Appendix Book 2

Prevention Services Task Force
Interim Progress Report

Prepared by the Anti-Racism, Diversity, & Inclusion Initiative,
Chief Executive Office

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Appendix K. Prevention and Promotion Metrics Summary Document

North Star Outcomes

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Age-Appropriate Socioemotional/Cognitive Proficiency for grades 1-6	6-11
Child Maltreatment (within Family & Systems)	6-11
Good Physical & Behavioral Health/Wellbeing	12-20
Good Financial Wellbeing	21-35
Adult First-Time Felony Convictions	21-35
Attainment of a Postsecondary Credential w/ Significant Labor Market Value	21-35
Stable Affordable Housing	21-35
Stable Full-Time Employment among Individual Adults with incomes at or above 250% FPL	21-60+
Family Income at 250% FPL (pegged to a family of 4)	21-60+
Age in Place with Safety, Dignity & Independence	60+

Contributing Outcomes

Contributing Outcome	Age Span
Preterm Birth	0-5
Low Birthweight	0-5
Early childhood disability	0-5
Asthma	0-5
Diabetes	0-5
Elevated Blood Lead Levels	0-5
Early Childhood trauma	0-5
Toxic Stress	0/5
Healthy Diet	0-5
Attends Pre-K	0-5
Secure/Insecure Attachment	0-5
Externalizing or Internalizing Behavior	0-5
General Health Status	6-11

Contributing Outcome	Age Span
Asthma	6-11
Diabetes	6-11
Disability	6-11
Elevated Blood Lead Levels	6-11
Overweight or Obese	6-11
Pubertal Timing (early puberty onset)	6-11
Chronic Stress	6-11
Childhood trauma	6-11
School Engagement	6-11
Externalizing Behavior	6-11
Self-Regulation	6-11
Depressed/Internalizing Behavior	6-11
Social Isolation	6-11
School Suspensions	6-11
School Absences	6-11
General Health Status	12-20
Allostatic Load	12-20
Chronic Stress	12-20
Substance use/abuse	12-20
Proficient in 8th Grade Math and ELA Tests	12-20
Middle School Grades	12-20
Passing courses in ninth grade	12-20
Participation in Arts Education	12-20
Grade Retention	12-20
High School GPA	12-20
College Readiness (course-taking)	12-20
A-G Completion	12-20
High School Graduation/Dropout	12-20
Postsecondary Enrollment	12-20
Enrollment in a For-Profit College	12-20
Enrollment in High-Mobility College	12-20
Youth Disconnection	12-20
Gender Identity & Expression	12-20

Contributing Outcome	Age Span
Sexual Orientation	12-20
Social Isolation	12-20
Socioemotional Development	12-20
School Suspensions	12-20
Expulsions	12-20
School Absences	12-20
Juvenile Delinquency	12-20
Juvenile Felony Arrest	12-20
Juvenile Misdemeanor Arrest	12-20
Incarceration in Secure Juvenile Facility	12-20
Early childbearing	12-20
General Health Status	21-35
Behavioral Health	21-35
Allostatic Load	21-35
High BMI	21-35
Postsecondary Completion/Dropout	21-35
Full-Time Employment	21-35
Stable Employment	21-35
Employment in High Demand Industry or Sector	21-35
Has childcare arrangement	21-35
Child support debt (TANF)	21-35
Work Disability	21-35
Inability to Pay Bail	21-35
Incarceration	21-35
Adequate Prenatal Care	21-35
Physical Limitations	35-60+
Income	60+
Social Isolation	60+

Ecological-Institutional Factors

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Ecological-Institutional Factors	Age Span
Mother smoking during pregnancy	Pregnancy/Infancy
Obesity During Pregnancy	Pregnancy/Infancy
Mother drinking during pregnancy	Pregnancy/Infancy
Maternal diabetes, hypertension, asthma or depression	Pregnancy/Infancy
Timing of prenatal care	Pregnancy/Infancy
Adequacy of perinatal care	Pregnancy/Infancy
Domestic Violence/IPV	Pregnancy/Infancy
Physician-Patient Racial Concordance	Pregnancy/Infancy
Cesarean Section Delivery	Pregnancy/Infancy
Inter-pregnancy interval	Pregnancy/Infancy
Maternal chronic worry about discrimination	Pregnancy/Infancy
Neighborhood Concentrated Disadvantage	0-60+
Neighborhood Concentrated Imprisonment	0-60+
Neighborhood Mobility Score	0-60+
Formerly Redlined Neighborhood	0-60+
Environmental pollutants (e.g. lead top soil, air pollution)	0-60+
Community Violence	0-60+
Affordable Housing availability	0-60+
Neighborhood Physical Disorder	0-60+
Community Cohesion/Collective Efficacy	0-60+
Aggressive Policing	12-60+
Police Violence	12-20
Racial Discrimination	0-60+
ACEs	0-20
Family Income/Poverty	0-20
Persistent Child Poverty	0-20
Family Income Volatility	0-20
Parental Wealth	0-20
Health insurance Coverage	0-20

Ecological-Institutional Factors	Age Span
Parents' Education	0-20
Family Structure/Living Arrangements	0-20
Family Instability	0-20
Maternal Age at Birth	0-20
Maternal Depression	0-20
Child Maltreatment	0-20
Parent Cognitive Stimulation & Emotional Supportiveness (HOME)	0-20
Language spoken at home	0-20
Extended family members	0-5
Family Learning Activities	0-20
Access to prenatal and perinatal care	0-20
Overcrowded housing	0-20
Housing stability/Residential Mobility	0-20
Household debt	0-20
Food Insecurity	0-20
Parental substance use disorder	0-20
Parental Trauma History	0-20
Availability of Preschool Centers	0-5
Availability of Quality Childcare	0-5
Foster Care Placement	0-20
Parent Expectations	6-11
Parental Incarceration	6-11
Death of a Family Member	6-11
School Mobility	6-11
School Funding	5-20
Class size	5-20
School poverty levels	5-20
School Segregation	5-20
Teacher Quality	5-20
Teacher-Student Racial Match	5-20
Mentor/Developmental Relationships (Caring Adult)	5-35
School Climate	5-20
Ethnic Studies Courses	12-20

Ecological-Institutional Factors	Age Span
School Disciplinary Practices	5-20
Bullying Victimization	12-20
School Tracking	12-20
School and neighborhood peer groups	6-20
Summer Jobs Availability	12-20
Job Networks/Social Capital	21-35
Access to Managerial Jobs	21-35
Union Job	21-35
Precarious employment/Gig Economy	21-35
Affordable Senior Housing	36-60+
Family Social Support	36-60+
Housing Costs	60+
Children Moving out of the Home	60+
Home Equity	60+
Relatives in close proximity	60+
Local Unemployment Rates	60+
Home Disrepair	60+
Age-Friendly Communities	60+

North Star Outcomes

North Star Outcome	Measure	Other North Star Outcomes Impacted	Predictor/Causal Studies
Infant Mortality	Number of infant deaths for every 1,000 live births Age Span: 0-5		
Socioemotional/cognitive readiness as children approach school age	Desired Results Developmental Profile-Kindergarten© (DRDP-K) Age Span: 0-5	• Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6 • Completion of a Postsecondary Credential w/ Significant Labor Market Value	• "School Readiness and Later Achievement." Developmental Psychology 43(6): 1428–46; • Rabiner, D. L., Godwin, J., & Dodge, K. A. (2016). Predicting Academic Achievement and Attainment: The Contribution of Early Academic Skills, Attention Difficulties, and Social Competence. School Psychology Review, 45(2), 250–267. • Owens, J. (2016). Early Childhood Behavior Problems and the Gender Gap in Educational Attainment in the United States. Sociology of Education, 89(3), 236–258; • Stressing Out the Poor Chronic Physiological Stress and the Income-Achievement Gap: Toward a new biology of social adversity; Duncan, G. and Magnuson, K. (2011) • "Chapter 3: The Nature and Impact of Early Achievement Skills, Attention Skills and

North Star Outcome	Measure	Other North Star Outcomes Impacted	Predictor/Causal Studies
			Behavior Problems," in Duncan, G. J., & Murnane, R. J. (Eds.) Whither Opportunity?: • Rising Inequality, Schools, and Children's Life Chances. Russell Sage Foundation; • Long-Term Outcomes of ADHD: Academic Achievement and Performance; • Williams, P. G., Lerner, M. A., Sells, J., Alderman, S. L., Hashikawa, A., Mendelsohn, A., ... & Weiss-Harrison, A. (2019). School readiness. Pediatrics, 144(2).
Age-Appropriate Socioemotional/Cognitive Proficiency for grades 1-6	Cognitive Met or Exceeded standard for 3rd, 4th, 5th and 6th Grade ELA and Math for California Smarter Balanced Summative Assessments Socioemotional Behavior Assessment for Children, Second Edition (BASC-2): Child Version California Healthy Kids Survey Age Span: 6-11 Measure-Related Studies	• Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Middle Childhood Success and Economic Mobility; Magnuson, K., Duncan, G., Lee, K. T., & Metzger, M. (2016). Early School Adjustment and Educational Attainment. American educational research journal, 53(4), 1198–1228.

North Star Outcome	Measure	Other North Star Outcomes Impacted	Predictor/Causal Studies
	• Socioemotional Skills in Education and Beyond: Recent Evidence and Future Research Avenues; • The Assessment of Psychological, Emotional, and Social Development Indicators in Middle Childhood in Key Indicators of Child and Youth Well-Being		
Child Maltreatment (within Family & Systems)	Comprehensive Child Maltreatment Scale (CCMS) for Parents California Healthy Kids Survey Age Span: 0-11	• Age-appropriate Socioemotional Proficiency for Grades 1-6 • Good Physical & Behavioral Health/Wellbeing	• Is developmental timing of trauma exposure associated with depressive and post-traumatic stress disorder symptoms in adulthood; • The Legacy of Early Abuse and Neglect for Social and Academic Competence from Childhood to Adulthood; • Comparing early adult outcomes of maltreated and non-maltreated children, A prospective longitudinal investigation; • "The Long-Term Health Consequences of Child Physical Abuse, Emotional Abuse, and Neglect: A Systematic Review and Meta-Analysis" (2012) in PLOS Medicine

North Star Outcome	Measure	Other North Star Outcomes Impacted	Predictor/Causal Studies
Good Physical & Behavioral Health/Wellbeing	RAND 36-Item Short Form Survey (SF-36) PROMIS global physical health scale SASSI-3 (Substance Abuse Subtle Screening Inventory, 3rd Edition) ASI (Addiction Severity Index) Age Span: 12-35 Measure-Related Studies https://www.rand.org/health-care/surveys_tools/mos/12-item-short-form.html	• Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Long-term effects of mental disorders on educational attainment in the National Comorbidity Survey ten-year follow-up
Good Financial Wellbeing	Household income at 50th percentile or higher AND No household debt in collections Age Span: 21-35		

North Star Outcome	Measure	Other North Star Outcomes Impacted	Predictor/Causal Studies
Adult First-Time Felony Convictions	Receipt of an adult felony conviction Age Span: 18-35	• Stable Full-Time Employment at 250% FPL for individuals • Family Income at 250% FPL (pegged to a family of 4)	• Apel, R., and Sweeten, G. (2010). The impact of incarceration on employment during the transition to adulthood. Social Problems, 57(3), 448-479; • Mueller-Smith, M., & Schnepel, K. T. (2020). Diversion in the Criminal Justice System. The Review of Economic Studies. • Craigie, T., Grawert, A., Kimble, C. and Stiglitz, J. E. (2020). Conviction, Imprisonment and Lost Earnings: How Involvement with the Criminal Justice System Deepens Inequality. Brennan Center for Justice. https://www.brennancenter.org/our-work/research-reports/conviction-imprisonment-and-lost-earnings-how-involvement-criminal; • Apel, R., and Powell, K. (2019). Level of Criminal Justice Contact and Early Adult Wage Inequality." RSF: The Russell Sage Foundation Journal of the Social Sciences 5(1): 198–222
Attainment of a Postsecondary Credential w/ Significant Labor Market Value	Attainment of bachelor's degrees from four-year nonprofit or public universities as well as the attainment of associates degrees or vocational certificates from nonprofit or public colleges in high-earning subject fields that include	• Stable Full-Time Employment at 250% FPL for individuals • Family Income at 250% FPL (pegged to a family of 4)	• Bayer, P., & Charles, K. K. (2018). Divergent paths: A new perspective on earnings differences between black and white men since 1940. The Quarterly Journal of Economics, 133(3), 1459-1501; • Thompson, O. (2021). Human Capital and Black-White Earnings Gaps, 1966-2017 (No. w28586). National Bureau of Economic Research;

North Star Outcome	Measure	Other North Star Outcomes Impacted	Predictor/Causal Studies
	Health Sciences, Business, Computers/IT, and Engineering/Drafting. Age Span: 21-35 <u>Measure-Related Studies</u> • The Missing Manual: Using National Student Clearinghouse Data to Track Postsecondary Outcomes		• Carnevale, A. P., Strohl, J., Gulish, A., Van Der Werf, M., & Peltier Campbell, K. (2019). The unequal race for good jobs: How Whites made outsized gains in education and good jobs compared to Blacks and Latinos. Center for Education and the Workforce, Georgetown University; • Carnevale, A. P., Rose, S. J. & Cheah, B. (2011) The College Payoff: Education, Occupations, Lifetime Earnings. The Georgetown University Center on Education and the Workforce; • Kim, C., & Tamborini, C. R. (2019). Are they still worth it? The long-run earnings benefits of an associate degree, vocational diploma or certificate, and some college. RSF: The Russell Sage Foundation Journal of the Social Sciences, 5(3), 64-85.
Stable Affordable Housing	Housing costs comprising less than 30% of household income AND Moving no more than two times in the prior five years AND not experiencing homelessness. Age Span: 21-35	• Stable Full-Time Employment at 250% FPL for individuals	• Desmond, M., & Gershenson, C. (2016). Housing and employment insecurity among the working poor. Social Problems, 63(1), 46-67

North Star Outcome	Measure	Other North Star Outcomes Impacted	Predictor/Causal Studies
Stable Full-Time Employment among Individual Adults with incomes at or above 250% FPL	The percentage of adults engaged in stable (i.e. working for 50-52 weeks out of the year) full-time employment (i.e. equal to or greater than 35 hours per week) with incomes equal to or greater than 250% of the Federal Poverty Level (FPL) for individuals, which in 2019 equaled $31,225. Age Span: 24-60+	• Family Income at 250% FPL (pegged to a family of 4)	• Weisshaar, K., & Cabello-Hutt, T. (2020). Labor force participation over the life course: The long-term effects of employment trajectories on wages and the gendered payoff to employment. Demography, 57(1), 33-60; • Schultz, M. A. (2019). The Wage Mobility of Low-Wage Workers in a Changing Economy, 1968 to 2014. RSF: The Russell Sage Foundation Journal of the Social Sciences, 5(4), 159-189
Family Income at 250% FPL (pegged to a family of 4)	The percentage of families with incomes equal to or greater than 250% the Federal Poverty Level (FPL) (pegged to a family of 4, which is the average family size in the County). In 2019 this equaled $64,375. Due to the high cost of living in Los Angeles County, the income-poverty is pegged to a family of four even if a family is comprised of 2, 3, 5, or more individuals. Age Span: 24-60+	• Age in Place with Safety, Dignity & Independence	

North Star Outcome	Measure	Other North Star Outcomes Impacted	Predictor/Causal Studies
Age in Place with Safety, Dignity & Independence	Person-Place Fit Measure for Older Adults (PPFM-OA) Age Span: 60+ <u>Measure-Related Studies</u> • Developing the Person–Place Fit Measure for Older Adults: Broadening Place Domains; • Supporting Aging-in-Place Well: Findings From a Cluster Analysis of the Reasons for Aging-in-Place and Perceptions of Well-Being; • What Is Aging in Place? Confusions and Contradictions; • Using Ecological Frameworks to Advance a Field of Research, Practice, and Policy on Aging-in-Place Initiatives		

Contributing Outcomes

All the following contributing outcome metrics are intended to be measured for individuals.

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Preterm Birth	Live birth occurring at less than 37 weeks gestation from the date of last normal menstrual period Age Span: 0-5	Infant Mortality	• Fishman, S. H., Hummer, R. A., Sierra, G., Hargrove, T., Powers, D. A., & Rogers, R. G. (2021). Race/ethnicity, maternal educational attainment, and infant mortality in the United States. Biodemography and social biology, 66(1), 1-26; • MacDorman, M. F., & Mathews, T. J. (2011). Understanding racial and ethnic disparities in US infant mortality rates; • Schempf, A. H., Branum, A. M., Lukacs, S. L., & Schoendorf, K. C. (2007). The contribution of preterm birth to the black–white infant mortality gap, 1990 and 2000. American journal of public health, 97(7), 1255-1260; • Chao, S. M., Donatoni, G., Bemis, C., Donovan, K., Harding, C., Davenport, D., ... & Peck, M. G. (2010). Integrated approaches to improve birth outcomes:perinatal periods of risk, infant mortality review, and the Los Angeles Mommy and Baby Project. Maternal and child health journal, 14(6), 827-837; • Riddell, C. A., Harper, S., & Kaufman, J. S. (2017). Trends in differences in US mortality rates between black and white infants. JAMA pediatrics, 171(9), 911-913.

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Low Birthweight	Live birth weighing less than 2,500 grams Age Span: 0-5	• Infant Mortality • Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Centers for Disease Control and Prevention (CDC. (2002). Infant mortality and low birth weight among black and white infants--United States, 1980-2000. MMWR. Morbidity and mortality weekly report, 51(27), 589-592; • Kothari, C. L., Romph, C., Bautista, T., & Lenz, D. (2017). Perinatal periods of risk analysis: Disentangling race and socioeconomic status to inform a Black infant mortality community action initiative. Maternal and child health journal, 21(1), 49-58; • Hauck, F. R., Tanabe, K. O., & Moon, R. Y. (2011, August). Racial and ethnic disparities in infant mortality. In Seminars in perinatology (Vol. 35, No. 4, pp. 209-220); • Royer, H. (2009). Separated at girth: US twin estimates of the effects of birth weight. American Economic Journal: Applied Economics, 1(1), 49-85.
Early childhood disability	National Survey of Children's Health Questionnaire – Children Ages 0-5 Age Span: 0-5 Measure-Related Studies	• Good Physical & Behavioral Health/Wellbeing • Stable Full-Time Employment at	• Currie, J., Stabile, M., Manivong, P., & Roos, L. L. (2010). Child health and young adult outcomes. Journal of Human resources, 45(3), 517-548.; Childhood Health: Trends and Consequences over the Life-course; • Smith J. P. (2009). The Impact of Childhood Health on Adult Labor Market Outcomes. The review of economics and statistics, 91(3), 478–489;

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	National Survey of Children's Health: https://www.childhealthdata.org/learn-about-the-nsch/survey-instruments	250% FPL for individuals	• Prinz, D., Chernew, M., Cutler D., & Frakt, A. (2018) Health and economic activity over the lifecycle: Literature review (NBER Working Paper 24865). National Bureau of Economic Research. • Stabile, M., & Allin, S. (2012). The economic costs of childhood disability. The future of children, 65-96.
Asthma	National Survey of Children's Health Questionnaire – Children Ages 0-5 Age Span: 0-5 Measure-Related Studies National Survey of Children's Health: https://www.childhealthdata.org/learn-about-the-nsch/survey-instruments	Good Physical & Behavioral Health/Wellbeing	• Currie, J., Stabile, M., Manivong, P., & Roos, L. L. (2010). Child health and young adult outcomes. Journal of Human resources, 45(3), 517-548.; Childhood Health: Trends and Consequences over the Life-course; • Smith J. P. (2009). The Impact of Childhood Health on Adult Labor Market Outcomes. The review of economics and statistics, 91(3), 478–489; • Prinz, D., Chernew, M., Cutler D., & Frakt, A. (2018) Health and economic activity over the lifecycle: Literature review (NBER Working Paper 24865). National Bureau of Economic Research.
Diabetes	National Survey of Children's Health Questionnaire – Children Ages 0-5 Age Span: 0-5 Measure-Related Studies National Survey of Children's Health: https://www.childhealthdata.org/le	Good Physical & Behavioral Health/Wellbeing	• Currie, J., Stabile, M., Manivong, P., & Roos, L. L. (2010). Child health and young adult outcomes. Journal of Human resources, 45(3), 517-548.; Childhood Health: Trends and Consequences over the Life-course; • Smith J. P. (2009). The Impact of Childhood Health on Adult Labor Market Outcomes. The review of economics and statistics, 91(3), 478–489;

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	arn-about-the-nsch/survey-instruments		• Prinz, D., Chernew, M., Cutler D., & Frakt, A. (2018) Health and economic activity over the lifecycle: Literature review (NBER Working Paper 24865). National Bureau of Economic Research.
Elevated Blood Lead Levels	Child with blood level values of 3.5 micrograms per deciliter (µg/dL) or higher Age Span: 0-5 <u>Measure-Related Studies</u> CDC's Blood Lead Reference Value: https://www.cdc.gov/nceh/lead/data/blood-lead-reference-value.htm	• School Readiness • Good Physical & Behavioral Health/Wellbeing	• McLaine, P., Navas-Acien, A., Lee, R., Simon, P., Diener-West, M., & Agnew, J. (2013). Elevated blood lead levels and reading readiness at the start of kindergarten. Pediatrics, 131(6), 1081-1089. • Wodtke, G., Ramaj, S., & Schachner, J. (2020). Toxic Neighborhoods: The Joint Effects of Concentrated Poverty and Environmental Lead Contamination on Cognitive Development during Early Childhood. • Winter, A. S., & Sampson, R. J. (2017). From lead exposure in early childhood to adolescent health: A Chicago birth cohort. American journal of public health, 107(9), 1496-1501.
Early Childhood trauma	Child Stress Disorders Checklist-Screening Form (CSDCSF) Age Span: 0-5 <u>Measure-Related Studies</u> • Saxe, G.N. (2001). Child Stress Disorders Checklist (CSDC) (v.4.0-11/01). National Child Traumatic Stress Network and Department of Child and	Good Physical & Behavioral Health/Wellbeing	• Dunn, E. C., Nishimi, K., Powers, A., & Bradley, B. (2017). Is developmental timing of trauma exposure associated with depressive and post-traumatic stress disorder symptoms in adulthood?. Journal of psychiatric research, 84, 119-127. • Dunn, E. C., Soare, T. W., Zhu, Y., Simpkin, A. J., Suderman, M. J., Klengel, T., ... & Relton, C. L. (2019). Sensitive periods for the effect of childhood adversity on DNA methylation: results from a prospective, longitudinal study. Biological psychiatry, 85(10), 838-849.

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	Adolescent Psychiatry, Boston University School of Medicine. • Saxe, G., Chawla, N., Stoddard, F., Kassam-Adams, N., Courtney, D., Cunningham, K., Lopez, C., Sheridan, R., King, D., & Kind, L. (2003). Child stress disorders checklist: A measure of ASD and PTSD in children. Journal of the American Academy of Child & Adolescent Psychiatry, 42(8), 972-978.		• Narayan, A. J., Labella, M. H., Englund, M. M., Carlson, E. A., & Egeland, B. (2017). The legacy of early childhood violence exposure to adulthood intimate partner violence: Variable-and person-oriented evidence. Journal of Family Psychology, 31(7), 833.
Toxic Stress	Chronic stress is measured using hair cortisol Age Span: 0/5 <u>Measure-Related Studies</u> • Bates, R., Salsberry, P., & Ford, J. (2017). Measuring stress in young children using hair cortisol: The state of the science. Biological Research for Nursing, 19(5), 499-510. • Condon, E. M. (2018). Chronic stress in children and adolescents: A review of biomarkers for use in pediatric	School Readiness; Good Physical & Behavioral Health/Wellbeing	• Shonkoff, J. P., Garner, A. S., Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption, and Dependent Care, and Section on Developmental and Behavioral Pediatrics, Siegel, B. S., Dobbins, M. I., Earls, M. F., ... & Wood, D. L. (2012). The lifelong effects of early childhood adversity and toxic stress. Pediatrics, 129(1), e232-e246.

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	research. Biological research for nursing, 20(5), 473-496.		
Healthy Diet	Nutrition Screening for Toddlers and Preschoolers (NutriSTEP) Age Span: 0-5	Good Physical & Behavioral Health/Wellbeing	• Omand, J. A., Janus, M., Maguire, J. L., Parkin, P. C., Aglipay, M., Randall Simpson, J., ... & Birken, C. S. (2021). Nutritional Risk in Early Childhood and School Readiness. The Journal of Nutrition, 151(12), 3811-3819.
Attends Pre-K	Attend Head Start or Pre-K program Age Span: 0-5	Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Cascio, E. (2021) Early Childhood Education in the United States: What, When, Where, Who, How, and Why. (NBER Working Paper 28722) • Gray-Lobe, G. Pathak, P. A., and Walters C. R. (2021) "The Long-Term Effects of Universal Preschool in Boston," NBER Working Paper No. 28756
Secure/Insecure Attachment	Attachment Behavior Q-Sort Age Span: 0-5	• School Readiness • First-Time Felony Conviction	• Bernier, A., Beauchamp, M. H., & Cimon-Paquet, C. (2020). From early relationships to preacademic knowledge: A sociocognitive developmental cascade to school readiness. Child development, 91(1), e134-e145. • Ogilvie, C. A., Newman, E., Todd, L., & Peck, D. (2014). Attachment & violent offending: A meta-analysis. Aggression and violent behavior, 19(4), 322-339.
Externalizing or Internalizing Behavior	Child Behavior Checklist Age Span: 0-5 Measure-Related Studies	School Readiness	• Duncan, G. and Magnuson, K. (2011) "Chapter 3: The Nature and Impact of Early Achievement Skills, Attention Skills and Behavior Problems," in Duncan, G. J., & Murnane, R. J. (Eds.) Whither Opportunity?: Rising Inequality, Schools, and Children's Life Chances. Russell Sage Foundation;

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	• "Appendix: Review of Measure Profiles of Social and Emotional Development" to Review of Measures of Social and Emotional Development		• Long-Term Outcomes of ADHD: Academic Achievement and Performance; Williams, P. G., Lerner, M. A., Sells, J., Alderman, S. L., Hashikawa, A., Mendelsohn, A., ... & Weiss-Harrison, A. (2019). School readiness. Pediatrics, 144(2).
General Health Status	National Survey of Children's Health Questionnaire – Children Ages 6-11 Age Span: 6-11 Measure-Related Studies National Survey of Children's Health: https://www.childhealthdata.org/learn-about-the-nsch/survey-instruments	Good Physical & Behavioral Health/Wellbeing	• Currie, J., Stabile, M., Manivong, P., & Roos, L. L. (2010). Child health and young adult outcomes. Journal of Human resources, 45(3), 517-548.; • Delaney, L., & Smith, J. P. (2012). Childhood health: trends and consequences over the life-course. The Future of Children/Center for the Future of Children, the David and Lucile Packard Foundation, 22(1), 43. • Smith J. P. (2009). The Impact of Childhood Health on Adult Labor Market Outcomes. The review of economics and statistics, 91(3), 478–489; • Prinz, D., Chernew, M., Cutler D., & Frakt, A. (2018) Health and economic activity over the lifecycle: Literature review (NBER Working Paper 24865). National Bureau of Economic Research.
Asthma	National Survey of Children's Health Questionnaire – Children Ages 6-11 Age Span: 6-11 Measure-Related Studies	Good Physical & Behavioral Health/Wellbeing	• Currie, J., Stabile, M., Manivong, P., & Roos, L. L. (2010). Child health and young adult outcomes. Journal of Human resources, 45(3), 517-548.; • Childhood Health: Trends and Consequences over the Life-course; Smith J. P. (2009). The Impact of Childhood

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	National Survey of Children's Health: https://www.childhealthdata.org/learn-about-the-nsch/survey-instruments		Health on Adult Labor Market Outcomes. The review of economics and statistics, 91(3), 478–489; • Prinz, D., Chernew, M., Cutler D., & Frakt, A. (2018) Health and economic activity over the lifecycle: Literature review (NBER Working Paper 24865). National Bureau of Economic Research.
Diabetes	National Survey of Children's Health Questionnaire – Children Ages 6-11 Age Span: 6-11 Measure-Related Studies National Survey of Children's Health: https://www.childhealthdata.org/learn-about-the-nsch/survey-instruments	Good Physical & Behavioral Health/Wellbeing	• Currie, J., Stabile, M., Manivong, P., & Roos, L. L. (2010). Child health and young adult outcomes. Journal of Human resources, 45(3), 517-548.; • Childhood Health: Trends and Consequences over the Life-course; Smith J. P. (2009). The Impact of Childhood Health on Adult Labor Market Outcomes. The review of economics and statistics, 91(3), 478–489; • Prinz, D., Chernew, M., Cutler D., & Frakt, A. (2018) Health and economic activity over the lifecycle: Literature review (NBER Working Paper 24865). National Bureau of Economic Research.
Disability	National Survey of Children's Health Questionnaire – Children Ages 6-11 Age Span: 6-11 Measure-Related Studies National Survey of Children's Health: https://www.childhealthdata.org/le	Good Physical & Behavioral Health/Wellbeing	• Currie, J., Stabile, M., Manivong, P., & Roos, L. L. (2010). Child health and young adult outcomes. Journal of Human resources, 45(3), 517-548.; • Childhood Health: Trends and Consequences over the Life-course; Smith J. P. (2009). The Impact of Childhood Health on Adult Labor Market Outcomes. The review of economics and statistics, 91(3), 478–489;

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	arn-about-the-nsch/survey-instruments		• Prinz, D., Chernew, M., Cutler D., & Frakt, A. (2018) Health and economic activity over the lifecycle: Literature review (NBER Working Paper 24865). National Bureau of Economic Research. • Stabile, M., & Allin, S. (2012). The economic costs of childhood disability. The future of children, 65-96.
Elevated Blood Lead Levels	Child with blood level values of 3.5 micrograms per deciliter (µg/dL) or higher Age Span: 6-11 Measure-Related Studies CDC's Blood Lead Reference Value: https://www.cdc.gov/nceh/lead/data/blood-lead-reference-value.htm	Good Physical & Behavioral Health/Wellbeing	• Aizer, A., Currie, J., Simon, P., & Vivier, P. (2018). Do low levels of blood lead reduce children's future test scores?. American Economic Journal: Applied Economics, 10(1), 307-41; • Martin, S., & Acs, G. (2018). The long-term benefits of preventing childhood lead exposure. Washington, DC: Urban Institute.
Overweight or Obese	BMI-for-age weight status in the 85th percentile or higher Age Span: 6-11	Good Physical & Behavioral Health/Wellbeing	• Childhood Health: Trends and Consequences over the Life-course; Smith J. P. (2009). The Impact of Childhood Health on Adult Labor Market Outcomes. The review of economics and statistics, 91(3), 478–489; • Prinz, D., Chernew, M., Cutler D., & Frakt, A. (2018) Health and economic activity over the lifecycle: Literature review (NBER Working Paper 24865). National Bureau of Economic Research.

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Pubertal Timing (early puberty onset)	Self-reported Tanner stage and age at menarche Age Span: 6-11 Measure-Related Studies Detrimental psychological outcomes associated with early pubertal timing in adolescent girls	Good Physical & Behavioral Health/Wellbeing	• Hoyt, L. T., Niu, L., Pachucki, M. C., & Chaku, N. (2020). Timing of puberty in boys and girls: implications for population health. SSM-population health, 10, 100549. • Mendle, J., Turkheimer, E., & Emery, R. E. (2007). Detrimental psychological outcomes associated with early pubertal timing in adolescent girls. Developmental review, 27(2), 151-171. • Copeland, W., Shanahan, L., Miller, S., Costello, E. J., Angold, A., & Maughan, B. (2010). Outcomes of early pubertal timing in young women: a prospective population-based study. American Journal of Psychiatry, 167(10), 1218-1225.
Chronic Stress	Chronic stress is measured using the following biomarkers: cortisol, adrenaline, noradrenaline, dopamine, DHEA, Interleukin (IL)-6, C-Reactive Protein, TNF-α, and IGF-1 Age Span: 6-11 Measure-Related Studies • Condon, E. M. (2018). Chronic stress in children and adolescents: A review of biomarkers for use in pediatric research. Biological research for nursing, 20(5), 473-496.	Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6	• Gary Evans, Jeanne Brooks-Gunn and Pamela Kato Klebanov (2011) Stressing Out the Poor Chronic Physiological Stress and the Income-Achievement Gap: Toward a new biology of social adversity

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Childhood trauma	Child Stress Disorders Checklist-Screening Form (CSDCSF) Age Span: 6-11 Measure-Related Studies • Saxe, G.N. (2001). Child Stress Disorders Checklist (CSDC) (v.4.0-11/01). National Child Traumatic Stress Network and Department of Child and Adolescent Psychiatry, Boston University School of Medicine. • Saxe, G., Chawla, N., Stoddard, F., Kassam-Adams, N., Courtney, D., Cunningham, K., Lopez, C., Sheridan, R., King, D., & Kind, L. (2003). Child stress disorders checklist: A measure of ASD and PTSD in children. Journal of the American Academy of Child & Adolescent Psychiatry, 42(8), 972-978.	Good Physical & Behavioral Health/Wellbeing	• Ogle, C. M., Rubin, D. C., & Siegler, I. C. (2013). The impact of the developmental timing of trauma exposure on PTSD symptoms and psychosocial functioning among older adults. Developmental psychology, 49(11), 2191.
School Engagement	The Multidimensional Student Engagement Scale Age Span: 6-11 Measure-Related Studies	Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Rumberger, R. W., & Rotermund, S. (2012). The relationship between engagement and high school dropout. In Handbook of research on student engagement (pp. 491-513). Springer, Boston, MA.

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	Wang, M. T., Fredricks, J., Ye, F., Hofkens, T., & Linn, J. S. (2019). Conceptualization and assessment of adolescents' engagement and disengagement in school: A Multidimensional School Engagement Scale. European Journal of Psychological Assessment, 35(4), 592.		
Externalizing Behavior	Child Behavior Checklist (CBCL) Age Span: 6-11 Measure-Related Studies "Appendix: Review of Measure Profiles of Social and Emotional Development" to Review of Measures of Social and Emotional Development	Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Magnuson, K., Duncan, G., Lee, K. T., & Metzger, M. (2016). Early School Adjustment and Educational Attainment. American educational research journal, 53(4), 1198–1228.
Self-Regulation	Child Behavior Checklist (CBCL) Age Span: 6-11 Measure-Related Studies "Appendix: Review of Measure Profiles of Social and Emotional	Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6 Completion of a Postsecondary	• Li-Grining, C. P., Stockdale, L., Cunningham, A., Bradley, K., Papadakis, J. L., Flores-Lamb, V., ... & Radulescu, M. (2022). Self-Regulation and Academic Achievement from Early to Middle Childhood Among Children in Low-Income Neighborhoods. Early Education and Development, 1-16.

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	Development" to Review of Measures of Social and Emotional Development	Credential w/ Significant Labor Market Value	• Johnson, S. B., Voegtline, K. M., Ialongo, N., Hill, K. G., & Musci, R. J. (2022). Self-control in first grade predicts success in the transition to adulthood. Development and psychopathology, 1-13.
Depressed/Internalizing Behavior	Child Behavior Checklist (CBCL) Age Span: 6-11 Measure-Related Studies "Appendix: Review of Measure Profiles of Social and Emotional Development" to Review of Measures of Social and Emotional Development	Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-7	• Kremer, K. P., Flower, A., Huang, J., & Vaughn, M. G. (2016). Behavior problems and children's academic achievement: A test of growth-curve models with gender and racial differences. Children and youth services review, 67, 95-104.
Social Isolation	Children's Loneliness and Social Dissatisfaction Scale (CLS) Age Span: 6-11 Measure-Related Studies Cole, A., Bond, C., Qualter, P., & Maes, M. (2021). A systematic review of the development and psychometric properties of loneliness measures for children and adolescents. International journal of	Good Physical & Behavioral Health/Wellbeing	• Matthews, T., Danese, A., Wertz, J., Ambler, A., Kelly, M., Diver, A., ... & Arseneault, L. (2015). Social isolation and mental health at primary and secondary school entry: a longitudinal cohort study. Journal of the American Academy of Child & Adolescent Psychiatry, 54(3), 225-232.

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	environmental research and public health, 18(6), 3285.		
School Suspensions	Number of in-school and out-of-school suspensions received in grades 1-5 Age Span: 6-11	Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Rumberger, R. and Losen, D. (2016) The High Cost of Harsh Discipline and its Disparate Impact, The Center for Civil Rights Remedies; • Rosenbaum J. E. (2020). Educational and criminal justice outcomes 12 years after school suspension. Youth & society, 52(4), 515–547
School Absences	Number of school days missed in the last school year Age Span: 6-11	Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Smerillo, N. E., Reynolds, A. J., Temple, J. A., & Ou, S. R. (2018). Chronic absence, eighth-grade achievement, and high school attainment in the Chicago Longitudinal Study. Journal of school psychology, 67, 163–178; • Liu, J., Lee, M., & Gershenson, S. (2021). The Short- and Long-Run Impacts of Secondary School Absences. Journal of Public Economics 199, 10441.
General Health Status	National Survey of Children's Health Questionnaire – Children Ages 12-17 Age Span: 12-20 Measure-Related Studies National Survey of Children's Health	Stable Full-Time Employment at 250% FPL for individuals	• Currie, J., & Madrian, B. C. (1999). Health, health insurance and the labor market. Handbook of labor economics, 3, 3309-3416 • O'Donnell, O., Van Doorslaer, E., & Van Ourti, T. (2015). Health and inequality. In Handbook of income distribution (Vol. 2, pp.

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Allostatic Load	Allostic Load Measurement Biomarkers *[Highest or lowest quartile cutpoints where appropriate]* • Resting Heart Rate • Systolic Blood Pressure • Diastolic Blood Pressure • C-Reactive Protein • Interleukin-6 • Fibrinogen • sE-selectin • sICAM-1 • HbA1c • Glucose • Body Mass Index Age Span: 12-20 <u>Measure-Related Studies</u> Midlife in the United States (MIDUS) Survey data as repoted in Vadiveloo, M., & Mattei, J. (2017). Perceived weight discrimination and 10-year risk of allostatic load among US adults. Annals of Behavioral Medicine, 51(1), 94-104.	Good Physical & Behavioral Health/Wellbeing	• Beckie, T. M. (2012). A systematic review of allostatic load, health, and health disparities. Biological research for nursing, 14(4), 311-346.
Chronic Stress	Chronic stress is measured using the following biomarkers: cortisol, adrenaline, noradrenaline,	Good Physical & Behavioral Health/Wellbeing	• Sheth, C., McGlade, E., & Yurgelun-Todd, D. (2017). Chronic stress in adolescents and its neurobiological and psychopathological consequences: an RDoC perspective. Chronic Stress, 1, 2470547017715645.

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	dopamine, DHEA, Interleukin (IL)-6, C-Reactive Protein, TNF-α, and IGF-1 Age Span: 12-20 Measure-Related Studies Measuring Adolescent Chronic Stress: A Review of Established Biomarkers and Psychometric Instruments		
Substance use/abuse	SASSI-A2 (Substance Abuse Subtle Screening Inventory-Adolescent, 2nd Edition) Age Span: 12-20	First-Time Felony Conviction	• Slade, E. P., Stuart, E. A., Salkever, D. S., Karakus, M., Green, K. M., & Ialongo, N. (2008). Impacts of age of onset of substance use disorders on risk of adult incarceration among disadvantaged urban youth: A propensity score matching approach. Drug and alcohol dependence, 95(1-2), 1-13
Proficient in 8th Grade Math and ELA Tests	Met or Exceeded standard for 8th Grade ELA and Math for California Smarter Balanced Summative Assessments Age Span: 12-20	Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Farkas, G. (2011) "Chapter 4: Middle and High School Skills, Behaviors, Attitudes and Curriculum Enrollment, and Their Consequences" in Duncan, G. J., & Murnane, R. J. (Eds.) Whither Opportunity?: Rising Inequality, Schools, and Children's Life Chances. Russell Sage Foundation
Middle School Grades	Eighth grade grade point average (GPA) Age Span: 12-20	Completion of a Postsecondary Credential w/ Significant Labor Market Value	• DiPrete, T.A. and Buchmann, C. (2014) The Secret Behind College Completion, Girls, Boys, and The Power of Eighth Grade Grades. Third Way Report

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Passing courses in ninth grade	Ninth grade grade point average (GPA) Age Span: 12-20	Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Easton, J. Q., Johnson, E., & Sartain, L. (2017). The predictive power of ninth-grade GPA. Chicago, IL: University of Chicago Consortium on School Research, 2018-10.
Participation in Arts Education	Cumulative credits in arts classes Age Span: 12-20	Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Thomas. M. K., Singh, P. & Klopfenstein, K. (2015). Arts education and the high school dropout problem. Journal of Cultural Economics, 39 (4): 327-339
Grade Retention	Student remains in the same grade for two consecutive years Age Span: 12-20	Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Jacob, B. A., & Lefgren, L. (2009). The Effect of Grade Retention on High School Completion. American Economic Journal: Applied Economics, 1(3), 33–58. • Mariano, L. T., Martorell, P. and Berglund, T. (2018). The Effects of Grade Retention on High School Outcomes: Evidence from New York City Schools (RAND Corporation Working Paper WR-1259-DEIES).
High School GPA	High school grade point average Age Span: 12-20	Completion of a Postsecondary Credential w/ Significant Labor Market Value; First-Time Felony Conviction	• Galla, B. M., Shulman, E. P., Plummer, B. D., Gardner, M., Hutt, S. J., Goyer, J. P., ... & Duckworth, A. L. (2019). Why high school grades are better predictors of on-time college graduation than are admissions test scores: The roles of self-regulation and cognitive ability. American Educational Research Journal, 56(6), 2077-2115. • Barnert, E. S et al J. (2021). Adolescent Protective and Risk Factors for Incarceration through Early Adulthood. Journal of Child and Family Studies, 30(6), 1428-1440

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
			• Allensworth EM, Clark K. (2020) High School GPAs and ACT Scores as Predictors of College Completion: Examining Assumptions About Consistency Across High Schools. Educational Researcher. 2020;49(3):198-211; • Jackson, J., & Kurlaender, M. (2014). College readiness and college completion at broad access four-year institutions. American Behavioral Scientist, 58(8), 947-971
College Readiness (course-taking)	College readiness is defined as whether a student is exempt from remediation in English and mathematics by receiving a high score on a section of the SAT (550 for math and 500 for English) or ACT (23 for math and 22 for English) a 3 or higher on a relevant AP exam, dual enrollment credit from a community college, and satisfactory performance on the Early Assessment Program or a university placement exam. Age Span: 12-20 <u>Measurement-related Studies</u> • Jackson, J., & Kurlaender, M. (2014). College readiness and college completion at broad access four-year institutions.	Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Jackson, J., & Kurlaender, M. (2014). College readiness and college completion at broad access four-year institutions. American Behavioral Scientist, 58(8), 947-971.

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	American Behavioral Scientist, 58(8), 947-971.		
A-G Completion	Completion of California A-G College Entrance requirements Age Span: 12-20	Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Jackson, J., & Kurlaender, M. (2014). College readiness and college completion at broad access four-year institutions. American Behavioral Scientist, 58(8), 947-971.
High School Graduation/Dropout	Four-year adjusted cohort graduation rate Age Span: 12-20	• First-Time Felony Conviction; • Completion of a Postsecondary Credential w/ Significant Labor Market Value; • Stable Full-Time Employment at 250% FPL for individuals;	• Steven Raphael (2007) "Early Incarceration Spells and the Transition to Adulthood," in Danziger, Sheldon and Cecilia Elena Rouse (eds) The Price of Independence: The Economics of Early Adulthood, Russell Sage Foundation: New York pp. 278-306. • Hirsch, B. T., & Winters, J. V. (2014). An anatomy of racial and ethnic trends in male earnings in the US. Review of Income and Wealth, 60(4), 930-947
Postsecondary Enrollment	Enrollment in a certificate program, Associates degree programs or four-year degree-granting college or university Age Span: 12-20 Measure-Related Studies	• Completion of a Postsecondary Credential w/ Significant Labor Market Value; • Stable Full-Time Employment at	• FPLCarnevale, A. P., Rose, S. J. & Cheah, B. (2011) The College Payoff: Education, Occupations, Lifetime Earnings. The Georgetown University Center on Education and the Workforce

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	Dynarski, S. M., Hemelt, S. W., & Hyman, J. M. (2015). The missing manual: Using National Student Clearinghouse data to track postsecondary outcomes. Educational Evaluation and Policy Analysis, 37(1_suppl), 53S-79S.	250% FPL for individuals	
Enrollment in a For-Profit College	Enrollment in and degree-completion at a for-profit college Age Span: 12-20 <u>Measure-Related Studies</u> Dynarski, S. M., Hemelt, S. W., & Hyman, J. M. (2015). The missing manual: Using National Student Clearinghouse data to track postsecondary outcomes. Educational Evaluation and Policy Analysis, 37(1_suppl), 53S-79S.	• Completion of a Postsecondary Credential w/ Significant Labor Market Value; • Stable Full-Time Employment at 250% FPL for individuals; • Family Income at 250% FPL (pegged to a family of 4)	• Cellini, S. R., & Turner, N. (2019). Gainfully employed? Assessing the employment and earnings of for-profit college students using administrative data. Journal of Human Resources, 54(2), 342-370; • Armona, L., Chakrabarti, R., & Lovenheim, M. F. (2022). Student debt and default: The role of for-profit colleges. Journal of Financial Economics, 144(1), 67-92; • Liu, V. Y. T., & Belfield, C. (2020). The labor market returns to for-profit higher education: Evidence for transfer students. Community College Review, 48(2), 133-155; • Cellini, S. R. (2021). For-Profit Colleges in the United States: Insights from Two Decades of Research. In The Routledge Handbook of the Economics of Education (pp. 512-523). Routledge; • Armona, L., Chakrabarti, R., & Lovenheim, M. F. (2022). Student debt and default: The role of for-profit colleges. Journal of Financial Economics, 144(1), 67-92

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Enrollment in High-Mobility College	Enrollment in colleges and universities in ranked in the top quartile using the "overall mobility index" elaborated in Chetty et al (2017). High mobility colleges locted in Los Angeles County include: Cal State Los Angeles (#5 out 2,137 colleges), Dominguez Hills (18th) and Northridge (70th), The Los Angeles Community College District (96th), Cal Policy Pomona (124th), Cal State Long Beach (320th) and Pasadena City College (445th). Age Span: 12-20 <u>Measure-Related Studies</u> Dynarski, S. M., Hemelt, S. W., & Hyman, J. M. (2015). The missing manual: Using National Student Clearinghouse data to track postsecondary outcomes. Educational Evaluation and Policy Analysis, 37(1_suppl), 53S-79S.	• Completion of a Postsecondary Credential w/ Significant Labor Market Value; • Stable Full-Time Employment at 250% FPL for individuals	Chetty, R., Friedman, J. N., Saez, E., Turner, N., & Yagan, D. (2017). Mobility report cards: The role of colleges in intergenerational mobility (No. w23618). national bureau of economic research.
Youth Disconnection	Youth ages 16-24 neither enrolled in school or working Age Span: 12-35	Stable Full-Time Employment at 250% FPL for individuals	• Fernandes, A. L., & Gabe, T. (2009). Disconnected youth: A look at 16-to 24-year olds who are not working or in school. DIANE Publishing.

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Gender Identity & Expression	The Gender Identity Scale Age Span: 12-20 Measure-Related Studies Ho, F., & Mussap, A. J. (2019). The Gender Identity Scale: Adapting the Gender Unicorn to measure gender identity. Psychology of Sexual Orientation and Gender Diversity, 6(2), 217.	Good Physical & Behavioral Health/Wellbeing	• Robertson, L., Akré, E. R., & Gonzales, G. (2021). Mental Health Disparities at the Intersections of Gender Identity, Race, and Ethnicity. LGBT health, 8(8), 526-535.
Sexual Orientation	Sexual-Romantic and Gendered Sexuality Scales Age Span: 12-20 Measure-Related Studies Galupo, M. P., & Bennett, A. J. (2019). Face validity ratings of sexual orientation scales by heterosexual cisgender adults. Psychology & Sexuality, 10(3), 261-268.	Good Physical & Behavioral Health/Wellbeing	• Becker, M., Cortina, K. S., Tsai, Y. M., & Eccles, J. S. (2014). Sexual orientation, psychological well-being, and mental health: A longitudinal analysis from adolescence to young adulthood. Psychology of Sexual Orientation and Gender Diversity, 1(2), 132. • Gilbey, D., Mahfouda, S., Ohan, J., Lin, A., & Perry, Y. (2020). Trajectories of mental health difficulties in young people who are attracted to the same gender: a systematic review. Adolescent Research Review, 5(3), 281-293.
Social Isolation	Children's Loneliness and Social Dissatisfaction Scale (CLS) Age Span: 12-20 Measure-Related Studies	Good Physical & Behavioral Health/Wellbeing	• Matthews, T., Danese, A., Wertz, J., Ambler, A., Kelly, M., Diver, A., ... & Arseneault, L. (2015). Social isolation and mental health at primary and secondary school entry: a longitudinal cohort study. Journal of the American Academy of Child & Adolescent Psychiatry, 54(3), 225-232.

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	Cole, A., Bond, C., Qualter, P., & Maes, M. (2021). A systematic review of the development and psychometric properties of loneliness measures for children and adolescents. International journal of environmental research and public health, 18(6), 3285.		
Socioemotional Development	Child Behavior Checklist (CBCL) Age Span: 12-20 Measure-Related Studies "Appendix: Review of Measure Profiles of Social and Emotional Development" to Review of Measures of Social and Emotional Development	• Completion of a Postsecondary Credential w/ Significant Labor Market Value; • First Time Felony Convictions	• Jackson, C. K., Porter, S. C., Easton, J. Q., Blanchard, A., & Kiguel, S. (2020). School effects on socioemotional development, school-based arrests, and educational attainment. American Economic Review: Insights, 2(4), 491-508.
School Suspensions	Number of in-school and out-of-school suspensions received in grades 6-12 Age Span: 12-20	• Completion of a Postsecondary Credential w/ Significant Labor Market Value; • First Time Felony Convictions	• Rumberger, R. and Losen, D. (2016) The High Cost of Harsh Discipline and its Disparate Impact, The Center for Civil Rights Remedies; • Rosenbaum J. E. (2020). Educational and criminal justice outcomes 12 years after school suspension. Youth & society, 52(4), 515–547; • Hemez, P., Brent, J. J., & Mowen, T. J. (2020). Exploring the school-to-prison pipeline: How school suspensions

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
			influence incarceration during young adulthood. Youth Violence and Juvenile Justice, 18(3), 235-255.
Expulsions	Total number of K-12 expulsions Age Span: 12-20	• Completion of a Postsecondary Credential w/ Significant Labor Market Value; • First Time Felony Convictions	• Rumberger, R. and Losen, D. (2016) The High Cost of Harsh Discipline and its Disparate Impact, The Center for Civil Rights Remedies; • Rosenbaum J. E. (2020). Educational and criminal justice outcomes 12 years after school suspension. Youth & society, 52(4), 515–547; • Hemez, P., Brent, J. J., & Mowen, T. J. (2020). Exploring the school-to-prison pipeline: How school suspensions influence incarceration during young adulthood. Youth Violence and Juvenile Justice, 18(3), 235-255.
School Absences	Number of school days missed in grades 6-12 Age Span: 12-20	• Completion of a Postsecondary Credential w/ Significant Labor Market Value; • First Time Felony Convictions	• Smerillo, N. E., Reynolds, A. J., Temple, J. A., & Ou, S. R. (2018). Chronic absence, eighth-grade achievement, and high school attainment in the Chicago Longitudinal Study. Journal of school psychology, 67, 163–178; • Liu, J., Lee, M., & Gershenson, S. (2021). The Short- and Long-Run Impacts of Secondary School Absences. Journal of Public Economics 199, 10441.
Juvenile Delinquency	Add Health Self-Report Delinquency (AHSRD) Scale Age Span: 12-20 Measure-Related Studies	• Completion of a Postsecondary Credential w/ Significant Labor Market Value;	• Ward, S. and Williams, J. (2015), Does Juvenile Delinquency Reduce Educational Attainment? Journal of Empirical; • Carter, A. (2019). The consequences of adolescent delinquent behavior for adult employment outcomes.

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	The Self-Report Delinquency Scale From the National Longitudinal Study of Adolescent to Adult Health Among At-Risk for Delinquency Youths	• First Time Felony Convictions; • Stable Full-Time Employment at 250% FPL for individuals	Journal of youth and adolescence, 48(1), 17-29. Legal Studies, 12: 716-756. • Also see Kim, J. (2020). The Role of Violent and Nonviolent Delinquent Behavior in Educational Attainment. Youth & Society, 52(3), 377–402.
Juvenile Felony Arrest	Juvenile arrest for a felony offense Age Span: 12-20	• Completion of a Postsecondary Credential w/ Significant Labor Market Value; • First Time Felony Convictions • Stable Full-Time Employment at 250% FPL for individuals	• Ward, S., Williams, J., & van Ours, J. C. (2020). Delinquency, Arrest and Early School Leaving. Oxford Bulletin of Economics and Statistics; • Widdowson, A. O., Siennick, S. E., & Hay, C. (2016). The implications of arrest for college enrollment: An analysis of long-term effects and mediating mechanisms. Criminology, 54(4), 621-652; • Siennick, S. E., & Widdowson, A. O. (2020). Juvenile arrest and later economic attainment: Strength and mechanisms of the relationship. Journal of Quantitative Criminology, 1-28. • Kirk, D. S., & Sampson, R. J. (2013). Juvenile arrest and collateral educational damage in the transition to adulthood. Sociology of education, 86(1), 36-62.
Juvenile Misdemeanor Arrest	Juvenile arrest for a misdemeanor offense Age Span: 12-20	• Completion of a Postsecondary Credential w/ Significant Labor Market Value;	• Ward, S., Williams, J., & van Ours, J. C. (2020). Delinquency, Arrest and Early School Leaving. Oxford Bulletin of Economics and Statistics;

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
		• First Time Felony Convictions • Stable Full-Time Employment at 250% FPL for individuals	• Widdowson, A. O., Siennick, S. E., & Hay, C. (2016). The implications of arrest for college enrollment: An analysis of long-term effects and mediating mechanisms. Criminology, 54(4), 621-652; • Siennick, S. E., & Widdowson, A. O. (2020). Juvenile arrest and later economic attainment: Strength and mechanisms of the relationship. Journal of Quantitative Criminology, 1-28. • Kirk, D. S., & Sampson, R. J. (2013). Juvenile arrest and collateral educational damage in the transition to adulthood. Sociology of education, 86(1), 36-62.
Incarceration in Secure Juvenile Facility	Juvenile commitment to a secure county facility Age Span: 12-20	• Completion of a Postsecondary Credential w/ Significant Labor Market Value; • First Time Felony Convictions	• Aizer, A., & Doyle Jr, J. J. (2015). Juvenile incarceration, human capital, and future crime: Evidence from randomly assigned judges. The Quarterly Journal of Economics, 130(2), 759-803.
Early childbearing	Births to mothers younger than age 24 Age Span: 12-20	Stable Full-Time Employment at 250% FPL for individuals	• Hynes, K., & Clarkberg, M. (2005). Women's employment patterns during early parenthood: A group-based trajectory analysis. Journal of Marriage and Family, 67(1), 222-239
General Health Status	PROMIS global physical health scale Age Span: 21-35	Stable Full-Time Employment at	• Currie, J., & Madrian, B. C. (1999). Health, health insurance and the labor market. Handbook of labor economics, 3, 3309-3416;

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	Measure-Related Studies U.S. General Population Estimate for "Excellent" to "Poor" Self-Rated Health Item	250% FPL for individuals	• O'Donnell, O., Van Doorslaer, E., & Van Ourti, T. (2015). Health and inequality. In Handbook of income distribution (Vol. 2, pp. 1419-1533). Elsevier.
Behavioral Health	RAND 36-Item Short Form Survey (SF-36); SASSI-3 (Substance Abuse Subtle Screening Inventory, 3rd Edition) Age Span: 21-35	Stable Full-Time Employment at 250% FPL for individuals	• Huang, D. Y., Evans, E., Hara, M., Weiss, R. E., & Hser, Y. I. (2011). Employment trajectories: Exploring gender differences and impacts of drug use. Journal of vocational behavior, 79(1), 277-289
Allostatic Load	Allostic Load Measurement Biomarkers [Highest or lowest quartile cutpoints where appropriate] Resting Heart Rate Systolic Blood Pressure Diastolic Blood Pressure C-Reactive Protein Interleukin-6 Fibrinogen sE-selectin sICAM-1 HbA1c Glucose Body Mass Index Age Span: 21-35	Good Physical & Behavioral Health/Wellbeing	• Beckie, T. M. (2012). A systematic review of allostatic load, health, and health disparities. Biological research for nursing, 14(4), 311-346.

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
High BMI	Body Mass Index of 30 or greater Age Span: 21-35	Good Physical & Behavioral Health/Wellbeing	• Berger, N. A. (2018). Young adult cancer: influence of the obesity pandemic. Obesity, 26(4), 641-650.
Postsecondary Completion/Dropout	Completion of an Associates or Bachelor's Degree Age Span: 21-35	• Stable Full-Time Employment at 250% FPL for individuals; • Family Income at 250% FPL (pegged to a family of 4)	• Bayer, P., & Charles, K. K. (2018). Divergent paths: A new perspective on earnings differences between black and white men since 1940. The Quarterly Journal of Economics, 133(3), 1459-1501; • Thompson, O. (2021). Human Capital and Black-White Earnings Gaps, 1966-2017 (No. w28586). National Bureau of Economic Research; • Carnevale, A. P., Strohl, J., Gulish, A., Van Der Werf, M., & Peltier Campbell, K. (2019). The unequal race for good jobs: How Whites made outsized gains in education and good jobs compared to Blacks and Latinos. Center for Education and the Workforce, Georgetown University; • Carnevale, A. P., Rose, S. J. & Cheah, B. (2011) The College Payoff: Education, Occupations, Lifetime Earnings. The Georgetown University Center on Education and the Workforce; • Kim, C., & Tamborini, C. R. (2019). Are they still worth it? The long-run earnings benefits of an associate degree, vocational diploma or certificate, and some college. RSF: The Russell Sage Foundation Journal of the Social Sciences, 5(3), 64-85.

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Full-Time Employment	Employed at least 30 hours a week for the last 12 months Age Span: 21-35	• Stable Full-Time Employment at 250% FPL for individuals; • Family Income at 250% FPL (pegged to a family of 4)	Schultz, M. A. (2019). The Wage Mobility of Low-Wage Workers in a Changing Economy, 1968 to 2014. RSF: The Russell Sage Foundation Journal of the Social Sciences, 5(4), 159-189
Stable Employment	Employed at least 52 weeks during the past year Age Span: 21-35	• Stable Full-Time Employment at 250% FPL for individuals; • Family Income at 250% FPL (pegged to a family of 4)	• Chetty, R., Hendren, N., Jones, M., & Porter, S. (2020). Race and economic opportunity in the United States: An intergenerational perspective. The Quarterly Journal of Economics 135, 711-783; • Weisshaar, K., & Cabello-Hutt, T. (2020). Labor force participation over the life course: The long-term effects of employment trajectories on wages and the gendered payoff to employment. Demography, 57(1), 33-60; • Hynes, K., & Clarkberg, M. (2005). Women's employment patterns during early parenthood: A group-based trajectory analysis. Journal of Marriage and Family, 67(1), 222-239
Employment in High Demand Industry or Sector	Adult employed in industries that show high wages and high labor demand for Los Angeles County Age Span: 21-35	• Stable Full-Time Employment at 250% FPL for individuals;	• Seltzer, N. (2020). Cohort-Specific Experiences of Industrial Decline and Intergenerational Income Mobility. SocArXiv Papers;

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
		• Family Income at 250% FPL (pegged to a family of 4)	• Katz, L. F., Roth, J., Hendra, R., & Schaberg, K. (2020). Why Do Sectoral Employment Programs Work? Lessons from WorkAdvance (No. w28248). National Bureau of Economic Research
Has childcare arrangement	Difficulty finding childcare Age Span: 21-35	Stable Full-Time Employment at 250% FPL for individuals	• Wu, C. F., Chang, Y. L., Rhodes, E., Musaad, S., & Jung, W. (2020). Work-Hour Trajectories and Associated Socioeconomic Characteristics among Single-Mother Families. Social Work Research, 44(1), 47-57; • "The Child Care Crisis Is Keeping Women Out of the Workforce." Center for American Progress
Child support debt (TANF)	Child support arrears owed, especially TANF arrears Age Span: 21-35	Stable Full-Time Employment at 250% FPL for individuals	• Holzer, H. J., Offner, P., & Sorensen, E. (2005). Declining employment among young black less educated men: The role of incarceration and child support. Journal of Policy Analysis and Management: The Journal of the Association for Public Policy Analysis and Management, 24(2), 329-350; • Miller, D. P., & Mincy, R. B. (2012). Falling further behind? Child support arrears and fathers' labor force participation. Social Service Review, 86(4), 604-635.
Work Disability	Does the person have a physical, mental, or other health condition that lasted for 6 months or more which: a) limits the type or amount of work the person can do at a job; b) prevents the person from working at a job?	Stable Full-Time Employment at 250% FPL for individuals	• Wu, C. F. (2011). Long-term employment and earnings among low-income families with children. Children and Youth Services Review, 33(1), 91-101; • Wu, C. F., Chang, Y. L., Rhodes, E., Musaad, S., & Jung, W. (2020). Work-Hour Trajectories and Associated Socioeconomic Characteristics among Single-Mother Families. Social Work Research, 44(1), 47-57;

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	Age Span: 21-35 Measure-Related Studies Survey Measurement of Work Disability: Summary of a Workshop		
Inability to Pay Bail	Pretrial detention due to inability to pay bail Age Span: 21-35	Stable Full-Time Employment at 250% FPL for individuals	• Leslie, E., & Pope, N. G. (2017). The unintended impact of pretrial detention on case outcomes: Evidence from New York City arraignments. The Journal of Law and Economics, 60(3), 529-557. • For Philadelphia and Miami-Dade counties see Dobbie, W., Goldin, J., & Yang, C. S. (2018). The effects of pretrial detention on conviction, future crime, and employment: Evidence from randomly assigned judges. American Economic Review, 108(2), 201-40
Incarceration	Experiencing either jail or prison incarceration as an adult Age Span: 21-35	Stable Full-Time Employment at 250% FPL for individuals	• Apel, R., and Sweeten, G. (2010). The impact of incarceration on employment during the transition to adulthood. Social Problems, 57(3), 448-479; • Mueller-Smith, M., & Schnepel, K. T. (2020). Diversion in the Criminal Justice System. The Review of Economic Studies. • Craigie, T., Grawert, A., Kimble, C. and Stiglitz, J. E. (2020). Conviction, Imprisonment and Lost Earnings: How Involvement with the Criminal Justice System Deepens Inequality. Brennan Center for Justice.;

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
			• Apel, R., and Powell, K. (2019). Level of Criminal Justice Contact and Early Adult Wage Inequality." RSF: The Russell Sage Foundation Journal of the Social Sciences 5(1): 198–223
Adequate Prenatal Care	Adequate prenatal care utilization index: "a sum of two independent dimensions: Adequacy of Initiation of PNC and Adequacy of Received Services (a ratio of PNC visits completed relative to those expected based on gestational age and the American Congress of Gynecologists and Obstetricians recommended PNC schedule for low-risk pregnancies). Deliveries were categorized by receipt of, in increasing order of PNC utilization, "inadequate care" (initiated after 4 months' gestation or fewer than half of predicted visits), "intermediate care" (initiated prior to 4 months and between 50% and 79% of expected visits), "adequate care" (initiated by 4 months and 80 to 109% of expected visits), or "adequate-plus care" (initiated by 4 months and 110% or more of expected visits). A final group, "missing care data," was created for cases where PNC ade- quacy could not be calculated due to the absence	Infant Mortality	• Partridge, S., Balayla, J., Holcroft, C. A., & Abenhaim, H. A. (2012). Inadequate prenatal care utilization and risks of infant mortality and poor birth outcome: a retrospective analysis of 28,729,765 US deliveries over 8 years. American journal of perinatology, 29(10), 787-794.

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	of essential information. The following variables were used to calculate the APNCU with a previously published SAS algorithm dis- tributed by Dr. Milton Kotelchuck, developer of the APNCU index14,15: gestational age at initiation of PNC (2-month intervals), total number of PNC visits (excluding hospital- izations), and the gestational age in weeks. In the event of missing gestational age data, the gestational age was imputed from the sex and birth weight. Improbable birth weight (less than 250 g and more than 4999 g) was corrected for." Age Span: 21-35 <u>Measure-Related Studies</u> Partridge, S., Balayla, J., Holcroft, C. A., & Abenhaim, H. A. (2012). Inadequate prenatal care utilization and risks of infant mortality and poor birth outcome: a retrospective analysis of 28,729,765 US deliveries over 8 years. American journal of perinatology, 29(10), 787-794.		

Contributing Outcome	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Physical Limitations	Physical Limitations Scale as reported in "Physical Limitations and Depressive Symptoms: Exploring the Nature of the Association" Age Span: 35-60+ Measure-Related Studies Gayman, M. D., Turner, R. J., & Cui, M. (2008). Physical limitations and depressive symptoms: exploring the nature of the association. The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 63(4), S219-S228.	Age in Place with Dignity & Independence	• Sabia, J. J. (2008). There's no place like home: A hazard model analysis of aging in place among older homeowners in the PSID. Research on Aging, 30(1), 3-35.
Income	Annual household income Age Span: 60+	Age in Place with Dignity & Independence	• Sabia, J. J. (2008). There's no place like home: A hazard model analysis of aging in place among older homeowners in the PSID. Research on Aging, 30(1), 3-35.
Social Isolation	UCLA Loneliness Scale Version Age Span: 60+	Age in Place with Dignity & Independence	• Sabia, J. J. (2008). There's no place like home: A hazard model analysis of aging in place among older homeowners in the PSID. Research on Aging, 30(1), 3-35.

Ecological-Institutional Factors

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Mother smoking during pregnancy	Maternal and Infant Health Assessment (2017) Age Span: Pregnancy/Infancy Unit of Measurement: Individual	Infant Mortality	Salihu, H. M., Aliyu, M. H., Pierre-Louis, B. J., & Alexander, G. R. (2003). Levels of excess infant deaths attributable to maternal smoking during pregnancy in the United States. Maternal and child health journal, 7(4), 219-227. Ratnasiri, A. W., Lakshminrusimha, S., Dieckmann, R. A., Lee, H. C., Gould, J. B., Parry, S. S., ... & Basford, K. E. (2020). Maternal and infant predictors of infant mortality in California, 2007–2015. PloS one, 15(8), e0236877.
Obesity During Pregnancy	Maternal and Infant Health Assessment (2017) Age Span: Pregnancy/Infancy Unit of Measurement: Individual	Infant Mortality	Ratnasiri, A. W., Lakshminrusimha, S., Dieckmann, R. A., Lee, H. C., Gould, J. B., Parry, S. S., ... & Basford, K. E. (2020). Maternal and infant predictors of infant mortality in California, 2007–2015. PloS one, 15(8), e0236877.
Mother drinking during pregnancy	Maternal and Infant Health Assessment (2017) Age Span: Pregnancy/Infancy	Infant Mortality	Burd, L., & Wilson, H. (2004, May). Fetal, infant, and child mortality in a context of alcohol use. In American Journal of Medical Genetics Part C: Seminars in Medical Genetics (Vol. 127, No. 1, pp. 51-58). Hoboken: Wiley Subscription Services, Inc., A Wiley Company.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	Unit of Measurement: Individual		
Maternal diabetes, hypertension, asthma or depression	Maternal and Infant Health Assessment (2017) Age Span: Pregnancy/Infancy Unit of Measurement: Individual	Infant Mortality	Scott, K. A., Chambers, B. D., Baer, R. J., Ryckman, K. K., McLemore, M. R., & Jelliffe-Pawlowski, L. L. (2020). Preterm birth and nativity among Black women with gestational diabetes in California, 2013–2017: a population-based retrospective cohort study. BMC pregnancy and childbirth, 20(1), 1-14;
Timing of prenatal care	Maternal and Infant Health Assessment (2017) Age Span: Pregnancy/Infancy Unit of Measurement: Individual	Infant Mortality	Partridge, S., Balayla, J., Holcroft, C. A., & Abenhaim, H. A. (2012). Inadequate prenatal care utilization and risks of infant mortality and poor birth outcome: a retrospective analysis of 28,729,765 US deliveries over 8 years. American journal of perinatology, 29(10), 787-794.
Adequacy of perinatal care	The variables used in this analysis were defined as follows. The APNCU index is a sum of two independent dimensions: Adequacy of Initiation of PNC and Adequacy of Received Services (a ratio of PNC visits	Infant Mortality	Partridge, S., Balayla, J., Holcroft, C. A., & Abenhaim, H. A. (2012). Inadequate prenatal care utilization and risks of infant mortality and poor birth outcome: a retrospective analysis of 28,729,765 US deliveries over 8 years. American journal of perinatology, 29(10), 787-794.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	completed relative to those expected based on gestational age and the American Congress of Gynecologists and Obstetricians recommended PNC sched- ule for low-risk pregnancies). Deliveries were categorized by receipt of, in increasing order of PNC utilization, “inadequate care” (initiated after 4 months’ gestation or fewer than half of predicted visits), “intermediate care” (initiated prior to 4 months and between 50% and 79% of expected visits), “adequate care” (initiated by 4 months and 80 to 109% of expected visits), or “adequate-plus care” (initiated by 4 months and 110% or more of expected visits). A final group, “missing care data,” was created for cases where PNC ade- quacy could not be calculated due to the absence of essential information. The following variables were used to calculate the APNCU with a previously published SAS		

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	algorithm dis- tributed by Dr. Milton Kotelchuck, developer of the APNCU index14,15: gestational age at initiation of PNC (2-month intervals), total number of PNC visits (excluding hospital- izations), and the gestational age in weeks. In the event of missing gestational age data, the gestational age was imputed from the sex and birth weight. Improbable birth weight (less than 250 g and more than 4999 g) was corrected for. Age Span: Pregnancy/Infancy Unit of Measurement: Individual		
Domestic Violence/IPV	Maternal and Infant Health Assessment (2017) Age Span: Pregnancy/Infancy Unit of Measurement:	Infant Mortality	Boy, A., & Salihu, H. M. (2004). Intimate partner violence and birth outcomes: a systematic review. International journal of fertility and women's medicine, 49(4), 159-164.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	Individual		
Physician-Patient Racial Concordance	Expectant mothers with race/ethnic identities matching those of their doctors Age Span: Pregnancy/Infancy Unit of Measurement: Individual	Infant Mortality	Greenwood, B. N., Hardeman, R. R., Huang, L., & Sojourner, A. (2020). Physician–patient racial concordance and disparities in birthing mortality for newborns. Proceedings of the National Academy of Sciences, 117(35), 21194-21200
Cesarean Section Delivery	Mothers with cesarean-section delliveries Age Span: Pregnancy/Infancy Unit of Measurement: Individual	Infant Mortality	Holmes Jr, L., et al. (2020). Maternal Subpopulation Variances in Vaginal and Cesarean Section Delivery Method Predicts Excess Infant Mortality of Black/African Americans in the United States: Linked Birth/Infant Death Records, 2007-2016.
Inter-pregnancy interval	Mothers with an inter-pregnancy interval less than 6 months Age Span: Pregnancy/Infancy Unit of Measurement:	Infant Mortality	• Cofer, F. G., Fridman, M., Lawton, E., Korst, L. M., Nicholas, L., & Gregory, K. D. (2016). Interpregnancy interval and childbirth outcomes in California, 2007–2009. Maternal and child health journal, 20(1), 43-51; • Schummers, L., Hutcheon, J. A., Hernandez-Diaz, S., Williams, P. L., Hacker, M. R., VanderWeele, T. J., & Norman, W. V. (2018). Association of short

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	Individual		interpregnancy interval with pregnancy outcomes according to maternal age. JAMA internal medicine, 178(12), 1661-1670. • Wendt, A., Gibbs, C. M., Peters, S., & Hogue, C. J. (2012). Impact of increasing inter-pregnancy interval on maternal and infant health. Paediatric and perinatal epidemiology, 26, 239-258
Maternal chronic worry about discrimination	Maternal and Infant Health Assessment (2017) Age Span: Pregnancy/Infancy Unit of Measurement: Individual	Infant Mortality	Braveman, P., Heck, K., Egerter, S., Dominguez, T. P., Rinki, C., Marchi, K. S., & Curtis, M. (2017). Worry about racial discrimination: A missing piece of the puzzle of Black-White disparities in preterm birth?. PloS one, 12(10), e0186151
Neighborhood Concentrated Disadvantage	Concentrated Disadvantage Index Age Span: 0-60+ Unit of Measurement: Census Tract	• Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6; • Child Maltreatment; • Completion of a Postsecondary Credential w/ Significant Labor Market Value;	• Hagan, J., Foster, H., & Murphy, C. J. (2020). A tale half told: State exclusionary and inclusionary regimes, incarceration of fathers, and the educational attainment of children. Social Science Research, 88, 102428. • Wodtke, G. T., Elwert, F., & Harding, D. J. (2012). Poor families, poor neighborhoods: How family poverty intensifies the impact of concentrated disadvantage on high school graduation. Unpublished manuscript, University of Michigan. • Hicks, A. L., Handcock, M. S., Sastry, N., & Pebley, A. R. (2018). Sequential neighborhood effects: The

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
		• Age in Place with Dignity & Independence	effect of long-term exposure to concentrated disadvantage on children's reading and math test scores. Demography, 55(1), 1-31. • Maguire-Jack, K., Korbin, J. E., Perzynski, A., Coulton, C., Font, S. A., & Spilsbury, J. C. (2021). How place matters in child maltreatment disparities: Geographical context as an explanatory factor for racial disproportionality and disparities. In Racial disproportionality and disparities in the child welfare system (pp. 199-212). Springer, Cham. • Riley, A., Hawkley, L. C., & Cagney, K. A. (2016). Racial differences in the effects of neighborhood disadvantage on residential mobility in later life. Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 71(6), 1131-1140.
Neighborhood Concentrated Imprisonment	The percentage of the adult population that is on parole or probation Age Span: 0-60+ Unit of Measurement: Census Tract	• Completion of a Postsecondary Credential w/ Significant Labor Market Value • Family Income at 250% FPL (pegged to a family of 4);	• Hagan, J., & Foster, H. (2012). Intergenerational educational effects of mass imprisonment in America. Sociology of Education, 85(3), 259-286. • Manduca, R., & Sampson, R. J. (2019). Punishing and toxic neighborhood environments independently predict the intergenerational social mobility of black and white children. Proceedings of the national academy of sciences, 116(16), 7772-7777.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Neighborhood Mobility Score	Average household incomes at age 35 (standardized for the county) Age Span: 0-60+ Unit of Measurement: Census Tract	Family Income at 250% FPL (pegged to a family of 4)	Chetty, R., Friedman, J. N., Hendren, N., Jones, M. R., & Porter, S. R. (2018). The opportunity atlas: Mapping the childhood roots of social mobility (No. w25147). National Bureau of Economic Research.
Formerly Redlined Neighborhood	Census tracts that partially or completely overlap with the boundaries of areas rated Red or Yellow in security maps of the Home Owners Loan Corporation Age Span: 0-60+ Unit of Measurement: Census Block Group	Infant Mortality	Nardone, A. L., Casey, J. A., Rudolph, K. E., Karasek, D., Mujahid, M., & Morello-Frosch, R. (2020). Associations between historical redlining and birth outcomes from 2006 through 2015 in California. PloS one, 15(8), e0237241.
Environmental pollutants (e.g. lead top soil, air pollution)	The percentage of children with blood lead levels at 6 µg/dL or higher AND neighborhood level of total suspended particulates Age Span: 0-60+ Unit of Measurement: Census Block Group	Family Income at 250% FPL (pegged to a family of 4)	• Manduca, R., & Sampson, R. J. (2019). Punishing and toxic neighborhood environments independently predict the intergenerational social mobility of black and white children. Proceedings of the national academy of sciences, 116(16), 7772-7777. • Heidari, S., Mostafaei, S., Razazian, N., Rajati, M., Saeedi, A., & Rajati, F. (2022). The effect of lead exposure on IQ test scores in children under 12 years: a systematic review and meta-analysis of

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
			case-control studies. Systematic reviews, 11(1), 1-8. • Aizer, A., Currie, J., Simon, P., & Vivier, P. (2018). Do low levels of blood lead reduce children's future test scores?. American Economic Journal: Applied Economics, 10(1), 307-41. • O'Brien, R. L., Neman, T., Rudolph, K., Casey, J., & Venkataramani, A. (2018). Prenatal exposure to air pollution and intergenerational economic mobility: Evidence from US county birth cohorts. Social Science & Medicine, 217, 92-96.
Community Violence	Witnessing gun violence: (1) Saw someone threaten another person with a gun,(2) saw someone hurt another person with a gun on purpose, and (3) saw someone shooting a gun in a public place (on the streets, parking lots, or stores); Hearing gun violence: (1) heard (but not seen) a gun being shot in a public place like the streets, parking lots, or stores; (1) Physical distance from adolescents' home or school addresses to gun homicide	• Good Physical & Behavioral Health/Wellbeing • Family Income at 250% FPL (pegged to a family of 4);	• Sharkey, P., & Torrats-Espinosa, G. (2017). The effect of violent crime on economic mobility. Journal of Urban Economics, 102, 22-33. • Manduca, R., & Sampson, R. J. (2019). Punishing and toxic neighborhood environments independently predict the intergenerational social mobility of black and white children. Proceedings of the national academy of sciences, 116(16), 7772-7777. • Burdick-Will, J. (2016). Neighborhood violent crime and academic growth in Chicago: Lasting effects of early exposure. Social forces, 95(1), 133-158. • Fowler, P. J., Tompsett, C. J., Braciszewski, J. M., Jacques-Tiura, A. J., & Baltes, B. B. (2009).

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	Age Span: 0-60+ Unit of Measurement: Census Block Group Measure-Related Studies Bancalari, P., Sommer, M., & Rajan, S. (2022). Youth Exposure to Endemic Community Gun Violence: A Systematic Review. Adolescent Research Review, 1-35.		Community violence: A meta-analysis on the effect of exposure and mental health outcomes of children and adolescents. Development and psychopathology, 21(1), 227-259. • Bennett Jr, M. D., & Joe, S. (2015). Exposure to community violence, suicidality, and psychological distress among African American and Latino youths: Findings from the CDC Youth Violence Survey. Journal of Human Behavior in the Social Environment, 25(8), 775-789.
Affordable Housing availability	Ratio of affordable (costing less than 30% of household income) and available rental housing units to households with low- and very low-income levels Age Span: 0-60+ Unit of Measurement: City/Census Place	• School Readiness; • Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6	• Newman, S. J., & Holupka, C. S. (2015). Housing affordability and child well-being. Housing Policy Debate, 25(1), 116-151. • Newman, S. J., & Holupka, C. S. (2014). Housing affordability and investments in children. Journal of Housing Economics, 24, 89-100. • Gabriel, S., & Painter, G. (2020). Why affordability matters. Regional science and urban economics, 80, 103378. • Newman, S., & Holupka, C. S. (2016). Housing affordability and children's cognitive achievement. Health Affairs, 35(11), 2092-2099.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Neighborhood Physical Disorder	Audit items assessing building quality, including: 1) presence of buildings with broken windows, boarded-up windows, or boarded-up doors; 2) presence of buildings with outside damage that can only be corrected by major repairs, such as damaged siding, shingles, boards, brick, concrete, and stucco; and 3) presence of entirely vacant buildings Age Span: 0-60+ Unit of Measurement: Census Block Group <u>Measure-Related Studies</u> Mooney, S. J., Bader, M. D., Lovasi, G. S., Teitler, J. O., Koenen, K. C., Aiello, A. E., ... & Rundle, A. G. (2017). Street audits to measure neighborhood disorder: virtual or in-person?. American journal of epidemiology, 186(3), 265-273.	Good Physical & Behavioral Health/Wellbeing	• South, E. C., Kondo, M. C., Cheney, R. A., & Branas, C. C. (2015). Neighborhood blight, stress, and health: a walking trial of urban greening and ambulatory heart rate. American Journal of Public Health, 105(5), 909-913. • South, E. C., Hohl, B. C., Kondo, M. C., MacDonald, J. M., & Branas, C. C. (2018). Effect of greening vacant land on mental health of community-dwelling adults: a cluster randomized trial. JAMA network open, 1(3), e180298-e180298.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Community Cohension/Collective Efficacy	The Community Collective Efficacy Scale Age Span: 0-60+ Unit of Measurement: Census Block Group Measure-Related Studies Hipp, J. R. (2016). Collective efficacy: How is it conceptualized, how is it measured, and does it really matter for understanding perceived neighborhood crime and disorder?. Journal of criminal justice, 46, 32-44.	• Good Physical & Behavioral Health/Wellbeing; • Child Maltreatment	• Bjornstrom, E. E., Ralston, M. L., & Kuhl, D. C. (2013). Social cohesion and self-rated health: the moderating effect of neighborhood physical disorder. American journal of community psychology, 52(3), 302-312. • Browning, C. R., Soller, B., & Jackson, A. L. (2015). Neighborhoods and adolescent health-risk behavior: An ecological network approach. Social Science & Medicine, 125, 163-172. • Fish, J. S., Ettner, S., Ang, A., & Brown, A. F. (2010). Association of perceived neighborhood safety on body mass index. American journal of public health, 100(11), 2296-2303. • Bjornstrom, E. (2011). To live and die in LA County: Neighborhood economic and social context and premature age-specific mortality rates among Latinos. Health & Place, 17(1), 230-237. • Abdullah, A., R. Emery, C., & P. Jordan, L. (2020). Neighbourhood collective efficacy and protective effects on child maltreatment: A systematic literature review. Health & Social Care in the Community, 28(6), 1863-1883. • Molnar, B. E., Goerge, R. M., Gilsanz, P., Hill, A., Subramanian, S. V., Holton, J. K., ... & Beardslee, W. R. (2016). Neighborhood-level social processes and substantiated cases of child maltreatment. Child abuse & neglect, 51, 41-53.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Aggressive Policing	Youth experiencing stop, question and frisk police stops Age Span: 12-60+ Unit of Measurement: Census Block Group	• Completion of a Postsecondary Credential w/ Significant Labor Market Value; • Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6	• Legewie, J., & Fagan, J. (2019). Aggressive policing and the educational performance of minority youth. American Sociological Review, 84(2), 220-247. • Gottlieb, A., & Wilson, R. (2019). The effect of direct and vicarious police contact on the educational achievement of urban teens. Children and youth services review, 103, 190-199. • McFarland, M. J., Geller, A., & McFarland, C. (2019). Police contact and health among urban adolescents: The role of perceived injustice. Social Science & Medicine, 238, 112487. • Del Toro, J., Lloyd, T., Buchanan, K. S., Robins, S. J., Bencharit, L. Z., Smiedt, M. G., ... & Goff, P. A. (2019). The criminogenic and psychological effects of police stops on adolescent black and Latino boys. Proceedings of the National Academy of Sciences, 116(17), 8261-8268. • Del Toro, J., Thomas, A., Wang, M. T., & Hughes, D. (2019). The Health-Related Consequences to Police Stops as Pathways to Risks in Academic Performance for Urban Adolescents (No. wp19-09-ff).

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Police Violence	Students exposes to police killings within .50 miles of their homes Age Span: 0-20 Unit of Measurement: Individual	• Good Physical & Behavioral Health/Wellbeing; • Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Ang, D. (2021). The effects of police violence on inner-city students. The Quarterly Journal of Economics, 136(1), 115-168.
Racial Discrimination	Racial discrimination demonstrated in experimental audit studies Age Span: 0-60+ Unit of Measurement: Individual	• Good Physical & Behavioral Health/Wellbeing; Stable Full-Time Employment at 250% FPL for individuals; • Family Income at 250% FPL (pegged to a family of 4)	• Colen, C. G., Ramey, D. M., Cooksey, E. C., & Williams, D. R. (2018). Racial disparities in health among nonpoor African Americans and Hispanics: The role of acute and chronic discrimination. Social science & medicine, 199, 167-180. • Benner, A. D., Wang, Y., Shen, Y., Boyle, A. E., Polk, R., & Cheng, Y. P. (2018). Racial/ethnic discrimination and well-being during adolescence: A meta-analytic review. American Psychologist, 73(7), 855. • Kline, P., Rose, E. K., & Walters, C. R. (2022). Systemic discrimination among large US employers. The Quarterly Journal of Economics, 137(4), 1963-2036. • Quillian, L., Lee, J. J., & Oliver, M. (2020). Evidence from field experiments in hiring shows substantial additional racial discrimination after the callback. Social Forces, 99(2), 732-759.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
			• Quillian, L., Pager, D., Hexel, O., & Midtbøen, A. H. (2017). Meta-analysis of field experiments shows no change in racial discrimination in hiring over time. Proceedings of the National Academy of Sciences, 114(41), 10870-10875.
ACEs	Adverse childhood experiences (ACEs) (10 questions) Age Span: 0-20 Unit of Measurement: Individual	• Good Physical & Behavioral Health/Wellbeing; • Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Hughes, K., Bellis, M. A., Hardcastle, K. A., Sethi, D., Butchart, A., Mikton, C., ... & Dunne, M. P. (2017). The effect of multiple adverse childhood experiences on health: a systematic review and meta-analysis. The Lancet Public Health, 2(8), e356-e366. • Liming, K. W., & Grube, W. A. (2018). Wellbeing outcomes for children exposed to multiple adverse experiences in early childhood: A systematic review. Child and Adolescent Social Work Journal, 35(4), 317-335. • Otero, C. (2021). Adverse Childhood Experiences (ACEs) and Timely Bachelor's Degree Attainment. Social Sciences, 10(2), 44.
Family Income/Poverty	Family income below the federal poverty level, adjusted for family size Age Span: 0-20 Unit of Measurement: Family	• School readiness • Child Maltreatment; • Completion of a Postsecondary Credential w/ Significant Labor Market Value;	• Cooper, K., & Stewart, K. (2021). Does household income affect children's outcomes? A systematic review of the evidence. Child Indicators Research, 14(3), 981-1005. • Mersky, J. P., Berger, L. M., Reynolds, A. J., & Gromoske, A. N. (2009). Risk factors for child and adolescent maltreatment: A longitudinal

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
		• Family Income at 250% FPL (pegged to a family of 4);	investigation of a cohort of inner-city youth. Child maltreatment, 14(1), 73-88.
Persistent Child Poverty	Twenty percent or more of childhood spent living below the poverty level Age Span: 0-20 Unit of Measurement: Family	• Family Income at 250% FPL (pegged to a family of 4); • Completion of a Postsecondary Credential w/ Significant Labor Market Value; • Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Wagmiller, R. L., & Adelman, R. M. (2009). Childhood and intergenerational poverty: The long-term consequences of growing up poor.
Family Income Volatility	Four or more years during childhood with a 20 percent or greater annual decline in family income Age Span: 0-20 Unit of Measurement: Family	• Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Hardy, B. L., & Marcotte, D. E. (2020). Ties that bind? Family income dynamics and children's post-secondary enrollment and persistence. Review of Economics of the Household, 1-25.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Parental Wealth	Parental net assets (total assets minus total liabilities) Age Span: 0-20 Unit of Measurement: Family	• Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Zhan, M., & Sherraden, M. (2011). Assets and liabilities, race/ethnicity, and children's college education. Children and Youth Services Review, 33(11), 2168-2175.
Health insurance Coverage	Full year health insurance coverage Age Span: 0-20 Unit of Measurement: Family	• Good Physical & Behavioral Health/Wellbeing; • Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Massey, D. S., & Brodmann, S. (2014). Spheres of influence: The social ecology of racial and class inequality. Russell Sage Foundation.
Parents' Education	Parent self-reported educational level: less than High School, High School Diploma, GED, Some College, Associate's Degree, Bachelor's Degree, Graduate Degree Age Span: 0-20 Unit of Measurement: Family	• School Readiness • Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Mistry, R. S., Benner, A. D., Biesanz, J. C., Clark, S. L., & Howes, C. (2010). Family and social risk, and parental investments during the early childhood years as predictors of low-income children's school readiness outcomes. Early childhood research quarterly, 25(4), 432-449. • Fleury, N., & Gilles, F. (2018). The intergenerational transmission of education. A meta-regression analysis. Education Economics, 26(6), 557-573.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
			• Lawrence, M., & Breen, R. (2016). And their children after them? The effect of college on educational reproduction. American Journal of Sociology, 122(2), 532-572.
Family Structure/Living Arrangements	Do children reside with: 1) Married Parents 2) Co-habiting parents; 3) Single Parent; 4) No Biological Parents Age Span: 0-20 Unit of Measurement: Family	• School Readiness • Completion of a Postsecondary Credential w/ Significant Labor Market Value • Family Income at 250% FPL (pegged to a family of 4);	• Halle, T. G., Hair, E. C., Wandner, L. D., & Chien, N. C. (2012). Profiles of school readiness among four-year-old Head Start children. Early Childhood Research Quarterly, 27(4), 613-626. • Kimmel, J. (Ed.). (2022). Intergenerational Mobility: How Gender, Race, and Family Structure Affect Adult Outcomes. WE Upjohn Institute. • Bloome, D. (2017). Childhood family structure and intergenerational income mobility in the United States. Demography, 54(2), 541-569. • Lopoo, L. M. (2010). Family structure and the economic mobility of children. Pew Charitable Trusts.
Family Instability	Number of times mothers enter into or exit from a cohabiting or marital union Age Span: 0-20 Unit of Measurement: Family	• Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6; • Good Physical & Behavioral Health/Wellbeing;	• Fomby, P., & Osborne, C. (2017). Family instability, multipartner fertility, and behavior in middle childhood. Journal of marriage and family, 79(1), 75-93. • Fomby, P. (2013). Family instability and college enrollment and completion. Population Research and Policy Review, 32(4), 469-494.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
		• Completion of a Postsecondary Credential w/ Significant Labor Market Value;	• Smith, C., Crosnoe, R., & Cavanagh, S. E. (2017). Family instability and children's health. Family relations, 66(4), 601-613. • Mitchell, C., McLanahan, S., Notterman, D., Hobcraft, J., Brooks-Gunn, J., & Garfinkel, I. (2015). Family structure instability, genetic sensitivity, and child well-being. American journal of sociology, 120(4), 1195-1225. • Cavanagh, S. E., Stritzel, H., Smith, C., & Crosnoe, R. (2018). Family instability and exposure to violence in the early life course. Journal of research on adolescence, 28(2), 456-472. • Lee, D., & McLanahan, S. (2015). Family structure transitions and child development: Instability, selection, and population heterogeneity. American sociological review, 80(4), 738-763.
Maternal Age at Birth	Mother's age at child's birth Age Span: 0-20 Unit of Measurement: Individual	• Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Duncan, G. J., Kalil, A., & Ziol-Guest, K. M. (2017). Increasing inequality in parent incomes and children's schooling. Demography, 54(5), 1603-1626.
Maternal Depression	Beck Depression Inventory-II Age Span: 0-20 Unit of Measurement:	• School Readiness; • Age-appropriate Cognitive and Socioemotional	• Goodman, S. H., Rouse, M. H., Connell, A. M., Broth, M. R., Hall, C. M., & Heyward, D. (2011). Maternal depression and child psychopathology: A meta-analytic review. Clinical child and family psychology review, 14(1), 1-27.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	Family	Proficiency for Grades 1-6	• Claessens, A., Engel, M., & Curran, F. C. (2015). The effects of maternal depression on child outcomes during the first years of formal schooling. Early Childhood Research Quarterly, 32, 80-93. • Isaacs, J. B. (2012). Starting School at a Disadvantage: The School Readiness of Poor Children. The Social Genome Project. Center on Children and Families at Brookings.
Child Maltreatment	Comprehensive Child Maltreatment Scale (CCMS) for Parents Age Span: 0-20 Unit of Measurement: Individual Measure-Related Studies Higgins, D. J., & McCabe, M. P. (2001). The development of the comprehensive child maltreatment scale. Journal of family studies, 7(1), 7-28.	• Good Physical & Behavioral Health/Wellbeing	• Dunn, E. C., Nishimi, K., Powers, A., & Bradley, B. (2017). Is developmental timing of trauma exposure associated with depressive and post-traumatic stress disorder symptoms in adulthood?. Journal of psychiatric research, 84, 119-127. • Raby, K. L., Roisman, G. I., Labella, M. H., Martin, J., Fraley, R. C., & Simpson, J. A. (2019). The legacy of early abuse and neglect for social and academic competence from childhood to adulthood. Child development, 90(5), 1684-1701. • Mersky, J. P., & Topitzes, J. (2010). Comparing early adult outcomes of maltreated and non-maltreated children: A prospective longitudinal investigation. Children and Youth Services Review, 32(8), 1086-1096.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
			• Norman, R. E., Byambaa, M., De, R., Butchart, A., Scott, J., & Vos, T. (2012). The long-term health consequences of child physical abuse, emotional abuse, and neglect: a systematic review and meta-analysis. PLoS medicine, 9(11), e1001349. • Jonson-Reid, M., Kohl, P. L., & Drake, B. (2012). Child and adult outcomes of chronic child maltreatment. Pediatrics, 129(5), 839-845.
Parent Cognitive Stimulation & Emotional Supportiveness (HOME)	The Home Observation for Measurement of the Environment (HOME) Inventory Age Span: 0-20 Unit of Measurement: Family	• School Readiness; Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6	• Baker, C. E., & Brooks-Gunn, J. (2020). Early parenting and the intergenerational transmission of self-regulation and behavior problems in African American Head Start families. Child Psychiatry & Human Development, 51(2), 220-230.
Language spoken at home	The primary language spoken at home Age Span: 0-20 Unit of Measurement: Family	• School Readiness	• Davoudzadeh, P., McTernan, M. L., & Grimm, K. J. (2015). Early school readiness predictors of grade retention from kindergarten through eighth grade: A multilevel discrete-time survival analysis approach. Early Childhood Research Quarterly, 32, 183-192.
Extended family members	Households where parents and their children live with siblings, parents or grandparents	• Age-appropriate Cognitive and Socioemotional	• Kang, J. (2019, June). Do extended family members protect children from disadvantaged neighborhoods? Focusing on behavioral problems

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	Age Span: 0-20 Unit of Measurement: Family	Proficiency for Grades 1-6	of children. In Child & Youth Care Forum (Vol. 48, No. 3, pp. 427-447). Springer US.
Family Learning Activities	Home-Learning Environment Profile (HLEP); Stipek Home Learning Activities (SHLA); Stony Brook Family Reading Survey (SBFRS) Age Span: 0-5 Unit of Measurement: Family <u>Measure-Related Studies</u> Bojczyk, K. E., Haverback, H. R., & Pae, H. K. (2018). Investigating maternal self-efficacy and home learning environment of families enrolled in Head Start. Early Childhood Education Journal, 46(2), 169-178.	• School Readiness	• Feng, L., Gai, Y., & Chen, X. (2014). Family learning environment and early literacy: A comparison of bilingual and monolingual children. Economics of Education Review, 39, 110-130.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Access to prenatal and perinatal care	The potential ability of a woman to enter prenatal care services and maintain care for herself and fetus during the perinatal period Age Span: 0-20 Unit of Measurement: Individual Measure-Related Studies Phillippi, J. C. (2009). Women's perceptions of access to prenatal care in the United States: a literature review. Journal of midwifery & women's health, 54(3), 219-225.	• Infant Mortality	Partridge, S., Balayla, J., Holcroft, C. A., & Abenhaim, H. A. (2012). Inadequate prenatal care utilization and risks of infant mortality and poor birth outcome: a retrospective analysis of 28,729,765 US deliveries over 8 years. American journal • of perinatology, 29(10), 787-794.
Overcrowded housing	Housing units with more than two adult or child occupants per room Age Span: 0-20 Unit of Measurement: Family Measure-Related Studies	• School Readiness	• Korucu, I., & Schmitt, S. A. (2020). Continuity and change in the home environment: Associations with school readiness. Early Childhood Research Quarterly, 53, 97-107.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	Clark, W. A., Deurloo, M. C., & Dieleman, F. M. (2000). Housing consumption and residential crowding in US housing markets. Journal of Urban Affairs, 22(1), 49-63.		
Housing stability/Residential Mobility	Housing instability is defined by moving residences three or more times during childhood Age Span: 0-20 Unit of Measurement: Family	• School Readiness; Good Physical & Behavioral Health/Wellbeing	• Ziol-Guest, K. M., & McKenna, C. C. (2014). Early childhood housing instability and school readiness. Child development, 85(1), 103-113.
Household debt	Debt owed by household members Age Span: 0-20 Unit of Measurement: Family	• Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6	• Berger, L. M., & Houle, J. N. (2019). Rising household debt and children's socioemotional well-being trajectories. Demography, 56(4), 1273-1301.
Food Insecurity	USDA Household Food Insecurity Survey Age Span: 0-20 Unit of Measurement: Family	• School Readiness • Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6	• Nelson, B. B., Dudovitz, R. N., Coker, T. R., Barnert, E. S., Biely, C., Li, N., ... & Chung, P. J. (2016). Predictors of poor school readiness in children without developmental delay at age 2. Pediatrics, 138(2).

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
			• Kimbro, R. T., & Denney, J. T. (2015). Transitions into food insecurity associated with behavioral problems and worse overall health among children. Health Affairs, 34(11), 1949-1955.
Parental substance use disorder	Parent completion of SASSI-3 (Substance Abuse Subtle Screening Inventory, 3rd Edition) Age Span: 0-20 Unit of Measurement: Family	• Good Physical & Behavioral Health/Wellbeing	• Buu, A., Dipiazza, C., Wang, J., Puttler, L. I., Fitzgerald, H. E., & Zucker, R. A. (2009). Parent, family, and neighborhood effects on the development of child substance use and other psychopathology from preschool to the start of adulthood. Journal of studies on alcohol and drugs, 70(4), 489-498.
Parental Trauma History	Parent completion of the Trauma History Screen Age Span: 0-20 Unit of Measurement: Family <u>Measure-Related Studies</u> Carlson, E. B., Smith, S. R., Palmieri, P. A., Dalenberg, C., Ruzek, J. I., Kimerling, R., ... & Spain, D. A. (2011). Development and validation of a brief self-report measure of trauma exposure: the Trauma History Screen.	• Child Maltreatment; • Good Physical & Behavioral Health/Wellbeing	• Bowers, M. E., & Yehuda, R. (2016). Intergenerational transmission of stress in humans. Neuropsychopharmacology, 41(1), 232-244. • Lê-Scherban, F., Wang, X., Boyle-Steed, K. H., & Pachter, L. M. (2018). Intergenerational associations of parent adverse childhood experiences and child health outcomes. Pediatrics, 141(6). • Madigan, S., Cyr, C., Eirich, R., Fearon, R. P., Ly, A., Rash, C., ... & Alink, L. R. (2019). Testing the cycle of maltreatment hypothesis: Meta-analytic evidence of the intergenerational transmission of child maltreatment. Development and psychopathology, 31(1), 23-51.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	Psychological assessment, 23(2), 463.		
Availability of Preschool Centers	Available preschool centers Age Span: 0-5 Unit of Measurement: Census Tract	• School Readiness; Stable Full-Time Employment at 250% FPL for individuals	• Magnuson, K., & Duncan, G. J. (2016). Can early childhood interventions decrease inequality of economic opportunity?. RSF: The Russell Sage Foundation Journal of the Social Sciences, 2(2), 123-141.
Availability of Quality Childcare	Available childcare centers Age Span: 0-5 Unit of Measurement: Census Tract	• School Readiness	• Bartik, T. J. (2022). The Economic and Business Case for Ensuring High-Quality Childcare and Preschool. • Magnuson, K. A., & Waldfogel, J. (2005). Early childhood care and education: Effects on ethnic and racial gaps in school readiness. The future of children, 169-196.
Foster Care Placement	Foster care entry Age Span: 0-20 Unit of Measurement: Individual	• Good Physical & Behavioral Health/Wellbeing; • Stable Full-Time Employment at 250% FPL for individuals	• Naccarato, T., Brophy, M., & Courtney, M. E. (2010). Employment outcomes of foster youth: The results from the Midwest Evaluation of the Adult Functioning of Foster Youth. Children and Youth Services Review, 32(4), 551-559. • Ahrens, K. R., Garrison, M. M., & Courtney, M. E. (2014). Health outcomes in young adults from foster care and economically diverse backgrounds. Pediatrics, 134(6), 1067-1074.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Parent Expectations	Parents response to question of "What degree do you expect your children to achieve": Response options were to receive less than a high school diploma, to graduate from high school, to attend two or more years of college, to finish a 4-or-5 year college degree, to earn a master's degree or equivalent, and to get a Ph.D., MD, or other higher degree. Age Span: 6-11 Unit of Measurement: Family <u>Measure-Related Studies</u> Briley, D. A., Harden, K. P., & Tucker-Drob, E. M. (2014). Child characteristics and parental educational expectations: Evidence for transmission with transaction. Developmental psychology, 50(12), 2614.	• Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6	Pinquart, M., & Ebeling, M. (2020). Parental educational expectations and academic achievement in children and adolescents—a meta-analysis. Educational Psychology Review, 32(2), 463-480. •

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Parental Incarceration	Prison or jail incarceration of an adolescent or adult with children Age Span: 6-11 Unit of Measurement: Family	• School Readiness • Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6; • Completion of a Postsecondary Credential w/ Significant Labor Market Value; • Stable Full-Time Employment at 250% FPL for individuals;	• Testa, A., & Jackson, D. B. (2021). Parental incarceration and school readiness: Findings from the 2016 to 2018 National Survey of Children's Health. Academic pediatrics, 21(3), 534-541. • Hagan, J., & Foster, H. (2012). Intergenerational educational effects of mass imprisonment in America. Sociology of Education, 85(3), 259-286. • Ryabov, I. (2020). Parental Incarceration and Social Status Attainment of Hispanic Young Adults. Crime & Delinquency, 66(1), 123-142. • Turney, K., & Haskins, A. R. (2019). Parental incarceration and children's well-being: Findings from the fragile families and child well-being study. In Handbook on children with incarcerated parents (pp. 53-64). Springer, Cham.
Death of a Family Member	Death of a parent or sibling during childhood Age Span: 6-11 Unit of Measurement: Family	• Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Thyden, N. H., Schmidt, N. M., & Osypuk, T. L. (2020). The unequal distribution of sibling and parent deaths by race and its effect on attaining a college degree. Annals of epidemiology, 45, 76-82.
School Mobility	Students that changed schools more than three times from ages 5 to 17 (outside of progression from	• Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6	• Welsh, R. O. (2017). School hopscotch: A comprehensive review of K–12 student mobility in the United States. Review of Educational Research, 87(3), 475-511.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	primary, middle and high school) Age Span: 6-11 Unit of Measurement: Individual		• Reynolds, A. J., Chen, C. C., & Herbers, J. E. (2009, June). School mobility and educational success: A research synthesis and evidence on prevention. In Workshop on the impact of mobility and change on the lives of young children, schools, and neighborhoods, June (pp. 29-30). • Mehana, M., & Reynolds, A. J. (2004). School mobility and achievement: A meta-analysis. Children and Youth Services Review, 26(1), 93-119.
School Funding	Per-pupil school funding Age Span: 5-20 Unit of Measurement: School	• Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6 • Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Hyman, J. (2017). Does money matter in the long run? Effects of school spending on educational attainment. American Economic Journal: Economic Policy, 9(4), 256-80. • Jackson, C. K., Johnson, R. C., & Persico, C. (2015). The effects of school spending on educational and economic outcomes: Evidence from school finance reforms (No. w20847). National Bureau of Economic Research. • Jackson, C. K., Wigger, C., & Xiong, H. (2021). Do school spending cuts matter? Evidence from the Great Recession. American Economic Journal: Economic Policy, 13(2), 304-35.
Class size	Average class size Age Span: 5-20 Unit of Measurement:	• Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6	• Chetty, R., Friedman, J. N., Hilger, N., Saez, E., Schanzenbach, D. W., & Yagan, D. (2011). How does your kindergarten classroom affect your earnings? Evidence from Project STAR. The

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	School	• Completion of a Postsecondary Credential w/ Significant Labor Market Value	Quarterly journal of economics, 126(4), 1593-1660. • Shen, T., & Konstantopoulos, S. (2022). Are class size and teacher characteristics associated with cognitive outcomes in early grades?. School Effectiveness and School Improvement, 1-27.
School poverty levels	The percentage of students eligilbe for free and reduce cost lunch Age Span: 5-20 Unit of Measurement: School	• Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6; • Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Reardon, S. F. (2016). School segregation and racial academic achievement gaps. RSF: The Russell Sage Foundation Journal of the Social Sciences, 2(5), 34-57.
School Segregation	School racial and income dissimilarity indices Age Span: 5-20 Unit of Measurement: School	• Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6; • Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Reardon, S. F., & Owens, A. (2014). 60 years after Brown: Trends and consequences of school segregation. Annual Review of Sociology, 40(1), 199-218. • Antman, F. M., & Cortes, K. (2021). The long-run impacts of mexican-american school desegregation (No. w29200). National Bureau of Economic Research. • Anstreicher, G., Fletcher, J., & Thompson, O. (2022). The Long Run Impacts of Court-Ordered

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
			Desegregation (No. w29926). National Bureau of Economic Research.
Teacher Quality	Teacher valude-added using test scores Age Span: 5-20 Unit of Measurement: School <u>Measure-Related Studies</u> Chetty, R., Friedman, J. N., & Rockoff, J. E. (2014). Measuring the impacts of teachers I: Evaluating bias in teacher value-added estimates. American economic review, 104(9), 2593-2632.	• Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6 • Completion of a Postsecondary Credential w/ Significant Labor Market Value; • Family Income at 250% FPL (pegged to a family of 4)	• Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005). Teachers, schools, and academic achievement. Econometrica, 73(2), 417-458. • Chetty, R., Friedman, J. N., & Rockoff, J. E. (2011). The long-term impacts of teachers: Teacher value-added and student outcomes in adulthood (No. w17699). National Bureau of Economic Research. • Graham, J., & Flamini, M. (2021). Teacher quality and students' post-secondary outcomes. Educational Policy, 08959048211049429.
Teacher-Student Racial Match	Students with teachers of matching races or ethnicities Age Span: 5-20 Unit of Measurement: School	• Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6 • Completion of a Postsecondary Credential w/	• Wright, A., Gottfried, M. A., & Le, V. N. (2017). A kindergarten teacher like me: The role of student-teacher race in social-emotional development. American Educational Research Journal, 54(1_suppl), 78S-101S. • Gershenson, S., Hart, C. M., Hyman, J., Lindsay, C., & Papageorge, N. W. (2018). The long-run impacts of same-race teachers (No. w25254). National Bureau of Economic Research.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
		Significant Labor Market Value	• Redding, C. (2019). A teacher like me: A review of the effect of student–teacher racial/ethnic matching on teacher perceptions of students and student academic and behavioral outcomes. Review of educational research, 89(4), 499-535.
Mentor/Developmental Relationships (Caring Adult)	The following question drawn from Wave 3 of ADD HEALTH captures informal mentorship: "Other than your parents or step-parents, has an adult made an important positive difference in your life at any time since you were 14." Eligilble informal mentors exclude spouses, partners, siblings, peers or co-workers Age Span: 5-35 Unit of Measurement: Individual <u>Measure-Related Studies</u> Miranda-Chan, T., Fruiht, V., Dubon, V., & Wray-Lake, L. (2016). The functions and longitudinal outcomes of adolescents' naturally	• Good Physical & Behavioral Health/Wellbeing; • Stable Full-Time Employment at 250% FPL for individuals; • Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Miranda-Chan, T., Fruiht, V., Dubon, V., & Wray-Lake, L. (2016). The functions and longitudinal outcomes of adolescents' naturally occurring mentorships. American journal of community psychology, 57(1-2), 47-59. • Hurd, N. M., Albright, J., Wittrup, A., Negrete, A., & Billingsley, J. (2018). Appraisal support from natural mentors, self-worth, and psychological distress: Examining the experiences of underrepresented students transitioning through college. Journal of Youth and Adolescence, 47(5), 1100-1112. • Hurd, N. M., & Zimmerman, M. A. (2014). An analysis of natural mentoring relationship profiles and associations with mentees' mental health: Considering links via support from important others. American Journal of Community Psychology, 53(1), 25-36. • Hurd, N., & Zimmerman, M. (2010). Natural mentors, mental health, and risk behaviors: A longitudinal analysis of African American adolescents transitioning into adulthood.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	occurring mentorships. American journal of community psychology, 57(1-2), 47-59.		American journal of community psychology, 46(1), 36-48. • Van Dam, L., Smit, D., Wildschut, B., Branje, S. J. T., Rhodes, J. E., Assink, M., & Stams, G. J. J. (2018). Does natural mentoring matter? A multilevel meta-analysis on the association between natural mentoring and youth outcomes. American journal of community psychology, 62(1-2), 203-220. • Timpe, Z. C., & Lunkenheimer, E. (2015). The long-term economic benefits of natural mentoring relationships for youth. American journal of community psychology, 56(1), 12-24. • Fruiht, V. M., & Wray-Lake, L. (2013). The role of mentor type and timing in predicting educational attainment. Journal of youth and adolescence, 42(9), 1459-1472.
School Climate	The California School Climate Survey Age Span: 5-20 Unit of Measurement: School Measure-Related Studies Kohl, D., Recchia, S., & Steffgen, G. (2013).	• Age-appropriate Cognitive and Socioemotional Proficiency for Grades 1-6; • Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Wang, M. T., & Degol, J. L. (2016). School climate: A review of the construct, measurement, and impact on student outcomes. Educational psychology review, 28(2), 315-352.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	Measuring school climate: An overview of measurement scales. Educational Research, 55(4), 411-426.		
Ethnic Studies Courses	Enrollment in an ethnic studies class Age Span: 12-20 Unit of Measurement: School	• Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Bonilla, S., Dee, T. S., & Penner, E. K. (2021). Engagement and Attainment: The Longer-Run Effects of Ethnic Studies.
School Disciplinary Practices	School suspension rates Age Span: 5-20 Unit of Measurement: School	• Completion of a Postsecondary Credential w/ Significant Labor Market Value; • First-Time Felony Conviction	• Riddle, T., & Sinclair, S. (2019). Racial disparities in school-based disciplinary actions are associated with county-level rates of racial bias. Proceedings of the National Academy of Sciences, 116(17), 8255-8260. • Welsh, R. O., & Little, S. (2018). Caste and control in schools: A systematic review of the pathways, rates and correlates of exclusion due to school discipline. Children and Youth Services Review, 94, 315-339. • Gregory, A., & Roberts, G. (2017). Teacher beliefs and the overrepresentation of Black students in classroom discipline. Theory Into Practice, 56(3), 187-194.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
Bullying Victimization	California Bullying Victimization Scale Age Span: 12-20 Unit of Measurement: Individual Measure-Related Studies Felix, E. D., Sharkey, J. D., Green, J. G., Furlong, M. J., & Tanigawa, D. (2011). Getting precise and pragmatic about the assessment of bullying: The development of the California Bullying Victimization Scale. Aggressive behavior, 37(3), 234-247.	• Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Nikolaou, D. (2022). Identifying the effects of bullying victimization on schooling. Contemporary Economic Policy, 40(1), 162-189. • Halliday, S., Gregory, T., Taylor, A., Digenis, C., & Turnbull, D. (2021). The impact of bullying victimization in early adolescence on subsequent psychosocial and academic outcomes across the adolescent period: A systematic review. Journal of school violence, 20(3), 351-373.
School Tracking	The sorting of students into groups based upon inferred ability Age Span: 6-20 Unit of Measurement: School	• Completion of a Postsecondary Credential w/ Significant Labor Market Value	• Francis, D. V., & Darity, W. A. (2021). Separate and unequal under one roof: How the legacy of racialized tracking perpetuates within-school segregation. RSF: The Russell Sage Foundation Journal of the Social Sciences, 7(1), 187-202. • Karlson, K. B. (2015). Expectations on track? High school tracking and adolescent educational expectations. Social Forces, 94(1), 115-141.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
School and neighborhood peer groups	Neighborhood and school friends as well as classmates Age Span: 12-20 Unit of Measurement: Individual	• Completion of a Postsecondary Credential w/ Significant Labor Market Value; • Good Physical & Behavioral Health/Wellbeing; • First Time Felony Conviction; • Family Income at 250% FPL (pegged to a family of 4)	• Bietenbeck, J. (2020). The long-term impacts of low-achieving childhood peers: evidence from Project STAR. Journal of the European Economic Association, 18(1), 392-426. • Fletcher, J. M., Ross, S. L., & Zhang, Y. (2020). The consequences of friendships: Evidence on the effect of social relationships in school on academic achievement. Journal of Urban Economics, 116, 103241. • Bifulco, R., Fletcher, J. M., Oh, S. J., & Ross, S. L. (2014). Do high school peers have persistent effects on college attainment and other life outcomes?. Labour economics, 29, 83-90. • Fletcher, J. M., & Ross, S. L. (2018). Estimating the effects of friends on health behaviors of adolescents. Health economics, 27(10), 1450-1483. • Fletcher, J., & Ross, S. (2013). Understanding the mechanisms underlying peer group effects: The role of friendships in determining adolescent outcomes. • Chetty, R., Jackson, M. O., Kuchler, T., Stroebel, J., Hendren, N., Fluegge, R. B., ... & Wernerfelt, N. (2022). Social capital I: measurement and associations with economic mobility. Nature, 608(7921), 108-121.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
			• Billings, S. B., & Hoekstra, M. (2019). Schools, neighborhoods, and the long-run effect of crime-prone peers (No. w25730). National Bureau of Economic Research.
Summer Jobs Availability	The percentage of adolescents employed in summer jobs Age Span: 12-20 Unit of Measurement: Census Tract	• First Time Felony Convictions	• Modestino, A. S. (2019). How do summer youth employment programs improve criminal justice outcomes, and for whom?. Journal of Policy Analysis and Management, 38(3), 600-628.
Job Networks/Social Capital	Two questions from the Social Capital-USA Survey: 1) "Now I would like you to think of the last 12 months, did someone mention job possibilities, openings, or opportunities to you, without your asking, in casual conversations?"; 2) How many of these jobs did the respondent hear about in the past year Age Span: 21-35 Unit of Measurement: Individual	• Stable Full-Time Employment at 250% FPL for individuals; • Family Income at 250% FPL (pegged to a family of 4)	• Abbott, M., & Reilly, A. (2019). The Role of Social Capital in Supporting Economic Mobility. Office of the Assistant Secretary for Planning and Evaluation US Department of Health and Human Services. • Hellerstein, J. K., & Neumark, D. (2020). Social Capital, Networks, and Economic Wellbeing. The Future of Children, 30(1), 127-152. • Bayer, P., Ross, S. L., & Topa, G. (2008). Place of work and place of residence: Informal hiring networks and labor market outcomes. Journal of political Economy, 116(6), 1150-1196. • Hellerstein, J. K., McInerney, M., & Neumark, D. (2011). Neighbors and coworkers: The importance of residential labor market networks. Journal of Labor Economics, 29(4), 659-695.

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	Measure-Related Studies McDonald, S., Lin, N., & Ao, D. (2009). Networks of opportunity: Gender, race, and job leads. Social Problems, 56(3), 385-402.		• Hellerstein, J. K., McInerney, M., & Neumark, D. (2009). Spatial mismatch, immigrant networks, and Hispanic employment in the United States (No. w15398). National Bureau of Economic Research. • Hellerstein, J. K., Neumark, D., & McInerney, M. (2008). Spatial mismatch or racial mismatch?. Journal of Urban Economics, 64(2), 464-479.
Access to Managerial Jobs	Two questions from the Social Capital-USA Survey: 1) "Now I would like you to think of the last 12 months, did someone mention managerial job possibilities, openings, or opportunities to you, without your asking, in casual conversations?"; 2) How many of these jobs did the respondent hear about in the past year Age Span: 21-35 Unit of Measurement: Metro	• Stable Full-Time Employment at 250% FPL for individuals; • Family Income at 250% FPL (pegged to a family of 4)	• Shams, S., & Tomaskovic-Devey, D. (2019). Racial and gender trends and trajectories in access to managerial jobs. Social science research, 80, 15-29. • Cohen, P. N., & Huffman, M. L. (2007). Black under-representation in management across US labor markets. The annals of the American academy of political and social science, 609(1), 181-199. • Wilson, G. (2012). Starting the same... finishing the same? Race, occupational origins, and mobility into managerial positions. American Behavioral Scientist, 56(5), 682-695. • Wilson, G., & Maume, D. (2014). Men's mobility into management from blue collar and white collar jobs: Race differences across the early work-career. Social science research, 46, 117-129.

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			• Forsythe, E. (2019). Careers within firms: Occupational mobility over the lifecycle. Labour, 33(3), 241-277. • Jarvis, B. F., & Song, X. (2017). Rising intragenerational occupational mobility in the United States, 1969 to 2011. American sociological review, 82(3), 568-599. • Shin, Y., & Yuen, C. Y. (2019). Occupational Mobility and Lifetime Earnings. Occupational Mobility and Lifetime Earnings, 101-231.
Union Job	Adult employment in a job covered by a union Age Span: 21-35 Unit of Measurement: Metro	• Stable Full-Time Employment at 250% FPL for individuals; • Family Income at 250% FPL (pegged to a family of 4)	• Freeman, R., Han, E., Madland, D., & Duke, B. V. (2015). How does declining unionism affect the American middle class and intergenerational mobility? (No. w21638). National Bureau of Economic Research. • Rosenfeld, J., & Kleykamp, M. (2012). Organized labor and racial wage inequality in the United States. American Journal of Sociology, 117(5), 1460-1502.
Precarious employment/Gig Economy	Irregular work shifts with weekly fluctuating hours Age Span: 21-35 Unit of Measurement: Metro	• Stable Full-Time Employment at 250% FPL for individuals; • Family Income at 250% FPL (pegged to a family of 4)	• Lambert, S. J., Henly, J. R., & Kim, J. (2019). Precarious work schedules as a source of economic insecurity and institutional distrust. RSF: The Russell Sage Foundation Journal of the Social Sciences, 5(4), 218-257. • Allmang, S., & Franke, T. (2020). “Just a Job?” An Assessment of Precarious Employment

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			Trajectories by Gender Among Young People in the US. Advances in Social Work, 20(1), 152-171.
Affordable Senior Housing	Senior housing costing less than 30% of household income Age Span: 36-60+ Unit of Measurement: Metro	• Age in Place with Dignity & Independence	• Park, S., Han, Y., Kim, B., & Dunkle, R. E. (2017). Aging in place of vulnerable older adults: Person–environment fit perspective. Journal of Applied Gerontology, 36(11), 1327-1350.
Family Social Support	Questions from the NSHAP survey: (a) how often respondents respondents feel they can be open with and rely on family members (1=hardly ever or never, 2=some of the time, 3=often), and (b) how often do respondents feel the family members are demanding and critical of them. Age Span: 36-60+ Unit of Measurement: Individual <u>Measure-Related Studies</u>	• Age in Place with Dignity & Independence	Hawkley, L. C., & Kocherginsky, M. (2018). Transitions in loneliness among older adults: A 5-year follow-up in the National Social Life, Health, and Aging Project. Research on aging, 40(4), 365-387.

Ecological-Institutional Factor	Measure	Relevant North Star Outcomes	Predictor/Causal Studies
	Hawkley, L. C., & Kocherginsky, M. (2018). Transitions in loneliness among older adults: A 5-year follow-up in the National Social Life, Health, and Aging Project. Research on aging, 40(4), 365-387.		
Housing Costs	The share of annual household income devoted to housing costs Age Span: 60+ Unit of Measurement: Individual	• Age in Place with Dignity & Independence	• Sabia, J. J. (2008). There's no place like home: A hazard model analysis of aging in place among older homeowners in the PSID. Research on Aging, 30(1), 3-35.
Children Moving out of the Home	Older adults living alone Age Span: 60+ Unit of Measurement: Individual	• Age in Place with Dignity & Independence	• Sabia, J. J. (2008). There's no place like home: A hazard model analysis of aging in place among older homeowners in the PSID. Research on Aging, 30(1), 3-35.
Home Equity	Total equity in home Age Span: 60+ Unit of Measurement: Individual	• Age in Place with Dignity & Independence	• Sabia, J. J. (2008). There's no place like home: A hazard model analysis of aging in place among older homeowners in the PSID. Research on Aging, 30(1), 3-35.

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Relatives in close proximity	Distance of close relatives from residential location Age Span: 60+ Unit of Measurement: Individual	• Age in Place with Dignity & Independence	• Sabia, J. J. (2008). There's no place like home: A hazard model analysis of aging in place among older homeowners in the PSID. Research on Aging, 30(1), 3-35.
Local Unemployment Rates	Percentage of adults that are unemployed Age Span: 60+ Unit of Measurement: Individual	• Age in Place with Dignity & Independence	• Sabia, J. J. (2008). There's no place like home: A hazard model analysis of aging in place among older homeowners in the PSID. Research on Aging, 30(1), 3-35.
Home Disrepair	Owned home in need of repair Age Span: 60+ Unit of Measurement: Individual	• Age in Place with Dignity & Independence	• Sabia, J. J. (2008). There's no place like home: A hazard model analysis of aging in place among older homeowners in the PSID. Research on Aging, 30(1), 3-35.
Age-Friendly Communities	Access to Business and Leisure, Social Interaction, Access to Health Care, Neighborhood Problems, Social Support, and Community Engagement Age Span: 60+	• Age in Place with Dignity & Independence	• Smith, R. J., Lehning, A. J., & Dunkle, R. E. (2013). Conceptualizing age-friendly community characteristics in a sample of urban elders: An exploratory factor analysis. Journal of Gerontological Social Work, 56(2), 90-111.

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	Unit of Measurement: Census Tract <u>Measure-Related Studies</u> Smith, R. J., Lehning, A. J., & Dunkle, R. E. (2013). Conceptualizing age-friendly community characteristics in a sample of urban elders: An exploratory factor analysis. Journal of Gerontological Social Work, 56(2), 90-111.		