

# Research in Youth

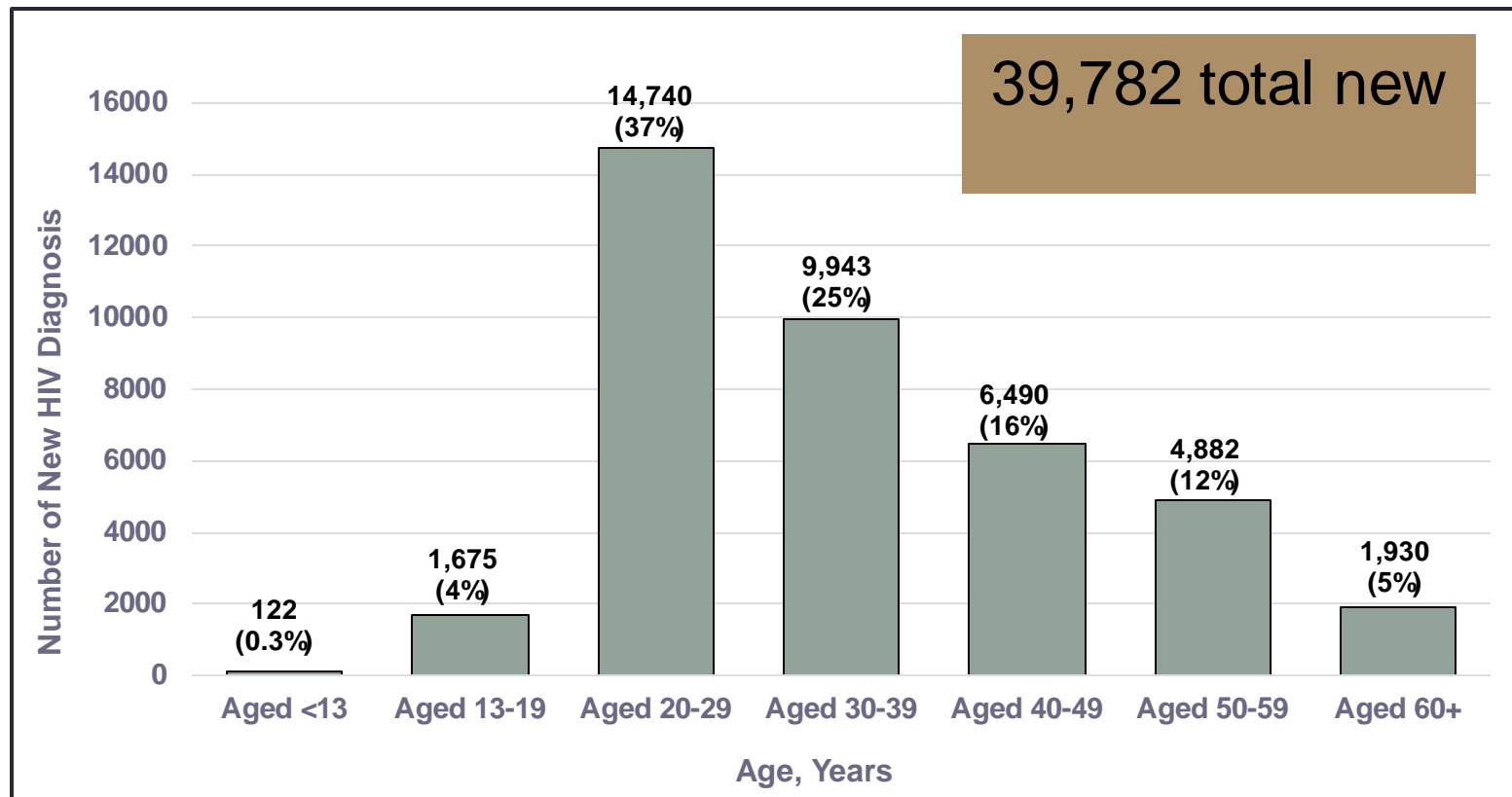
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# Why We Did this Study

## New HIV Diagnoses in the U.S. By Age, 2016



# What We Did

- An HIV Preexposure Prophylaxis Demonstration Project and Safety Study for Young MSM
  - 18-22 year old; 15-17 year old HIV negative
  - HIV transmission risk behavior in the previous six months
  - Daily tenofovir disoproxil fumarate/emtricitabine (Truvada)
  - Followed over 48 weeks



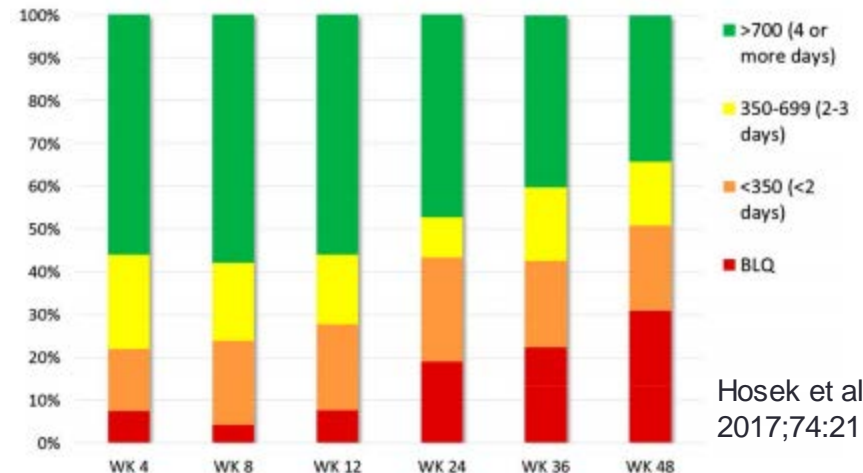
# What We Found

Over half in each group achieved protective drug levels.

Adherence decreased with quarterly visits

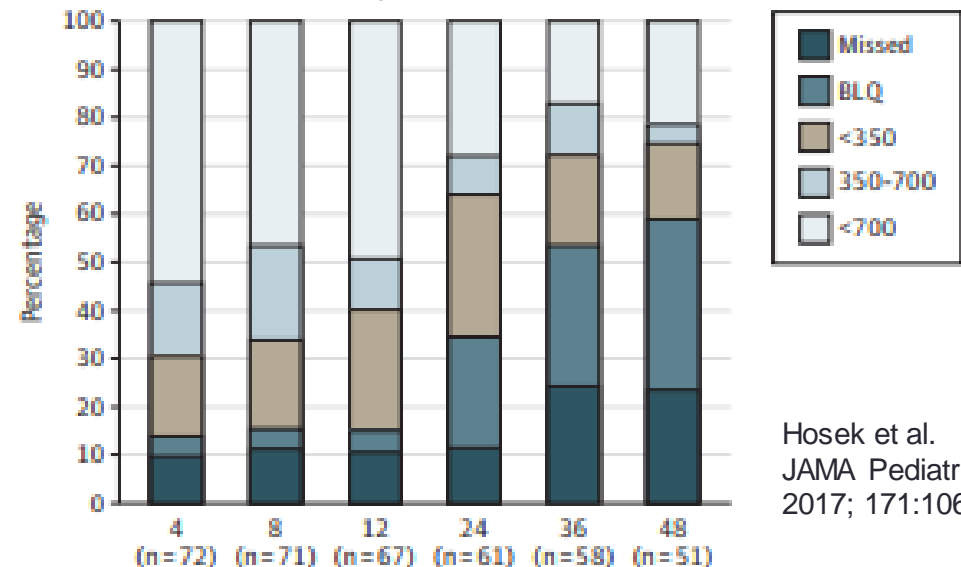
Study resulted in label indication for PrEP for youth

## Tenofovir levels in dried blood spots



Hosek et al. JAIDS 2017;74:21

## 18-22 year old

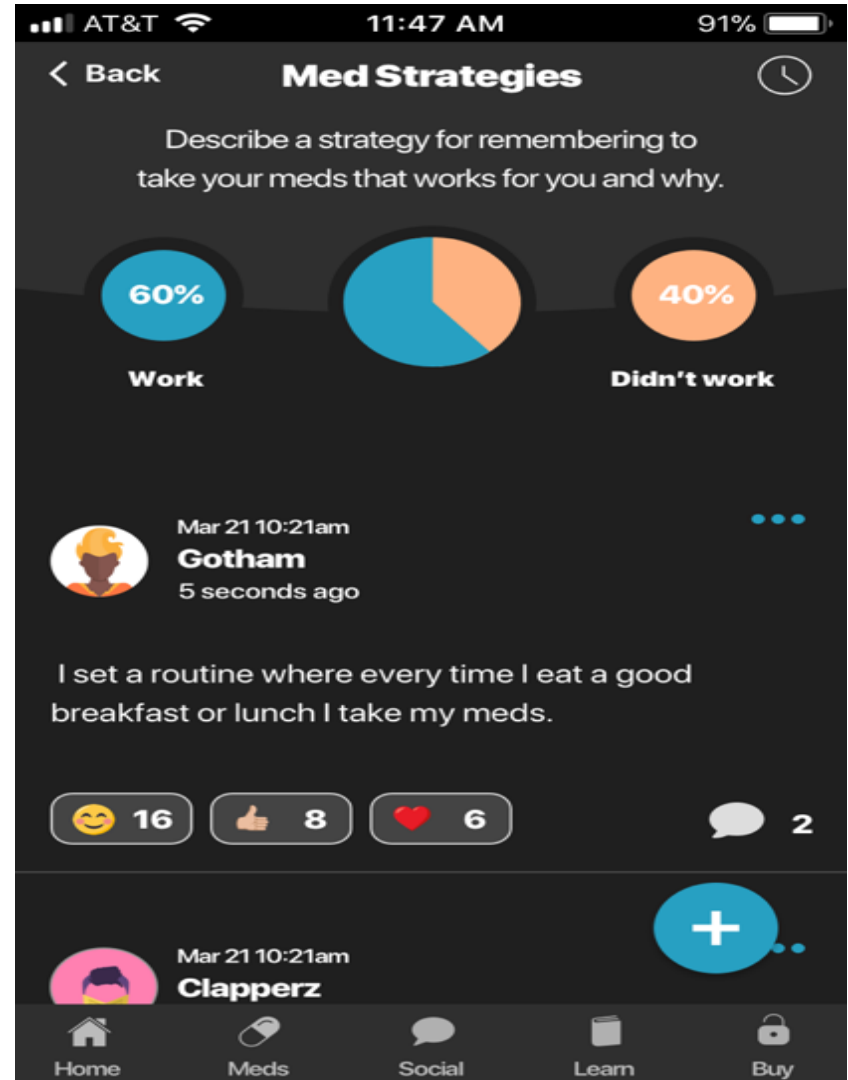


Hosek et al. JAMA Pediatr. 2017; 171:1063

## 15-17 year old

# What Our Results Mean

- Youth need additional supports to maintain high adherence to PrEP
- Itech is innovative technology project
- Aims to impact the HIV epidemic by conducting research on technology-based interventions across the HIV prevention and care continuum for adolescents and young adults.



# PHACS Clinical Sites



# Why We Did This Study

## Aging up with perinatal HIV infection (1)

- With combination antiretroviral therapy (ART), increasing numbers of perinatally HIV-infected (PHIV) young women are reaching child-bearing age and becoming pregnant.
- PHIV young women are unique in their experience:
  - Life-long HIV infection.
  - Exposed to mono-and dual-therapy→ resistance.
  - Challenge of maintaining long-term adherence to ART:
    - Transitioning to adulthood/adult care.
    - Experiencing depression, isolation, stigma, and parental loss.

# Why We Did This Study

## Aging up with perinatal HIV infection (2)

Type of Resistance	No.	Prevalence, %	95% CI
Any ARV	175	75	69–80
At least 1 class			
NRTI			
Any <sup>b</sup>	142	61	54–67
All <sup>c</sup>	27	12	8–16
NNRTI			
Any	105	45	38–51
All	45	19	14–25
PI			
Any	80	34	28–41
All	11	5	2–8
At least 2 classes			
NRTI + NNRTI			
Any	77	33	27–39
All	10	4	2–8
NRTI + PI			
Any	71	30	25–37
All	4	2	0.5–4
At least 3 classes			
Any	43	18	14–24
All	1	0.4	0.01–2



# What We Did

## Pregnancy Rates and Postpartum Virologic Control among Perinatally HIV-Infected Young Women in AMP Up

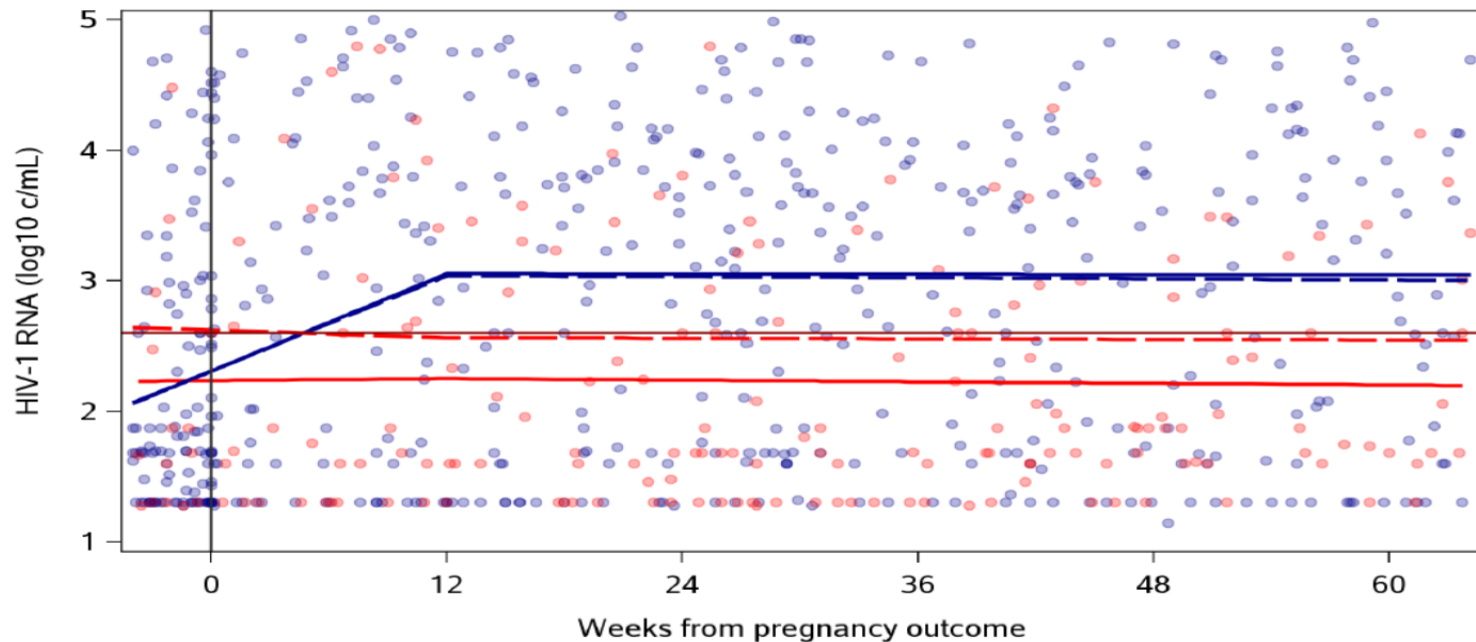


Kunjal Patel, Brad Karalius, Kathleen Powis, Claire Berman, Deborah Kacanek, Anna-Barbara Moscicki, Mary Paul and Katherine Tassiopoulos

# What We Found

## Adjusted\* GEE model of VL trajectories (N=140)

\*pre-pregnancy VLs  $\geq 400$  c/mL (4 missing), age at sexual debut, black race (9 missing), Hispanic ethnicity, highest caregiver education level attained, and prior live birth



	Mean log <sub>10</sub> VL at end of pregnancy	Mean $\Delta$ log <sub>10</sub> VL from 0-12 weeks	Mean $\Delta$ log <sub>10</sub> VL from 12-64 weeks
Live births	2.3 (2.1, 2.5)	0.73 (0.49, 0.97)	-0.03 (-0.3, 0.2)
S/E Abortions	2.6 (1.5, 3.7)	-0.06 (-0.39, 0.28)	-0.02 (-0.4, 0.4)

# Why This Matters

- While we observed lower rates of pregnancies among PHIV women compared to PHEU women, a high percentage (42%) had at least one pregnancy.
- Increased postpartum support with respect to managing their HIV infection may be necessary for PHIV young women after delivering a live-born infant.
  - End of pregnancy may be a good point to intervene to ensure adherence levels attained during pregnancy are maintained in the post-partum period.

# Acknowledgments

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Community

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