MILESTONES AND OUTCOMES OF YOUNG ADULTS WITH PERINATAL HIV INFECTION OR EXPOSURE

Elaine J. Abrams[1], Claude A. Mellins[2], Amelia Bucek[3], Curtis Dolezal[2], Jeannette Raymond[2], Andrew Wiznia[4], Cheng-Shiun Leu[2]

[1]ICAP at Columbia University, New York, NY, USA, [2]New York State Psychiatric Institute, New York, NY, USA, [3]Columbia University, New York, NY, USA, [4]Albert Einstein College of Medicine, Bronx, NY, USA

Background

With aging of the population with perinatal HIV infection (PHIV+) in the United States, concerns have emerged about their transition into adulthood. Using data from CASAH, one of the largest behavioral longitudinal cohort studies of PHIV+ and perinatally HIV-exposed uninfected (PHEU) youth, we examined young adult (YA) milestones, and behavioral and biomedical outcomes.

Methods

Participants, ages 9-16 years, were recruited from 4 New York City hospitals (2003-2008) and followed every 12-18 months. Validated assessments of psychiatric and substance use (SUD) disorders, and psychosocial and behavioral function and medical chart abstraction were completed at each time point. Data come from the 5th follow-up interview, conducted in 2014–2017. Descriptive statistics, chi-square and t-tests were used to compare YA milestones, sexual and reproductive health, psychiatric disorders, SUD and substance use, and neurocognitive function between PHEU and PHIV+ YA.

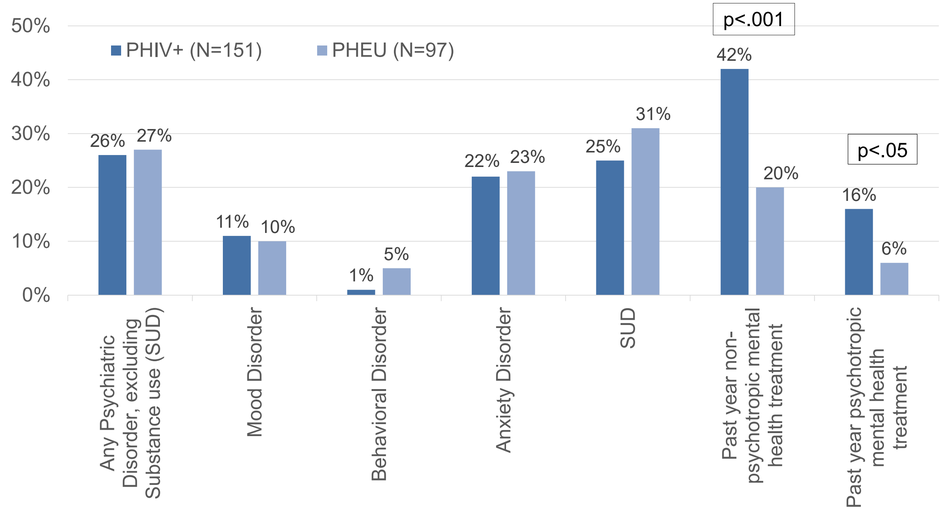
Results

Demographics. Participants were 18-28 years (mean= 22), 54% female, 69% African American/Black and 50% Latino. PHIV+ participants were more likely than PHEU to be enrolled in financial assistance programs (70% vs. 47%; p<.001) and to receive Medicaid (89% vs. 75%; p=.008).

Biomedical Outcomes. Among PHIV+ YA, mean CD4+ was 491 cells/mm^3; mean viral load (VL) 2.4 log$_{10}$; SD 1.66; 52% had a VL<50 copies/mL ; 32% had a VL >1000. 67% were prescribed a 2-drug class and 31% a 3-class ART regimen; 58% were prescribed a boosted protease inhibitor and 50% an integrase inhibitor. 87% were taking a once daily regimen; 33% took a single fixed dose combination pill; 34% were taking ≥4 pills daily.

This research was supported by NIMH grant R01-MH069133 (PI: Claude Ann Mellins, Ph.D.) and NIMH center grant P30-MH43520 (PI: Robert H. Remien, Ph.D.).
We would like to thank all participants for making this research possible.

Figure 1. Psychiatric & Substance Use Disorders, and Mental Health Treatment



Psychosocial Outcomes. (Figure 1). Over a quarter of participants met criteria for any psychiatric disorder excluding SUD, and equally high rates of SUD, with no HIV group differences. PHIV+YA reported significantly higher utilization of mental health treatment including medication compared with PHEUYA, with few (2 PHEUYA, 2 PHIVYA) in SUD treatment. Also, 28% reported cigarette, 63% alcohol, and 47% marijuana use in the past thirty days, again with no group differences.

Table 1. Neurocognitive Function

	PHIV+ (N=151)	PHEU (N=97)	
	Mean (SD) Range	**Mean (SD) Range**	**p-value**
TRAILS	28.26 (13.24) 12-127	23.17 (6.79) 12-47	**<.001**
TRAILS B	76.53 (49.05) 27-427	67.56(39.72) 21-255	.155
Digit Span Standard Score	7.62 (2.86) 1-17	8.59 (2.40) 3-15	**.009**

Neurocognitive Functioning. (Table 1.) PHIV+ YA had poorer performance than PHEUYA on two out of three tests of neurocognitive function measuring processing speed and executive function.

Milestones. (Table 2.) Two thirds of the cohort had a high school diploma or equivalent, 19% were currently in college, but 38% were neither working or in school. More PHEU YA were living rent free compared to PHIV+ participants, who were more likely to pay rent, likely due to HIV-related subsidies. Almost all had initiated sex (93%) with 41% of females reporting ≥1 pregnancy and 37% of males reporting a pregnancy in a partner.

Table 2. Young Adult Milestones

	PHIV+ (N=151)	PHEU (N=97)	
	N (%)	**N (%)**	**p-value**
Less than HS degree	34 (23%)	27 (28%)	.586
HS diploma or GED[a]	103 (68%)	63 (65%)	
College degree	14 (9%)	7 (7%)	
Currently in college	24 (16%)	24 (25%)	.085
Employed and/or in school	88 (58%)	66 (68%)	.122
Living rent free with family/friends	58 (38%)	66 (68%)	**<.001[b]**
Paying rent	81 (54%)	25 (26%)	
Household size (Mean, SD)	3.25 (2.51)	3.80 (1.60)	**.037**
Ever homeless	25 (17%)	14 (15%)	.663
Ever incarcerated	15 (10%)	14 (14%)	.282
Ever pregnant (female)	31 (39%)	22 (45%)	.491
Ever gotten someone pregnant (males)	25 (37%)	18 (38%)	.915

[a] Inclusive of 18 and 19 year olds in their senior year of high school.
[b]2 statistical tests (lives rent free vs. others; renting a room vs. others) both p < .001. Other housing included college dorms and specialty HIV housing.

Conclusion

Similar to PHEU, many PHIV+ young adults are achieving age appropriate adult milestones, but high rates of psychiatric and substance use disorders, neurocognitive dysfunction and viremia on ART warrant attention. Psychiatric and SUD treatment must be part of HIV healthcare for PHIV+YA with strategies needed to reach and engage PHEUYA.

ICAP GLOBAL. HEALTH. ACTION. Columbia University Mailman School of Public Health

HIV CENTER for Clinical and Behavioral Studies at the New York State Psychiatric Institute and Columbia University