



Increases in ART prescription and viral suppression among HIV-positive young adults in care in the United States, 2009-2013

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Acknowledgments

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 - Participants
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 - Community and provider advisory boards

Conflict of interest disclosure

Linda Beer, PhD has no real or apparent conflicts of interest to report

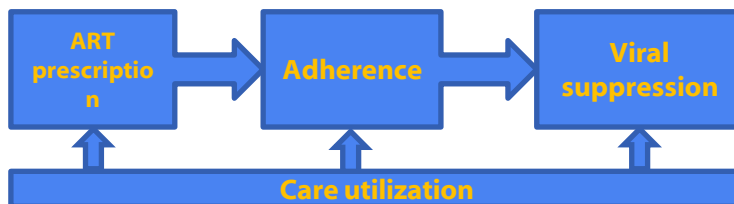
BACKGROUND

Background

- HIV-positive young adults are less likely than older adults to take antiretroviral therapy (ART), be adherent, and be virally suppressed
- Recent developments
 - Guidelines now recommend universal prescription of ART
 - Simpler, more tolerable ART regimens
 - Enhanced focus on improving care continuum for youth
- Effect of these developments on youth nationally is unknown

Analytic questions

- Have recent developments been accompanied by increased ART prescription, adherence, and care utilization among young adults in care?
 - If so, has this contributed to improvements in viral suppression?



- To answer these questions, we estimated temporal trends in these factors among HIV-positive young adults in care in the United States from 2009 to 2013

METHODS

Data

- Medical Monitoring Project (MMP), 2009 – 2013
 - Surveillance system describing clinical and behavioral characteristics of adults receiving HIV medical care in the U.S.
 - Annual, cross-sectional estimates
 - Complex sample of facilities and patients in 23 jurisdictions
- Data collection
 - Interviews and medical record abstractions (N=23,125)
 - Response rates: facilities 76–85%; patients 49–55%

Methods

- Used linear regression to estimate trends from 2009 to 2013 among young adults receiving HIV care (aged 18-24)
 - N by year: 2009=**107**; 2010=**125**; 2011=**127**; 2012=**144**; 2013=**133**
- Measures (all based on medical record review except adherence)
 - Viral suppression (<200 copies/mL at last test)
 - Sustained viral suppression (<200 copies/mL at all tests during past 12 months)
 - ART prescription during past 12 months
 - 100% adherence to ART dose during past 3 days (self-reported)
 - Care utilization (≥ 1 viral load in each 6 month period during past year)
- Weighted for unequal selection probabilities and non-response

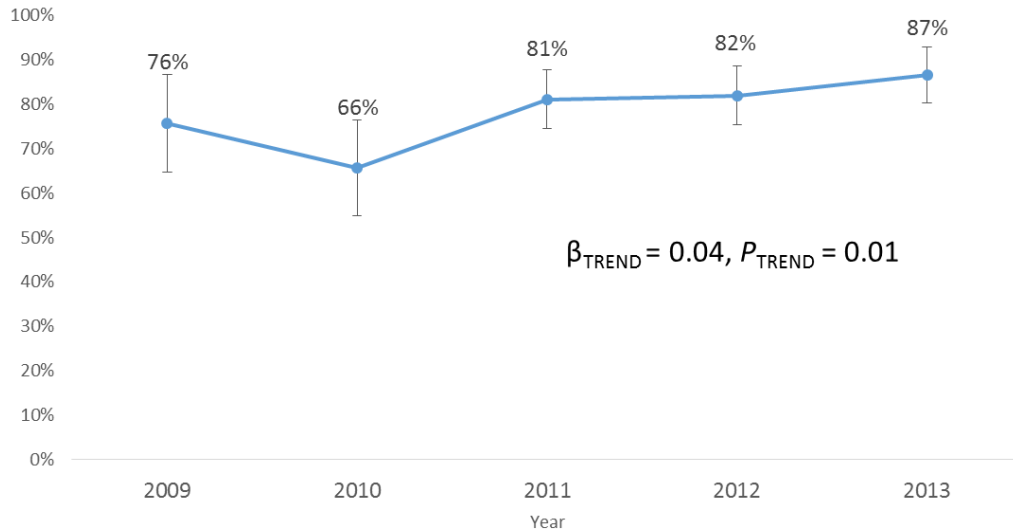
RESULTS

Selected characteristics of HIV-positive young adults in care, Medical Monitoring Project 2009-2013 (N=636)

	% (CI)		% (CI)
Black men	43 (37-50)	Homeless	14 (10-18)
Black women	15 (11-18)		
Hispanic men	14 (10-17)	Incarcerated	11 (8-14)
White men	11 (8-14)		
Other	17 (14-21)	Aged 10+ at HIV diagnosis	88 (84-91)
Gay or bisexual identity	62 (57-67)	Length of HIV diagnosis	
		<5 years	75 (70-80)
At/below household poverty	62 (56-66)	5-9 years	12 (9-15)
		10+ years	13 (9-17)
Uninsured/RW coverage only	35 (28-41)		

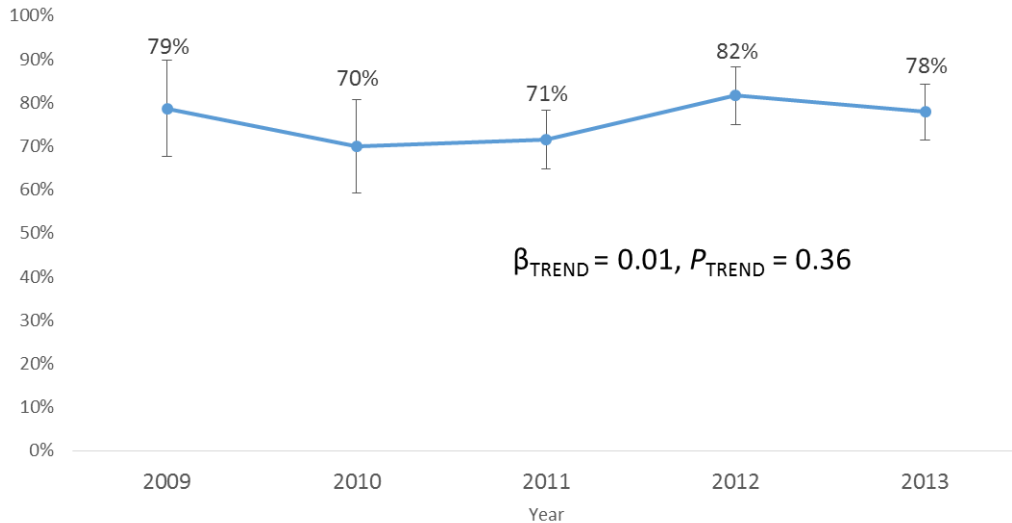
Source: Beer et al; Receipt of clinical and prevention services, clinical outcomes, and sexual risk behaviors among HIV-infected young adults in care in the United States; *AIDS Care* 2016. Time period is 12 months prior to interview unless otherwise noted; all variables measured by interview self-report.

ART prescription among HIV-positive young adults in care, Medical Monitoring Project 2009-2013



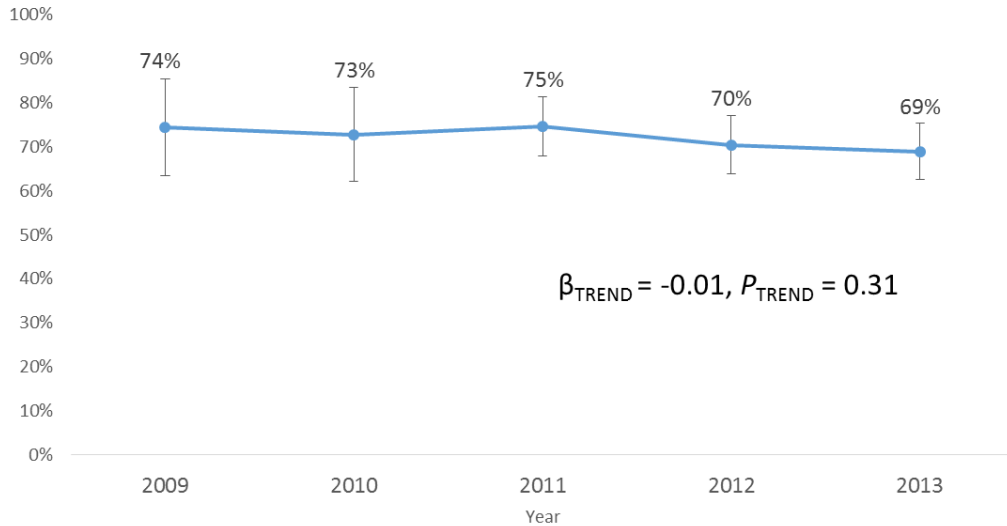
ART, antiretroviral therapy.

ART adherence among HIV-positive young adults in care, Medical Monitoring Project 2009-2013



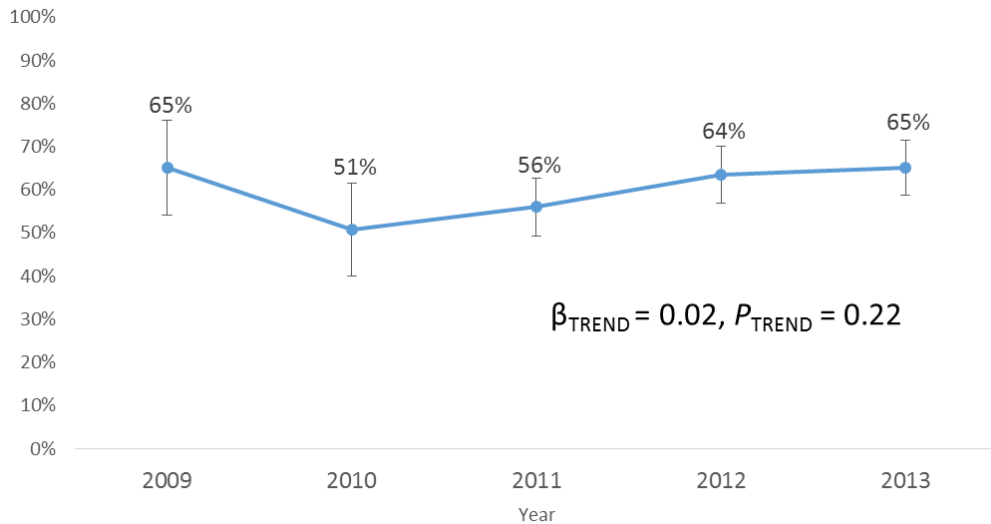
ART, antiretroviral therapy; adherence, 100% adherence to antiretroviral dose during past 3 days.

Care utilization among HIV-positive young adults in care, Medical Monitoring Project 2009-2013



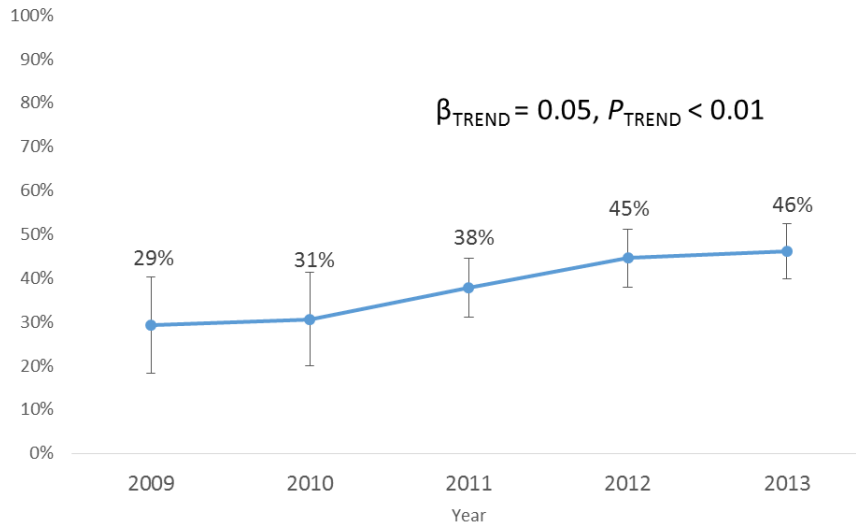
Care utilization, at least 1 viral load in each 6 month period during past year.

Viral suppression at last test among HIV-positive young adults in care, Medical Monitoring Project 2009-2013



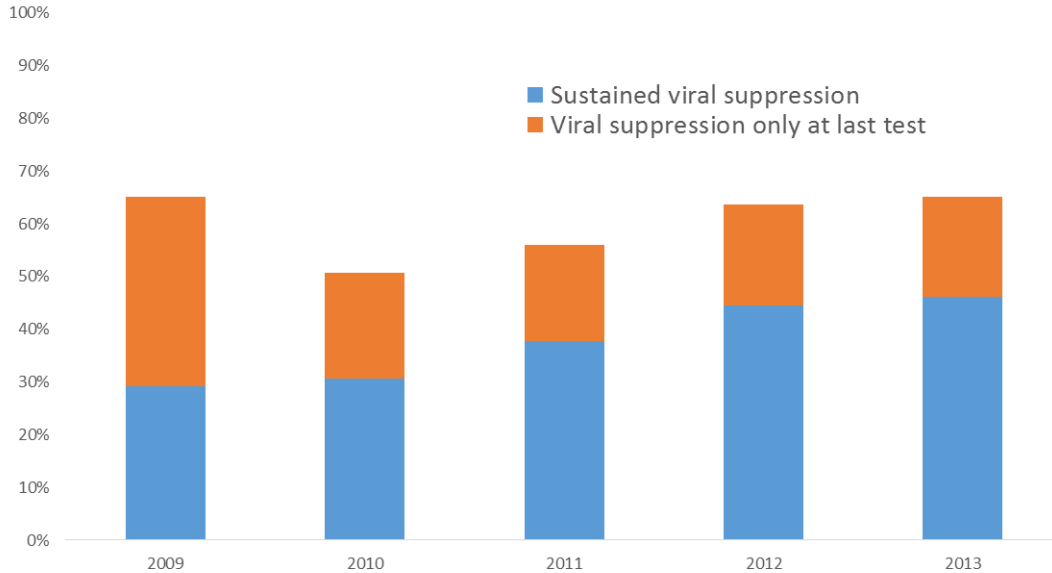
Viral suppression at last test, viral load at last test documented in medical record as undetectable or ≤ 200

Sustained viral suppression among HIV-positive young adults in care, Medical Monitoring Project 2009-2013



Sustained viral suppression, all viral loads in past 12 months documented in medical record as undetectable or ≤ 200 copies/ml.

Viral suppression among HIV-positive young adults in care, Medical Monitoring Project 2009-2013



Summary of results

- Improvements in ART prescription
 - 4 percentage point average annual increase
- No change in adherence or care utilization
- No change in viral suppression at last test
- Improvements in sustained viral suppression
 - 5 percentage point average annual increase

DISCUSSION AND CONCLUSIONS

Discussion

- Improvements in sustained viral suppression
 - Accounting for ART prescription somewhat attenuated the sustained viral suppression trend (adjusted $\beta=0.04$, $P_{\text{TREND}} 0.02$)
- No upward trend in viral suppression at last test
 - At any given time only about 2/3 of young adults in HIV care are virally suppressed, but increasingly more are able to maintain suppression

Discussion

- Why no change in viral suppression at last test?
 - No improvements in adherence or care utilization
 - Changes in the characteristics of young adults in care?
 - Increasing proportion of males, but stratifying by gender, race, ART use, time since diagnosis did not alter results

Limitations

- Adherence measure is limited to past three days
- Did not assess other potential explanatory factors for changes in viral suppression such as changes in ART regimens

Conclusions

- Significant increases in sustained viral suppression among HIV-positive young adults in care in the U.S.
 - Partially attributable to increasing ART prescription
- However, levels of viral suppression among young adults in care remain too low
- Wider development and implementation of effective strategies to improve adherence among young persons may be needed

Thank you

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

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