
 - Venous blood draw
- Continuous interviewing 2016-2018

Mixed Mode Wave V Survey

- Web survey: two 25 minute modules (~50 mins total)
- Paper survey with same visual presentation of modules
- Obtain consent for biomarker collection by EMSI who will schedule a follow up in-home exam
- Nonresponse follow-up
 - Sample nonrespondents and administer web survey in-person (CASI) on laptop
 - Abbreviated telephone questionnaire for contact information and request consent for biomarkers.

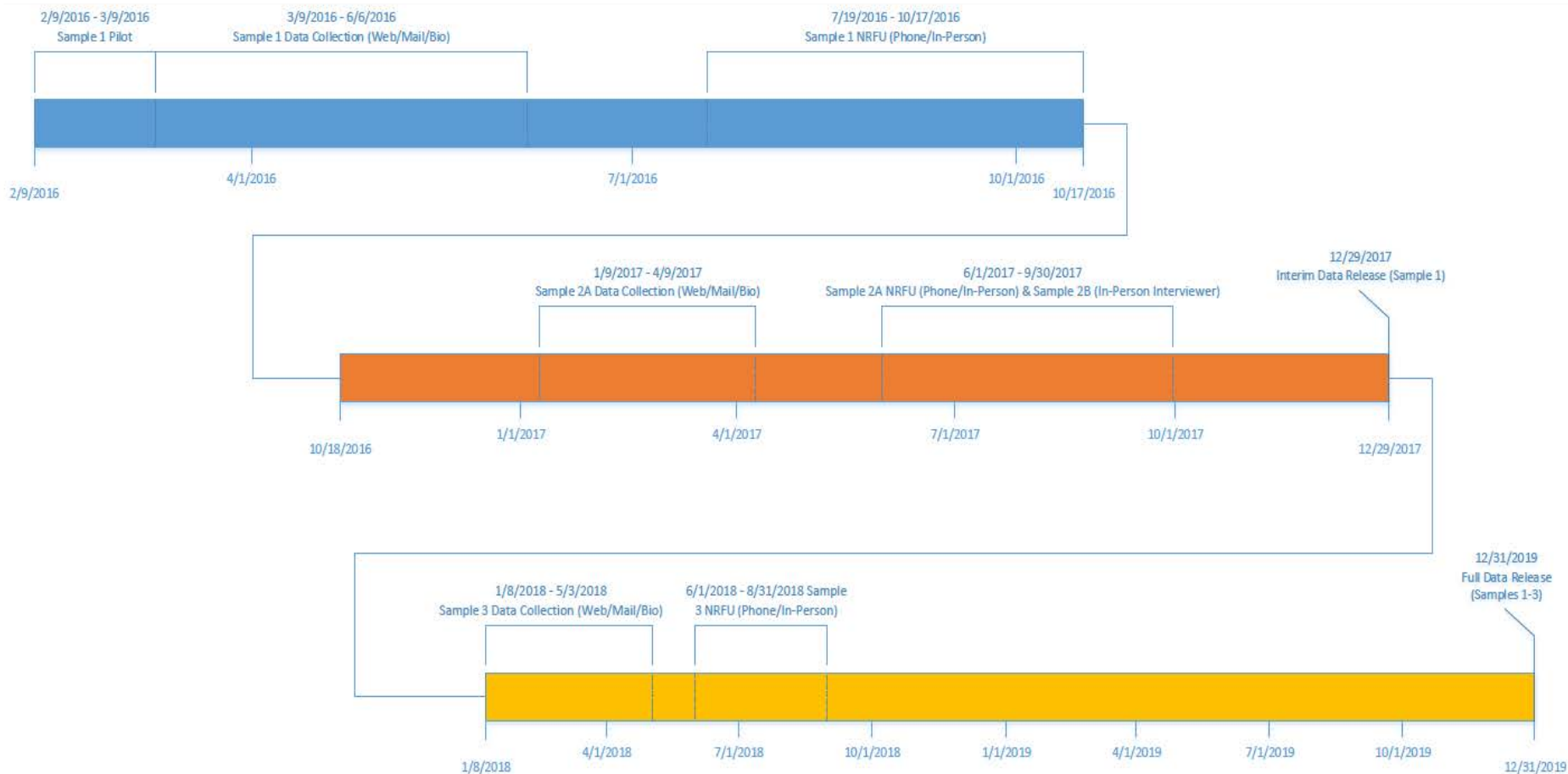
Wave V: Biological data

- Repeat measures of biomarkers:
 - anthropometrics
 - blood pressure
 - Whole blood assays of:
 - Inflammation
 - Lipids
 - Glucose
 - Glycosylated *hemoglobin*
- New biomarkers of kidney disease:
 - Creatinine
 - Cystatin C
- Medications inventory

Wave V Data Collection

- Conduct fieldwork on 3 nationally-representative samples sequentially during 2016-2018:
 - *Sample 1*: June 2016
 - *Sample 2a*: January 2017
 - *Sample 2b*: June 2017
 - subsample of 1,000 respondents interviewed in-person by interviewer to replicate Wave IV interview context to estimate mode effects
 - *Sample 3*: January 2018

Wave V Data Collection & Data Dissemination (2016-2019)



Sample 1 Experimental Treatments

	Factor B: Propensity/Incentive		
	Model-directed Incentive Plan		Standard Incentive Plan
Factor A: Survey Protocol	Low Response Propensity/High Incentive	High Response Propensity/Low Incentive	
Modular Survey	\$35/\$30	\$25/\$20	\$30/\$25
Singular Survey	\$65	\$45	\$55

Wave V Data Release

- Two data releases:
 - Sample 1 data in late 2017;
 - Full Wave V sample data in 2019 after data cleaning, checking and merging.

Add Health Data Dissemination

Ashley Sorgi

Add Health Dissemination Coordinator

Add Health Data Dissemination

- Data dissemination structure & security
- Restricted-use data contracts
- Data discovery tools and resources
- CPC Data Portal

Four tier data dissemination according to disclosure risks

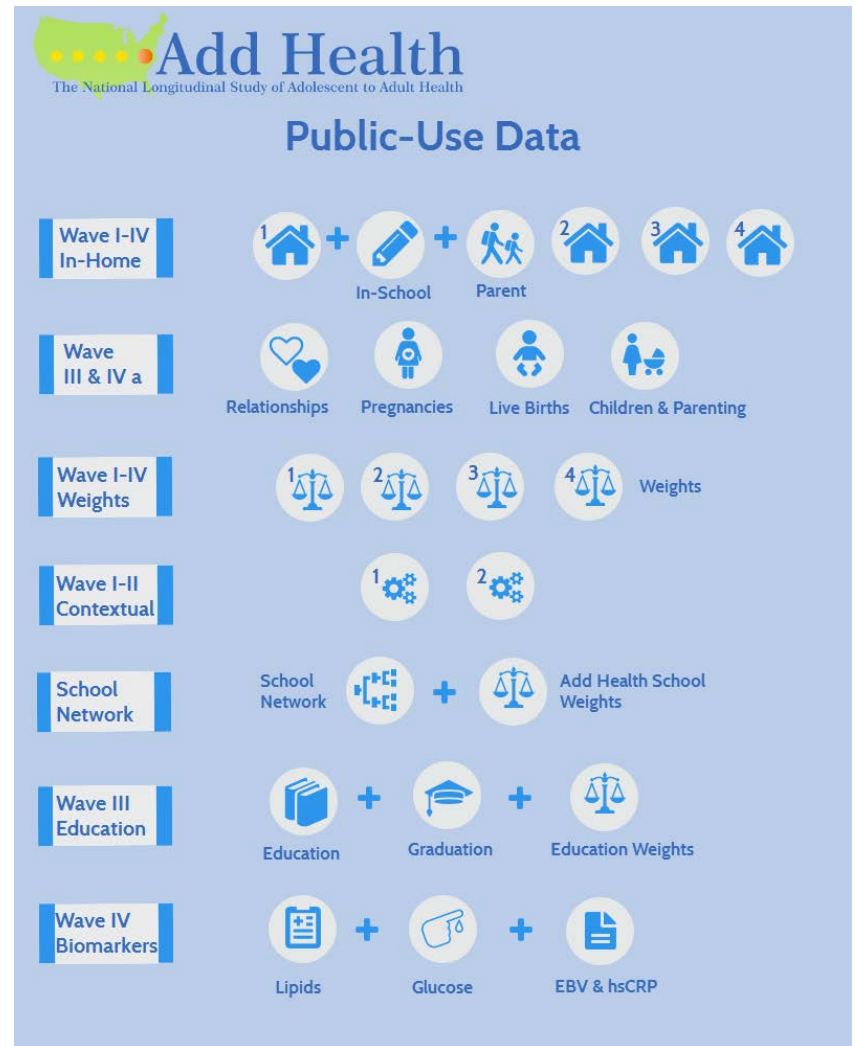
- Public-use data
- Restricted-use data
- High-security restricted data – Romantic Pairs
- Secure data facility for analyzing high school transcript data and for using geocodes to link contextual data
- dbGaP submission for GWAS data - 2016

Data Security

- **User requirements to protect from deductive disclosure:**
 - Pledge of confidentiality
 - Monitoring of data use
 - Store data securely
 - Deletion of temporary data analysis files every six months.
 - Security of printed information
 - Password protected screen saver, set to activate after 3 minutes of idle time.
 - Access data only from approved locations.

Public-Use Data can be downloaded from the following places:

- **Odum Institute Dataverse**
- **ICPSR**
- **Association of Religion Data Archives**



Restricted-Use Data Contract

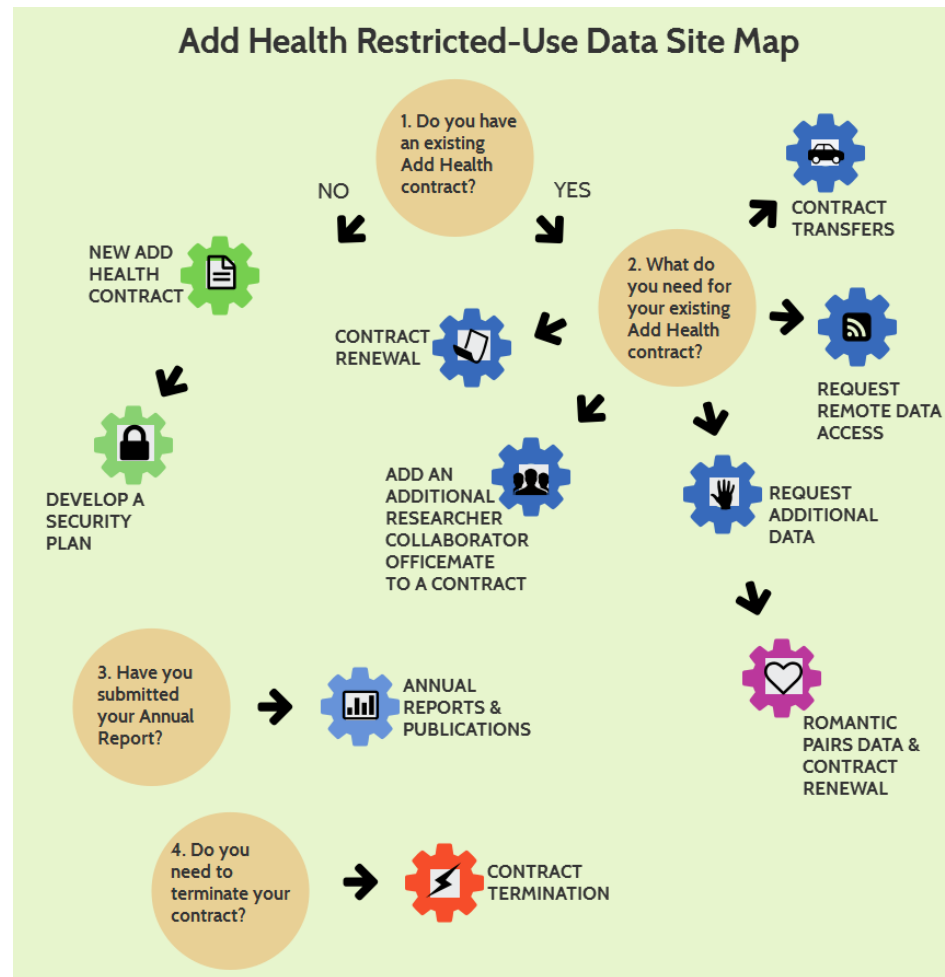
- Complete contract application – pdf
- Include IRB approval or waiver letter
- Include data processing payment (by check only)
- Make sure to download Attachment A – security plan form and include in application

Don't forget....

- **Your contract expires every 3 years!**
- Email us if you think your contract might be expired or to find out what your expiration date is.
- **Annual reports are due every year!**
- Let us know if you make changes to research staff or data storage locations.



Please visit our Contracts Homepage!





ADD HEALTH CODEBOOK EXPLORER (ACE)

- New interactive tool, developed in 2015 by the Add Health Team
- Developed in response to feedback that pdf codebooks were difficult to navigate and information on data collected across waves was nearly impossible to find
- Browse by topic or search by variable name, keyword, or phrase to discover the rich volume of data collected by Add Health



ADD HEALTH CODEBOOK EXPLORER (ACE)

Add Health Codebook Explorer (ACE)

The Add Health Codebook Explorer tool allows you to see how variables are related to each other, either topically or across time. This tool helps you identify which variables you may want to use in your analysis.

Search

Field

Question or Response ▼

Matches

contains ▼

Search Text

Find

Browse

[Topics](#)

[Instruments](#)

Topics

Expand All

- + [Contextual Data](#)
- + [Crime/Delinquency & Victimization](#)
- + [Demographic Characteristics](#)
- + [Education](#)
- + [Family](#)
- + [Friends & Social Network](#)
- + [Medication & Substance Use and Abuse](#)
- + [Meta Data](#)
- + [Physical Health](#)
- + [Psychological Well-being & Cognition](#)
- + [Reproductive Health](#)
- + [Risk Behavior](#)
- + [Romantic Relationships](#)
- + [SES, Labor Market & Occupation](#)

BROWSE BY TOPICS



ADD HEALTH CODEBOOK EXPLORER (ACE)

Add Health Codebook Explorer (ACE)

The Add Health Codebook Explorer tool allows you to see how variables are related to each other, either topically or across time. This tool helps you identify which variables you may want to use in your analysis.

Search			Browse
Field	Matches	Search Text	Topics
Question or Response ▾	contains ▾	sleep <input type="button" value="Find"/>	Instruments

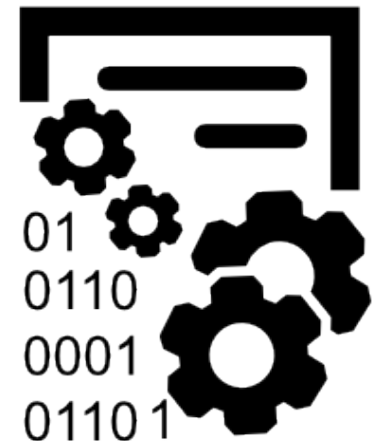
BROWSE BY KEYWORDS

Search Results (14)

Question	Instrument(s)	Topic(s)
Based on what you have noticed or what others have told you, are there times when you snore or you stop breathing during your sleep?	Wave IV In-Home Interview	Sleep
Do you usually get enough sleep?	Wave I In-Home Interview; Wave II In-Home Interview	Sleep
During the first few hours of not drinking, do you experience withdrawal symptoms such as the shakes, feeling anxious, trouble getting to sleep or staying asleep, nausea, vomiting, or rapid heart beats?	Wave IV In-Home Interview	Alcohol; Sleep; Stress/Anxiety; Substance Use/Abuse
During the first few hours of not using marijuana, do you experience withdrawal symptoms such as craving marijuana, feeling depressed, anxious, restless or irritable, having trouble concentrating, feeling tired or weak, having trouble sleeping, or a change in appetite?	Wave IV In-Home Interview	Depression; Illicit Drug Use; Marijuana; Nutrition; Sleep; Stress/Anxiety; Substance Use/Abuse
During the first few hours of not using {favorite drug}, do you experience one or more withdrawal symptoms such as craving {favorite drug} , feeling depressed, anxious, restless or irritable, having trouble concentrating, feeling tired or weak, having trouble sleeping, or a change in appetite?	Wave IV In-Home Interview	Depression; Illicit Drug Use; Nutrition; Sleep; Stress/Anxiety; Substance Use/Abuse
Have you ever been homeless for a week or longer--that is, you slept in a place where people weren't meant to sleep, or slept in a homeless shelter, or didn't have a regular residence in which to sleep?	Wave III In-Home Interview	Residence/Location
How many hours of sleep do you usually get?	Wave I In-Home Interview; Wave II In-Home Interview	Sleep

CPC Data Portal

- Restricted-Use data contract application process is moving to online application in the next year.
- Expedite and standardize contract application and renewal process for restricted-use Add Health data
- This system will also be the backbone for implementing restricted-use data file FTP transfers as the new mode of dissemination in the next year.



CPC Data Portal

[Public Data](#)[Restricted Data \(Single Study View\)](#)[Restricted Data \(Group View\)](#)[Quick link to the public data below ▾](#)

Wave I Data

[Download Data](#)

The public-use dataset for Wave I contains information collected in 1994–95 from Add Health’s nationally representative sample of adolescents. This dataset consists of one-half of the core sample, and one-half of the oversample of African-American adolescents with a parent who has a college degree, chosen at random. The total number of Wave I respondents in this dataset is **6,504**.

The Wave I public-use dataset includes information from each of the following sources (as available):

- Wave I In-Home Data File, includes Wave I In-School Questionnaire Data, Wave I Parent Questionnaire Data and Add Health Picture Vocabulary Test Scores
- Contextual data
- In-school network data
- Weights

Topics

- Demographic Characteristics
- Contextual Data
- Family
- Education
- SES, Labor Market & Occupation
- Physical Health
- Psychological Well-being & Cognition
- Friends & Social Network
- Medication & Substance Use and Abuse
- Reproductive Health
- Crime/Delinquency/Victimization
- Romantic Relationships
- Risk Behavior

Wave II Data

[Download Data](#)

CPC Data Portal

Public Data

Restricted Data (Single Study View)

Restricted Data (Group View)

Quick link to the restricted data group below ▾

Core Files

Requirements:

Add Health Data Processing Fee

Add Health IRB approval letter

Add Health Security Plan

Add Bundle

Friendship Files

Requirements:

Justification description for Add Health

Sibling Files

Requirements:

Justification description for Add Health

Contextual Data Files

Requirements:

Justification description for Add Health

Wave I Supplemental Files

Requirements:

Justification description for Add Health



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Add Health Co-Funders

- National Institute of Child Health and Human Development
- National Cancer Institute*
- National Center for Health Statistics, Centers for Disease Control and Prevention, DHHS
- National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, DHHS*
- National Center for Minority Health and Health Disparities*
- National Institute of Allergy and Infectious Diseases*
- National Institute of Deafness and Other Communication Disorders*
- National Institute of General Medical Sciences
- National Institute of Mental Health
- National Institute of Nursing Research*
- National Institute on Aging*
- National Institute on Alcohol Abuse and Alcoholism*
- National Institute on Drug Abuse*
- National Science Foundation*
- Office of AIDS Research, NIH*
- Office of the Assistant Secretary for Planning and Evaluation, DHHS*
- Office of Behavioral and Social Sciences Research, NIH*
- Office of the Director, NIH
- Office of Minority Health, Centers for Disease Control and Prevention, DHHS
- Office of Minority Health, Office of Public Health and Science, DHHS
- Office of Population Affairs, DHHS*
- Office of Research on Women's Health, NIH*

- **Questions or Feedback?**

- Contact Information:

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- Contract Inquires:

- addhealth_contracts@unc.edu