

National Consortium on Alcohol and Neurodevelopment in Adolescence (NCANDA): Adolescent Brain Structure and Function Linked to Risk for Heavy Drinking



Research Society on Alcoholism Annual Conference

Organizer: Susan F. Tapert, Ph.D., Professor, University of California San Diego

Chair: Bonnie J. Nagel, Ph.D., Associate Professor, Oregon Health & Science University

New Orleans, LA

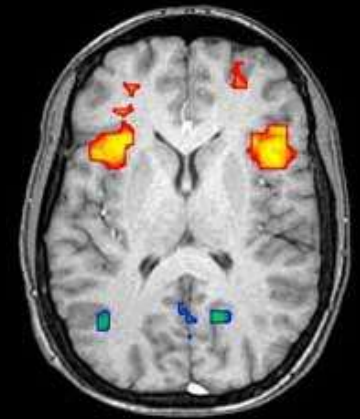
June 26, 2016

NCANDA



Data Collection

- Baseline age 12-21 years; data collected every six months, with annual neurocognitive, behavioral, and neuroimaging battery



Baseline	1 Year			18 Month			2 Year			30 Month			3 Year		
	Done	Due	%	Done	Due	%	Done	Due	%	Done	Due	%	Done	Due	%
831	800	831	96	761	824	92	567	677	84	336	396	85	95	146	65

NCANDA Publications

1. Rohlfing T, Cummins K, Henthorn T, Chu W, Nichols BN (2014). N-CANDA data integration: anatomy of an asynchronous infrastructure for multi-site, multi-instrument longitudinal data capture. *JAMA* 21: 758-762.
2. Brown SA, Brumback T, Tomlinson K, Cummins K, Thompson WK, Nagel BJ, De Bellis MD, Hooper SR, Clark DB, Chung T, Hasler BP, Colrain IM, Baker FC, Prouty D, Pfefferbaum A, Sullivan EV, Pohl KM, Rohlfing T, Nichols BN, Chu W & Tapert SF (2015). The National Consortium on Alcohol and NeuroDevelopment in Adolescence (NCANDA): Characterizing risk and resilience for alcohol use in adolescents. *Journal of Studies on Alcohol and Drugs* 76: 895-908.
3. Pfefferbaum A, Torsten Rohlfing T, Pohl KM, Lane B, Chu W, Brown SA, Tapert SF, Cummins K, Thompson WK, Brumback T, Meloy MJ, Jernigan TL, Dale A, Colrain IM, Baker FC, Prouty D, De Bellis MD, Voyvodic JT, Clark DB, Luna B, Chung T, Nagel B & Sullivan EV (2015). Adolescent Development of Cortical and White Matter Structure in the NCANDA Sample: Role of sex, ethnicity, puberty, and alcohol drinking. *Cerebral Cortex* (In Press).
4. Sullivan EV, Tapert SF, Fama R, Prouty D, Brown SA, Cummins K, Brumback T, Wesley TK, Colrain IM, Baker FC, De Bellis MD, Hooper SR, Clark DB, Chung T, Nagel B, Rohlfing T, Chu W, Pohl KM & Pfefferbaum A (2016). Cognitive, Emotion Control, and Motor Performance of Adolescents in the NCANDA Study: Contributions from Alcohol Consumption, Age, Sex, Ethnicity, and Family History of Addiction. *Neuropsychology* (In Press).
5. Nichols BN, Pohl KM (2015). Neuroinformatics Software Applications Supporting Electronic Data Capture, Management, and Sharing for the Neuroimaging Community. *Neuropsychology Review* 25(3): 356-368.
6. Pohl KM, Sullivan EV, Rohlfing T, Chu W, Kwon D, Nichols BN, Zhang Y, Brown SA, Tapert SF, Cummins K, Thompson WK, Brumback T, Colrain IM, Baker FC, Prouty D, De Bellis MD, Voyvodic JT, Clark DB, Schrida C, Nagel BJ, Pfefferbaum A (2016). Harmonizing DTI Measurements across Scanners to Examine the Development of White Matter Microstructure in 803 Adolescents of the NCANDA Study. *NeuroImage* 130: 194-213.
7. de Zambotti M, Baker FC, Willoughby AR, Godino JG, Wing D, Patrick K, Colrain IM (2016). Measures of sleep and cardiac functioning during sleep using a multi-sensory commercially-available wristband in adolescents. *Physiol Behav* 158:143-9.
8. Rabinowitz J, Drabick DA, Reynolds M, Clark DB, Tarter R (2016). Child temperamental flexibility moderates the relation between positive parenting and adolescent adjustment. *Journal of Applied Developmental Psychology* 43: 43-53.
9. de Zambotti M, Willoughby AR, Franzen PL, Clark DB, Baker FC, Colrain IM (2016). K-complexes: Interaction between the central and autonomic nervous systems during sleep. *Sleep* 39(5):1129-37.
10. Baker FC, Willoughby AR, de Zambotti M, Franzen PL, Prouty D, Javitz H, Hasler B, Clark DB, Colrain IM (2016). Age-related differences in sleep architecture and electroencephalogram in adolescents in the NCANDA sample. *Sleep* (In Press).

- **Sleep Composition and the Sleep EEG: Age, Sex, Ethnicity, and Alcohol Effects in the National Consortium on Alcohol & Neurodevelopment in Adolescence – Ian Colrain**
- **Executive Functioning and Risks for Alcohol Use Disorder: Baseline Results From NCANDA – Duncan Clark**
- **Adverse Childhood Experiences, Alcohol Use, and Brain Structure: Baseline NCANDA Findings – Michael De Bellis (Presented by Kate Nooner)**
- **Functional Brain Networks Related to Sex, Age, and Alcohol in Adolescence: Initial Resting-State fMRI Findings From NCANDA – Eva Mueller-Oehring**
- **Discussant – Sara Jo Nixon**