

# Prevention Research Center (PRC) Cohort 1 & 2 Data Users Guide

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## INTRODUCTION

The PRC intervention trial involves the ongoing evaluation of two classroom-based, universal preventive interventions which were implemented over 2311 first-graders in 43 classrooms of 19 schools located in 5 socio-demographically distinct areas in eastern Baltimore, during the 1985-86 (Cohort 1) and 1986-87 school years (Cohort 2). The five geographic areas, defined by census tract data and vital statistics from Baltimore City Planning Office, varied by ethnicity, type of housing, family structure, income, unemployment, violent crime, suicide and school drop-out rates (Werthamer-Larsson, 1988). Within the clusters of three to four schools within the five districts, one school was randomly assigned to receive the Mastery of Learning (ML) intervention, one the Good Behavior Game (GBG) intervention, and one school served as a control school (to provide protection against within-school contamination). Within each intervention school, children were randomly assigned to classrooms. The GBG was directed at improving classroom aggressive behavior, and the ML at improving school achievement.

Assessments were conducted on a semi-annual basis through 2nd grade and thereafter annually through elementary school and middle school (spring of seventh grade), focusing on children's social adaptation status (SAS) and psychological well-being (PWB). When the children were in 3rd and 4th grades in 1989, additional NIDA funding enabled assessment of illegal drug use. These childhood assessments were restricted to the proportion of the sample that continued to attend Baltimore City Public schools. During the transition into young adulthood (1998-2002), three consecutive follow-ups occurred when the sample was 19-23 years of age. The sample denominator was no longer restricted and opened up to include all 2,311, although priority was given to locating and interviewing those whom child information was available. In 2009-2011 the latest follow-up was completed as the participants were 30-32 years of age. The sample denominator again included all 2,311, although priority was given to locating and interviewing those whom had been interviewed in the young adulthood phase and those who had participated in several of the childhood interviews.

Among the total of 2311 individuals who initially participated under parental consent, large proportions have themselves consented to all of the followup procedures. There are many repeated assessments that provide rich information as shown in Table 2 (P.6). Assessments of conduct problems at ages (cohort 1): 11, 12, 13, 14, 20, 22 and 29 are supplemented by reports of covert and overt antisocial behaviors and weapon carrying at ages 9, 10, 11, 12, 13 and 14; by teacher reports of aggressive behaviors at ages 6, 7, 9, 10, 11, 12, 13 and 14 and by judicial arrest reports at ages 20 and 29. Depressive symptoms are assessed frequently, at ages of about 6, 7, 9, 10, 11, 12, 13, 14, 19, 21 and 30 in cohort 1. Suicidal ideation is also assessed at ages 19, 21 and 30. Assessments of substance use and substance disorders provide a rich dataset from these samples. At virtually all time points between ages 9 and 30, participants were assessed for use of alcohol, tobacco, marijuana, cocaine and inhalants. DSM dependence criteria, opportunities and use of a broader array of drug types (methamphetamine, club drugs, heroin, and prescription drugs), age of onset and recency of use begin after age 19 interviews. These dense datasets provide both categorical and continuous means of assessing addiction-related phenotypes, as well as levels of use in individuals who do not go on to display dependence.

This User's Guide sets forth the principles of the organization of the data and documentation. The principles reflect a tension between purely logical organization, and the history of the data collection and maintenance, which has not been strictly logical

All professional communications-- that is, papers as well as oral presentations--about these data must include acknowledgment of the source of funds: that is, the National Institute of Mental Health and the National Institute of Drug Abuse. Principal Investigators on these projects include Sheppard G. Kellam, James C. Anthony, and William W. Eaton. (See P.18 for the list of grant numbers).

## METHODS

### Demographic Information

The gender, ethnicity, and age of the subject population at entrance into the study, in Cohort 1, 49.1% were male, 65.6% were African-American, 31.6% were Euro-American, 0.3% Asian, 1.0% Native American, 0.3% Hispanic, and for 1.2% of the children, ethnicity was either missing or refused. At first grade, the mean age was 6.55 years (SD + 0.48). In Cohort II, 50% were male, 65% were African-American, 34% were Euro-American, 0.36% were Hispanic, 0.36% Asian American, and 0.36% Native American. At the time of the first grade assessments, the average age of the child was 6.48 years (SD + 0.39).

### PRC Intervention Design

The intervention design involved the evaluation of two universal classroom-based interventions, which were implemented over first and second grades for each cohort. Three or four schools were selected in each of the five urban areas described above. Within these clusters of schools, one school was randomly assigned to receive the ML intervention, one the GBG intervention, and one school served as a control school (to provide protection against within-school contamination). Within each intervention school, children were randomly assigned to classrooms. Classrooms not receiving any interventions were included as internal controls, thus holding constant school, family, and/or community differences such as the effect of the principal on the school environment. Teachers were also randomly assigned to intervention condition, with the restriction that they intended to remain in the building at the same grade level for at least a two-year period. Both interventions were applied at the classroom level by the teacher after intensive training. Baseline assessments were carried out prior to the initiation of the intervention. Teachers received equal attention and incentives. The training sessions continued throughout the intervention period (Grades 1 and 2 for both cohorts) for approximately 40 hours totally for each intervention. Control teachers were involved in meetings, workshops, and seminars not related to intervention targets. The GBG was directed at improving classroom aggressive behavior, and the ML at improving school achievement. The GBG (Barrish, Saunders, & Wolf 1969) represents the systematic use of behavioral analysis in classroom management. The GBG was selected because of its demonstrated efficacy and acceptability to the schools and the community. ML is a teaching strategy with demonstrated effectiveness in improving achievement. The theory and research upon which ML is based specifies that under

appropriate instructional conditions virtually all students will learn most of what they are taught (Bloom, 1976; Bloom, 1982; Block & Burns, 1976; Dolan, 1986; Guskey, 1985)

Detailed methods and measure can be found on the following web address:  
[http://www.jhsph.edu/prevention/Data/Cohort\\_1\\_and\\_2/index](http://www.jhsph.edu/prevention/Data/Cohort_1_and_2/index)

## **ORGANIZATION OF PRC DATA FILES**

There are nine waves of post-baseline (W0 to W9) assessments for the PRC trial, which are organized into seven main datasets. Transition datasets were organized by life stages childhood (CH), adolescence (AD), young adulthood (YA1 and YA2) and adulthood (A), except for the master file and baseline dataset. The master dataset, MASTER\_C12\_2311\_DATE, contains key variables (e.g. gender, race, birth-month, and birth-year) and other important variables such as the design and school variables. Baseline variables were organized into the baseline dataset, BASE\_C12\_2311\_DATE, together with item level data and constructed variables on school records, teacher reports, parent reports, and child self-reports collected between 1985 and 1994. Teacher report in BASE\_C12\_2311\_DATE includes ratings on the behavioral problems such as attention concentration problems, aggressive/ disruptive behaviors, shy behaviors, maturity, hyperactivity, and impulsivity. Parent reports contain information regarding their children and their families, such as parent-school interaction, history of substance use, management skills and practices of the parents. Psychological well-being (e.g., depressive symptoms, anxious symptoms), social adaptation status and children-based service utilization as reported by the children, can also be found in this dataset. (See Table 1 for Summary of datasets)

*There are three parts to the dataset naming convention for these seven main datasets - a unique abbreviation in the initial position which denotes the content or source of the dataset (e.g. CH, AD, CJIS); followed by C1, C2, or C12 which denotes the cohort; number of observations (n); and the date on which the dataset was last edited. For example, data collected from cohort 1&2 (n=1715) edited on Sept 3, 2008 will be named “AD\_C12\_1715\_sep03\_2008” With the exception for geocoding data, where an abbreviation denoting the content of the dataset from the same source is added to the second position of the dataset name.* Datasets are available in SAS, SPSS, and STATA formats. The user should be aware that transfer of data between these formats may destroy the uniqueness of certain variable names.

**Table 1. Summary of Datasets**

Type of Data	Time of Data Collection	Waves	Abbreviation in the Initial Position of Dataset
Baseline and Trajectory	1985-1994	-	BASE
Childhood	1989-1990	0 - 1	CH
Adolescence	1991-1994	2 - 5	AD
Young Adulthood	1999-2002	6 7-8	YA1 YA2
Adulthood	2008-2011	9	A
Criminal Justice Information System	-	-	CJ
School Systems	-	-	SCH
Geocoding	-	-	GIS

## **ORGANIZATION OF PRC DATA VARIABLES**

### **Variables available for analysis**

Table 2 (P.9) gives a summary of the variables available for analysis from each respective assessment. Capital letters in the table indicate the module(s) of the questionnaire which encompass the types of variables listed in the first column.

### **Variable Order**

The data analyst can search for a given variable from the specific module(s) of the questionnaire as listed in Table 2 (P.9). Variable names are listed in the first columns of the questionnaires for waves 7, 8 and 9. These questionnaires can be found on the sharepoint website.

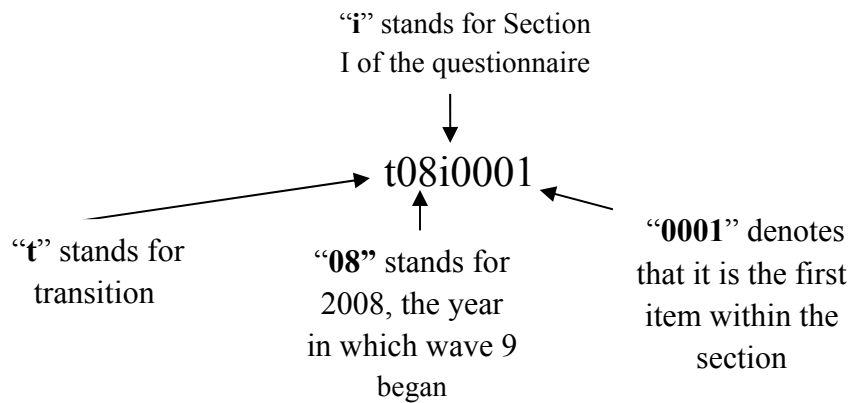
### **Variable Naming Convention**

**Variables in Datasets “CH\_C12\_n\_date”; “AD\_C12\_n\_date”; “YA2\_C12\_n\_date”; “A\_C12\_n\_date”**

Variable labels from these four datasets begin with “T”, “B”, or “C”, followed by a two-digit number which denotes the year in which the wave began; a letter that corresponds to the questionnaire section where the item can be found; and a 4-digit question number generated

based on the order in which questions were administered during the interview. Labels of variables in the datasets “YA2\_C12\_n\_date” and “A\_C12\_n\_date” mostly begin with “t” which stands for “transition”. Labels of variables from the dataset “A\_C12\_n\_date” mostly begin with “b” which stands for “Baltimore What’s Happening”. Labels of variables begin with “c” are items that had been administered to a convenience sample during adolescence.

For example:



### ***Variables in Base\_C12\_n\_date***

The variable naming conventions for variables in BASE\_C12\_2311\_date are listed in table 3, 4, 5 and 6. The naming convention for variables that identify the indexed child, school, intervention and tracking information can be found in Table 3 (P.12). Some data are obtained through school records (e.g., race, gender, birthdate), while other data are generated by PRC (e.g., intervention condition, PRCID, consent status, interview date). Table 4 (P.13) describes the variable naming convention for social/psychological fields, such as families, schools, and classrooms. These variables for social/ psychological fields are derived from reports by observers, parents, teachers, and children. As for variables for children’s Psychological Well-Being (PWB) and Social Adaptational Status (SAS) as reported by natural raters in relevant social/ psychological fields, please refer to table 5 on P.14 for the naming conventions. Other naming conventions for variables which describe help-seeking, who reported the problems, types of problem reported and the details about the type of services sought are listed in table 6 (P.15).

Detailed data description for Cohorts 1 & 2, are documented on the following website:

[http://www.jhsph.edu/prevention/Data/Cohort\\_1\\_and\\_2/index](http://www.jhsph.edu/prevention/Data/Cohort_1_and_2/index)

NOTE: It is imperative that all investigators take time to explore the nuances of the data, including variable names and response codes. While this user’s guide outlines the general principles of how the PRC data are organized, there are always exceptions to the rules. When choosing what variables to use in one’s analyses, it is important that all available avenues of information are explored. The tables provided in this guide will allow investigators to identify

the appropriate sections of the interview to utilize. From there, one should thoroughly review physical questionnaires, not only to obtain response coding, but also to gain an understanding of skip pattern logic and subtle differences in how questions are asked across waves. Notice that sections may not be consistent across waves. For example, tobacco-related questions can be found in Section F of the questionnaire in wave 7, but are located in section D for wave 9.



Table 2. Content of Variables Available for Analysis

<b>Start of Data Collection</b>	1985	1986	1989	1990	1991	1992	1993	1994	2000	2000	2001	2008
<b>Wave</b>	Baseline	Baseline	0	1	2	3	4	5	6	7	8	9
<b>Life Stage</b>	-	-	CH	CH	AD	AD	AD	AD	YA1	YA2	YA2	A
<b>Number of Observations</b>			1530	1234	1543	1416	1251	816	1715		1692	
<b>SES indicators</b>	√	√	√	√	√	√	√	√		U	K	N
<b>Education, employment, occupation</b>									W	B,P	C	A
<b>Marital &amp; parenthood</b>									C	B,C	C,J	A
<b>Residency/ household, social support</b>									FAM	Q		M,Q
<b>Family history of Drug Use</b>												P
<hr/>												
<b>Administrative Records</b>	<hr/>											
<b>School (achievement, attendance)</b>	√	√	√	√	√	√	√	√	√			
<b>Census (geocoding, economic)</b>	√			√							√	√
<b>Judiciary (arrest)</b>											√	√
<hr/>												
<b>Teacher reports (TOCA)</b>	<hr/>											
<b>Concentration problems</b>	√	√	√	√	√	√	√	√				
<b>Aggressive/disruptive behaviors</b>	√	√	√	√	√	√	√	√				
<b>Shy/social interaction behavior</b>	√	√	√	√	√	√	√	√				
<b>Hyperactivity</b>					√	√	√	√				
<b>Child service, special education</b>			√	√	√	√	√	√				
<hr/>												
<b>Drug Involvement</b>	<hr/>											
<b>Use: alcohol, tobacco, marijuana, cocaine, inhalants</b>			√	√	√	√	√	√		D,F,G	D,F,G	E

Dependence: nicotine							√			D	D	E	
Consequences of use (health, school family)			√	√	√	√	√						
Dependence: alcohol, marijuana, cocaine, inhalants, methamp, club drugs, heroin, Rx drugs										F	F	E	
Age of onset and recency of use			√	√	√	√	√			F	F	E	
Offers/ opportunities			√	√	√	√	√			E	E		
Use at school or work										H			
Peer drug use and deviance			√	√	√	√	√	√		R	J		
Injection							√	√	√	G	G		
<b>Mental Health</b>													
ADHD										GG			
Conduct disorder/ ASP				√	√	√	√			HH	L	I	L
Covert and overt antisocial			√	√	√	√	√	√					
Depression/ anxiety	√	√	√	√	√	√	√	√		CC,DD,EE, FF	J	H	I,G,H
Lifetime mental health/ health behaviors										CC	I, J,K	A	
Suicide ideation & attempts										SU	J	H	I
Memory and concentration													
<b>Environment</b>													
Neighborhood/ collective efficacy				√	√	√	√	√		N	M,N		
Parent monitoring, involvement, reinforcement			√	√	√	√	√	√					
Parent discipline			√	√	√	√	√	√					

**Individual characteristics**

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Scholastic competence			√	√	√	√	√	√	HW				
Self-derogation; personal skills			√	√	√	√	√	√					
Peer rejection	√	√	√	√									
Aspirations & other importance of things						√	√	√	O				
Risk taking				√	√	√	√	√					
Personality (compulsivity)									O	O			
Conflict tactics									O				
Behavior repertoire								√				B	
Weapon carrying			√	√	√	√	√	√					L

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**Other Health**

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General Health (QOL)							√	√			I		B
Physical problems and conditions										H	I		B
Sexual Behavior, STDs										X			B
Services, barriers to care										SV			O
Health insurance											T		N
Physical measures (BMI, BP)													B
Life events										L	B	C	A

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**Blank:** Not available for that wave

√: Available for that wave

All other letters referred to the section of interview that includes those items (e.g. items on drug dependence are in Section E in the W8 interview)

**Table 3. Variable Naming Convention: Identifier Domains**

<u>Column #</u>	<u>Identifier</u>	<u>Value Options (actual values are in bold)</u>
1-5	Identifier	Values are content-linked
6	Cohort	<b>1</b> = in 1 <sup>st</sup> grade in 9/85 (PRC I) <b>2</b> = in 1 <sup>st</sup> grade in 9/86 (PRC I)
7	Year of the Study	Academic years beginning with September 1985. Numeric values include 85, 86,...98, 99, 00, 01 ...09, 10
8	Time of the Year	Values indicate whether the construct/item was measured in <b>F</b> all or <b>S</b> pring of the academic year indicated in column #7

\*For values that never change (such as BIRTHDAY, PRCID, Intervention), columns 6-8 will not be coded.

**Table 4. Variable Naming Convention: Social Field Domains**

<u>Column #</u>	<u>Identifier</u>	<u>Value Options (actual values are in bold)</u>
1	Social Field Domain	<b>F</b> amily, <b>C</b> lassroom/School/Community, <b>P</b> eergroup, <b>C</b> lass <b>M</b> ate <b>O</b> bservation
2	Content Area	<u>Family</u> : Structure/ <b>D</b> emographics, <b>I</b> nteraction, Beliefs/ <b>V</b> alues, <b>S</b> AS of Family <b>P</b> WB of Family, Substance <b>U</b> se, <b>I</b> M <b>p</b> lementation, Service U <b>t</b> ili <b>Z</b> ation
3-5	Construct or Item	EXAMPLES: <b>TYP</b> = family <b>TYP</b> e code <b>YAP</b> = ‘ <b>Y</b> ou <b>A</b> ttend <b>P</b> TA meeting?’
6	Cohort	<b>1</b> = in 1 <sup>st</sup> grade in 9/85 (PRC I) <b>2</b> = in 1 <sup>st</sup> grade in 9/86 (PRC I)
7	Year of the Study	Academic years beginning with September 1985. Numeric values include <b>1,2,3,4,5,6,7,8,9</b> YEARS 10 and higher will use the alphabet (e.g. YEARS 10= <b>A</b> , YEARS 11= <b>B</b> , etc.). Cohort 2 started in YEAR 2.
8	Time of the Year	Values indicate whether the construct/item was measured in <b>F</b> all or <b>S</b> pring of the academic year indicated in column #7

**EXAMPLE: “FD18O24S”** describes the **F**amily’s **D**emographic make-up as reported by mother. The item is the number of people age **18** or **O**lder in the household. Child is Cohort**2** measured in the Spring of Year **4**.

**Table 5. Variable Naming Convention: Indexed Child Domain**

<u>Column #</u>	<u>Identifier</u>	<u>Value Options (actual values are in bold)</u>
1	Indexed Child Domain	<b>S</b> ocial adaptation status (SAS) of Child, <b>P</b> psychological well-being (PWB) of Child
2	Social/ Psychological Field	<b>F</b> amily, <b>C</b> lassroom, <b>P</b> eergroup, <b>S</b> chool, <b>O</b> bservation
3	Rater	<u>Natural Raters for SAS:</u> <b>M</b> other, <b>T</b> eacher, <b>P</b> eer, <b>S</b> chool, <b>C</b> hild, Neutral <b>O</b> bserver  <u>Raters for PWB:</u> <b>M</b> other, <b>T</b> eacher, <b>P</b> eer, <b>C</b> hild, Cli <b>N</b> ician, Medical <b>D</b> octor
4-5	Construct or Item	<u>PWB:</u> <b>D</b> e <b>P</b> ression, <b>A</b> n <b>X</b> xiety <u>SAS:</u> <b>C</b> oncentration <b>P</b> roblems, <b>A</b> uthority <b>A</b> cceptance (Aggression), Shy <b>B</b> ehavior
6	Cohort	<b>1</b> = in 1 <sup>st</sup> grade in 9/85 (PRC I) <b>2</b> = in 1 <sup>st</sup> grade in 9/86 (PRC I)
7	Year of Study	Academic years beginning with September 1985. Numeric values include <b>1,2,3,4,5,6,7,8,9</b> . YEARS 10 and higher will use the alphabet (e.g. YEARS 10= <b>A</b> , YEARS 11= <b>B</b> , etc.). Cohort 2 started in YEAR 2.
8	Time of the Year	Values indicate whether the construct/item was measured in <b>F</b> all or <b>S</b> pring of the academic year indicated in column #7.

**EXAMPLE:** “**PFMAX24S**” describes the indexed child’s **P**WB within the **F**amily as rated by the **M**other. The construct is the degree of **A**n**X**xiety in a Cohort 2 Child measured in the **S**pring of Year **4**.

**Table 6. Variable Naming Convention: Treatment/ Help Seeking Domain**

<u>Column #</u>	<u>Identifier</u>	<u>Value Options (actual values are in bold)</u>
1	Response Domain	<b>T</b> reatment/ <b>H</b> elp Seeking
2-3	Problem Type	<b>A</b> n <b>X</b> xiety, <b>D</b> e <b>P</b> ression, <b>S</b> hy <b>B</b> ehavior, <b>C</b> oncentration <b>P</b> roblem, <b>A</b> uthority <b>A</b> cceptance, <b>L</b> earning <b>P</b> roblem, <b>O</b> ther <b>P</b> roblem, <b>S</b> ubstance <b>D</b> ependency
4	Reporter	<b>T</b> eacher, <b>M</b> other/Parent Surrogate, <b>A</b> ssessors, <b>S</b> chool Records
5	Details of Help Received	School <b>C</b> ounselor, Medical <b>D</b> octor, <b>G</b> rade When First Treated, Mental <b>H</b> ealth Professional, <b>M</b> edication, Other Type of <b>H</b> e <b>L</b> p, <b>P</b> olice, Special Ser <b>V</b> ices, <b>S</b> pecial Class, or School, Services <b>R</b> eceived for Child, <b>O</b> ther Specified Help
6	Cohort	<b>1</b> = in 1 <sup>st</sup> grade in 9/85 (PRC I) <b>2</b> = in 1 <sup>st</sup> grade in 9/86 (PRC I)
7	Year of the Study	Academic years beginning with September 1985. Numeric values include <b>1,2,3,4,5,6,7,8,9</b> . YEARS 10 and higher will use the alphabet (e.g. YEARS 10= <b>A</b> , YEARS 11= <b>B</b> , etc.). Cohort 2 started in YEAR 2.
8	Time of the Year	Values indicate whether the construct/item was measured in <b>F</b> all or <b>S</b> pring of the academic year indicated in column #7

**EXAMPLE: “TCPTH24S” describes whether Treatment was received for a Concentration Problem, in this case the Teacher’s report of whether a mental Health professional was used. The information is for a Cohort 2 child measured in the Spring of Year 4.**

## INVESTIGATORS AND COLLABORATORS

The data represent a resource for the Principal Investigators, Co-Principal Investigators, Coinvestigators, faculty of the Department of Mental Health, the Johns Hopkins University intellectual community, and their collaborators. This part of the Users Guide establishes principles for sharing of the data.

### Contact with community participants

The information on the sample of individuals which may be used in locating them for interviews is a resource for the Department of Mental Health which is responsible for preserving the confidentiality of the data. Use of statistical data

The anonymized statistical data is available for analysis and publication by members of the intellectual community of Johns Hopkins University and by the original Principal Investigators, Co-Principal Investigators, and Coinvestigators who generated the funds for collection of the data. Arbitrary transformations will be performed on variables such as classrooms or schools to prevent identification of individuals.

In analyzing and publishing data, at least one of the co-authors must be someone who was involved in the actual data collection operation and who agrees to take responsibility for the fidelity of the report with respect to (a) methods actually used, and (b) interpretation of the findings in light of what might have been previously published by PRC investigators on that topic. Possibly someone on the data collection team could agree to serve in that capacity, be listed in acknowledgments, but not as co-author (i.e., right of refusal).

Principal and Co-Principal Investigators will be given the first priority to analyze and publish data that was funded by the grant on which they were the Principal or Co-Principal Investigator, in the process described below.

### Grant submissions

Principal Investigators responsible for data collection for a given area or wave have the option of designating a circumscribed topic-area as one that will be covered in an R01 research project for analysis of data.

### DNA

The 2009-2011 adult waves of data for cohorts 1 and 2 involve collection of DNA. Prior to funding, the University agreed to share the results of the current wave of follow-up, including whole blood, with the NIDA Genetics Consortium. The NIDA Genetics Consortium declined our application for membership, but the agreement to share the results of DNA assays persists, even in the absence of sharing the whole blood. The fact that the original sample consisted of the entire population of individuals in first grade in 19 schools in 1985 and 1986 makes discovery of the identity of individuals in the sample more likely (so-called “deductive discovery”), because knowledge that the individual was in the cohort can be combined with a few other pieces of information about them to allow conclusive identification using the statistical data. For this reason the DNA and complete data files will not be shared outside the community of Principal, Co-Principal, and Co-investigators. It may be that outsiders



will apply to acquire a specially constructed dataset to test a specific hypothesis, but this will be considered by Principal and Co-Principal Investigators on a case by case basis.

## Procedures

Persons wishing to analyze and publish from the PRC cohorts 1 and 2 should undertake the following steps:

1. Read through the list of published papers to ensure the proposal is not redundant with previous and working publications and to identify potential co-authors
2. Look through the questionnaires and code books available on the PRC team web site
3. Submit a brief (one page) description of the proposed analysis to the current Principal Investigator (at time of this writing, Bill Eaton). The description should explain the value of the analysis, the variables, (or perhaps the more broadly defined constructs to be included), the target journal, the expected completion date and the names of one or more Principal Investigators listed who will be co-authors or authors on the paper. Submitting a proposal on a topic not included on the list of papers does not guarantee acceptance, since, as noted above, some areas may be preserved for future papers or grant applications. Eaton will circulate the proposal to the Principal and co-Principal Investigators listed below. The individual who was Principal Investigator on the grant which funded data collection for the particular area of analysis will be have the option of undertaking that analysis within the coming year or proposing a grant application for data analysis in that area within the coming three years.
4. Principal and Co-Principal Investigators (listed below) may nominate others to serve as coauthors on a paper in their stead. In this situation the Principal or Co-Principal Investigators remain accountable to the group that the data are safeguarded by the proposing analyst and interpreted appropriately.
5. Once the proposal is accepted, it will be entered on the list of papers, and the area will be preserved from redundancy by others for at least one year, unless satisfactory progress is not being made.
6. The investigator should send proof of training in research on Human Subjects to Bill Eaton.
7. De-identified data will be shared on the PRC team web site. These data will include many but not all the data from the various data collection, in order to guarantee anonymity of the data. The data are to be analyzed on the network or on the individual Co-investigator's computer- that is, data are not to be copied for use at another institution without explicit written permission of Bill Eaton.
8. The individual engaging in the analysis is expected to attend relevant PRC workgroup meetings, and/or to provide progress reports and present results to other collaborators and Co-investigators for general discussion prior to submitting the paper for publication.
9. When a paper is submitted for publication, a paper copy and a magnetic version of the paper, and a magnetic copy of the program code used to create datasets and variables is given to the PRC staff in room 880 for our files and for listing on the network.
10. Papers must include in the acknowledgements, at minimum, the statement "This manuscript was supported by NIDA grant #009897."

<b>Year</b>	<b>Principle Investigator</b>	<b>Funding Source</b>	<b>Grant Number</b>	<b>Grant</b>
1985-1990; 1991-1995	Sheppard G. Kellam	NIMH	P50 MH 38725	Epidemiologic Prevention Center for Early Risk Behaviors
1988-1993	Sheppard G. Kellam	NIMH	R01 MH 42968	Periodic Follow-up of Two Preventive Trial
1989-1994	James C. Anthony	NIDA	DA 04392	Etiology and Prevention of Drug Related Behavior
1998-2003	Sheppard G. Kellam	NIMH	R01 MH 42968	Development and Malleability for Childhood to Adulthood
2007-2012	William W. Eaton	NIDA	DA 09897	Risks for Transitions in Drug Use in Urban Adults

Principal Collaborators who were Principal or co-Principal Investigators on NIH awards for collection of data, or who were otherwise crucial in collecting the data, are listed below:

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## DATA FROM OTHER SOURCES WHICH CAN BE LINKED TO PRC DATASETS

### **Criminal Justice Information System (CJIS) Data Base**

The State of Maryland Criminal Justice System (CJIS) Data Base is a computerized file of all criminal records of individuals arrested, charged and sentenced in the state of Maryland.

This record is available to the public with authorized use. The data regarding criminal activity among the original PRC cohort 1&2 from the Baltimore region was obtained in 2010.

The data provides information regarding the date of arrest, the reporting court, the citation number and description of the crime, the verdict, and times of confinement, suspension and probation. Preliminary review of the data suggests that 1,471 people from the original 2,311 respondents in the first generation cohorts matched demographic information in the CJIS records. These 1,471 individuals were reported to have 10,820 citations, resulting in an average of 7 citations per person. The types of crimes documented were diverse and ranged from crimes against property such as theft, and burglary to crimes against persons including, assault, rape and murder. The most common charges were for the possession of LSD, Barbiturates, Cocaine and other illicit substances and theft / misdemeanor charges.

### **National Death Index (NDI+)**

#### *Matching*

The NDI+ user submits a file of identifying information on individuals who may be living or deceased to the NDI+. The NDI+ searches its records for matches, where successful matching indicates confirmed death and cause of death of the respondent. Fields for matching are: first name; last name; sex; race; year, month, and day of birth; age; social security number; father's surname. There is more than one match for nearly every individual, because the country is large and there are many deaths. The NDI+ uses the identifying information to structure its matches, returning to the user matches ranked by the degree of agreement of the user-supplied identifying information and the NDI+ identifying information. Matching by name means the spelling of the first and last name matches for each and every letter. Marital status, middle initial and state of residence at death were not considered in matching. Common names are more frequently matched than uncommon names. A name like "John L. Smith" will likely generate more than one match even with perfect agreement on date of birth, sex, and race. Agreement on social security number would generate a single match. In a small minority of individuals, the matching process includes idiosyncrasies that require careful assessment. For example, an inversion in two digits in the social security number, or an inversion of day of birth with month of birth on the birthdate, might generate an inappropriate mismatch. Disagreement on name for an individual with agreement on social security number might be more likely to be regarded as a match for a female than a male, since names are more likely to change with marriage for females than males. Agreement for an unusual name will generate more confidence than agreement for a common name (for this reason the NDI+ provides a list of the 1000 most common names. In cases where vital status was uncertain after searching the NDI, the available identifying information (Name, DOB, and SSN) was submitted to the Social Security Death Index (SSDI). In addition, matches that were found in SSDI that were not found in the NDI results require a death certificate to confirm the death and to obtain cause of death information. We have developed a 23-category rating scale for the quality of the match and coded its value in a variable called NDIMatch. This

allows the individual investigator some flexibility in deciding how conservative to be. In much of our prior work we have considered values below 12 to be definite or very probably match.

### **Geocoding (GIS)**

Geocoding was used to link respondents' addresses during childhood and adolescence (1985-1993) and young adulthood (2000) with external data sources such as the Baltimore police data to assess the social environmental influences on cohort 1 and 2. Geocoded addresses at each assessment were matched to the census tracts in order to optimize resolution while maximizing precision based on the number of observations per geographic unit. Geographic analyses will, therefore, likely to occur at the level of census tracts. The 4 GIS datasets contain (1) all tracts for both cohorts 1 and 2 with parallel variables; (2) Crime data for 1990 census tracts; (3) Crime data for 2000 census tracts during young adulthood; and (4) additional tract records which involve multiple records per tract in 2000. These datasets provide information on a variety of health and social indicators such as rate of births to teens, causes of deaths, school performance and families in poverty. In addition, crime variables such as drug-related juvenile arrests, adult and juvenile arrests for violent as well as serious non-violent crimes, are also available for analyses. Since respondents' residence is involved, request for the GIS datasets will require special protocols. For further details, please contact the principle investigator or staff at Hampton House Rm880.

### **Genome wide association data**

Genome wide data were obtained from xxx subjects who donated blood and yyy subjects who donated saliva. Www subjects donated blood and saliva. The DNA was processed at the NIDA Intramural Research Program genetics laboratory directed by George Uhl using the Affymetrix Genome-Wide Human SNP Array 6.0 (REF). Viable DNA was obtained from xxx subjects' blood sample and yyy subjects' saliva sample. In all there are www samples of DNA which were processed successfully through the Affymetrix chip.

The results of the Affymetrix chip were provided to the Department of Mental Health. Genotype data were in a usable format that is readable by freely available non-commercial software (PLINK). For long-term storage and possible reprocessing, raw genotype CEL files, or equivalent for future technologies, were also provided.

The SNP genotype calls were provided to the Department of Mental Health in Birdsuite format (non-binary), in a format that is readable by freely available software. The Birdsuite format is transposed from the conventional genetic dataset. An example of a transposed format is:

	Individual 1	Individual 2	Individual 3 ....	Individual N
SNP1	G/G	G/G	G/G	G/G
SNP2	G/G	G/G	G/G	G/G

SNP3	G/G	G/G	G/G	G/G
.				
.				
.				
SNPX	G/G	G/G	G/G	G/G

-where G/G represents some called two-allele genotype.

The genotype data file includes all successfully called genotypes for every subject included in every experiment and the data points that are typically included in genetic data sets, including family and individual identifier and sex; a map file including the name and map location with the source of map location (NCBI Build) clearly indicated. Raw genotype CEL files are also available.

Each SNP has two possible alleles. Current SNP nomenclature assigns an rs# to each SNP (e.g., rs123). For inclusion in the local PRC database, the data will be reformatted into a pedigree format with each SNP given the value of the number of minor (less frequent of the two) alleles. SNP names will be appended with the minor and major allele base names (A,C,T or G). For example, if rs123 were a SNP with minor allele C and major allele A, the variable name would be rs123CA. Values of 0,1, and 2 represent genotypes of AA, AC and CC respectively. A typical order of a file of this format (and the format expected for many analysis platforms) would be:

Family ID, Individual ID, Father's ID, Mother's ID, Sex, Trait Value, SNP1, SNP2, SNP3...

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