

11th International  
Conference on  
HIV TREATMENT  
AND PREVENTION  
ADHERENCE



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# Ending AIDS as a Public Health Threat: The Power of Change

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## SESSION TITLE

### **Paradigm Shift(ing): When Treatment is Prevention, What Then Do We Mean by Prevention?**

Presenter

Jeremiah Johnson

HIV Prevention Research and Policy Coordinator

Treatment Action Group



## **Conflict of Interest Disclosure**

I have no real or apparent conflicts of interest to report.



## About Treatment Action Group

- Treatment Action Group is an independent research and policy think tank focused on activism to accelerate research, treatment, access, and community information to prevent, treat, and cure HIV and its most common coinfections, hepatitis C virus (HCV) and tuberculosis (TB).

[www.treatmentactiongroup.org](http://www.treatmentactiongroup.org)





## The fundamental concept of “HIV prevention” has changed radically in the past decade.

- First CDC PEP guidelines for non-occupational exposure in 2005
- Advent of PrEP
- HPTN 052 and TasP
- The Gardner Cascade/Care and Treatment Continuum
- Affordable Care Act
- Renewed urgency for SAPs and options for people who inject



Image source:  
[www.aidsmap.com](http://www.aidsmap.com)



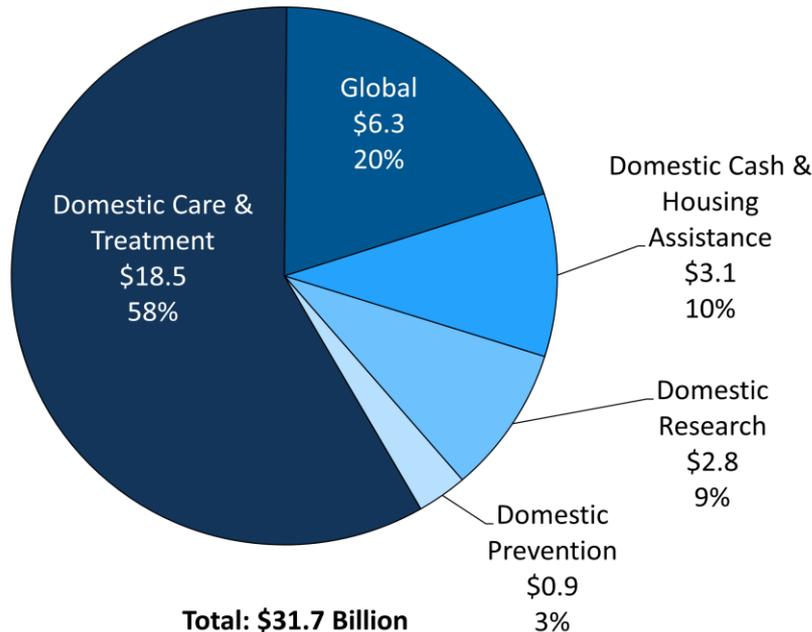
# A National TasP-Centric Prevention Response

- Calls for “test and treat” approaches in U.S.
- High Impact Prevention
- Questions about the future of “prevention for negatives”

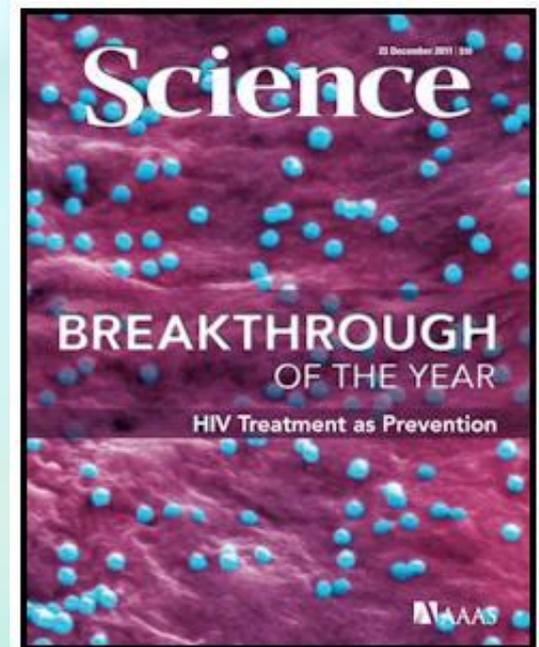
Figure 2

## U.S. Federal Funding for HIV/AIDS, by Category, FY 2016 Request

US\$ Billions



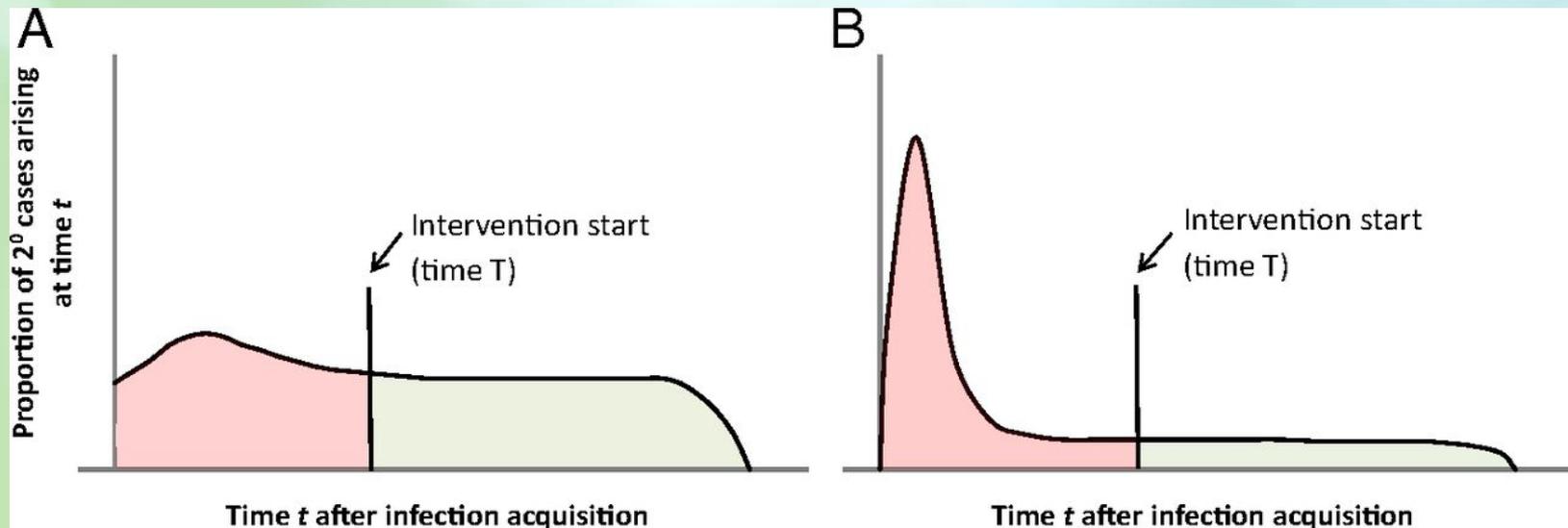
NOTE: Categories may include funding across multiple agencies/programs; global category includes international HIV research at NIH.  
SOURCE: Kaiser Family Foundation, U.S. Federal Funding for HIV/AIDS: The President's FY 2016 Budget Request; February 2015.





## But there are substantive arguments against a singular TasP approach

- The notion that TasP alone can end an HIV epidemic, particularly among MSM, is controversial both within existing modeling and real world examples. (*Kretzschmar 2013; Powers 2014; Cohen 2012; Phillips 2014*)
- Ethical Considerations



GRAPH: Powers, K et al. Impact of early-stage HIV transmission on treatment as prevention. Proceedings of the National Academy of Sciences. 2014.



**We will have to maintain and expand options for those most vulnerable to HIV infection.**

Equitable access to all the tools in our toolbox (PrEP, PEP, Clean Injection Supplies, STI screening)

Pursuing hopeful new tools in the pipeline (injectables, microbicides, other PrEPs, vaccines, and cures)

Maximize impact of the ACA

Medicaid expansion





## Complex questions will have to be answered for different contexts and different populations

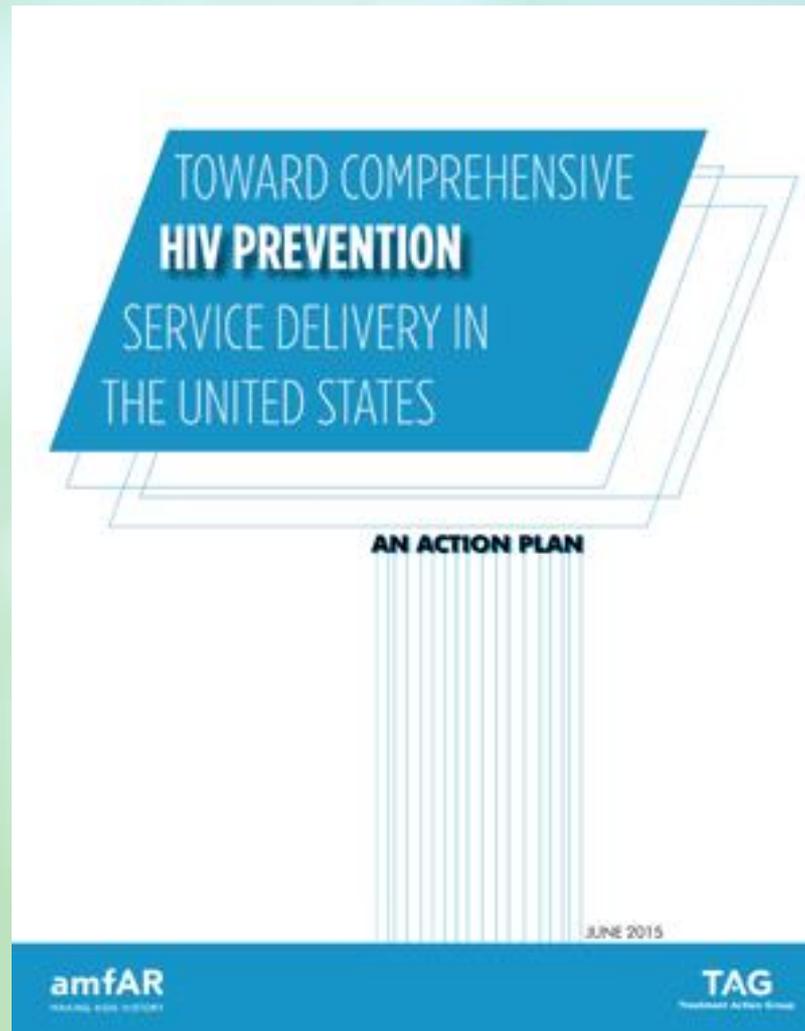
- Not all interventions are created equal
- The effectiveness of the same innovation in different locations will change
- Each key population has special considerations

Liu A, et al. Preexposure Prophylaxis for HIV Infection Integrated With Municipal- and Community-Based Sexual Health Services. JAMA Intern Med. 2016

### Independent predictors of protective DBS levels

Characteristic	% PL*	AOR (95% CI)	P value
<b>Site</b>			
San Francisco	90	Ref	
Miami	65	<b>0.32 (0.17-0.60)</b>	<b>&lt;0.001</b>
DC	88	1.08 (0.54-2.19)	0.82
<b>Race/Ethnicity</b>			
White	91	Ref	
Latino	77	0.81 (0.41-1.61)	0.55
Black	57	<b>0.28 (0.12-0.64)</b>	<b>0.003</b>
Asian	84	0.72 (0.17-3.03)	0.65
Other	82	0.42 (0.13-1.38)	0.15
<b>Living situation</b>			
Rent or own housing	87	<b>2.02 (1.14-3.55)</b>	<b>0.02</b>
Other	70	Reference	
<b># condomless anal sex partners, past 3 mo</b>			
0-1	75	Reference	
≥2	89	<b>1.82 (1.14-2.89)</b>	<b>0.01</b>

\*PL = Protective DBS levels (TFV-DP in DBS consistent with ≥4 doses/week)



Johnson, J. Toward Comprehensive HIV Prevention Service Delivery in the U.S. 2015. Available at:  
[www.treatmentactiongroup.org/hiv/publications](http://www.treatmentactiongroup.org/hiv/publications)



## Recommendations

1. **Strengthen surveillance** to document HIV incidence, impact of prevention interventions and services, and progress toward reduced new infections and other health outcomes among all vulnerable populations.
2. Identify and support research priorities to **better define evidence-based prevention practices** and **implementation science**
3. Form a federal ***Comprehensive HIV Prevention Service Delivery Initiative***, similar to the *HIV Care Continuum Initiative*, to identify and coordinate cross-agency responsibilities to address critical structural, social, and behavioral determinants of health and HIV risk reduction in key vulnerable populations.



4. Develop, disseminate, and support **best HIV prevention practices** to facilitate comprehensive, culturally competent, streamlined, age-appropriate, and rapid uptake among non-HIV care and other service providers
5. Develop **continua, process models, or similar heuristics** to guide comprehensive HIV prevention service delivery research and implementation

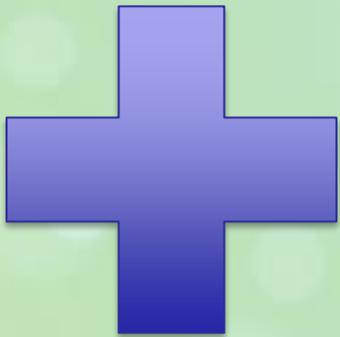


## HIV Care Continuum

- Simplifies a complex & dynamic process
- Generally measurable, outcomes oriented
  - All pillars should apply to 100% of PLWHIV
- Captures collective attention
  - Highly visual, accessible, and reproducible
  - Works across stakeholder populations
  - Has galvanized advocacy, funding, and implementation of sound research, policies, and best practices



## Time for a Prevention Continuum?



- Enter care continuum
- Insurance and provider linkage a priority
- Coordination of best practices and service delivery
- Strong framework for existing and emerging interventions/services



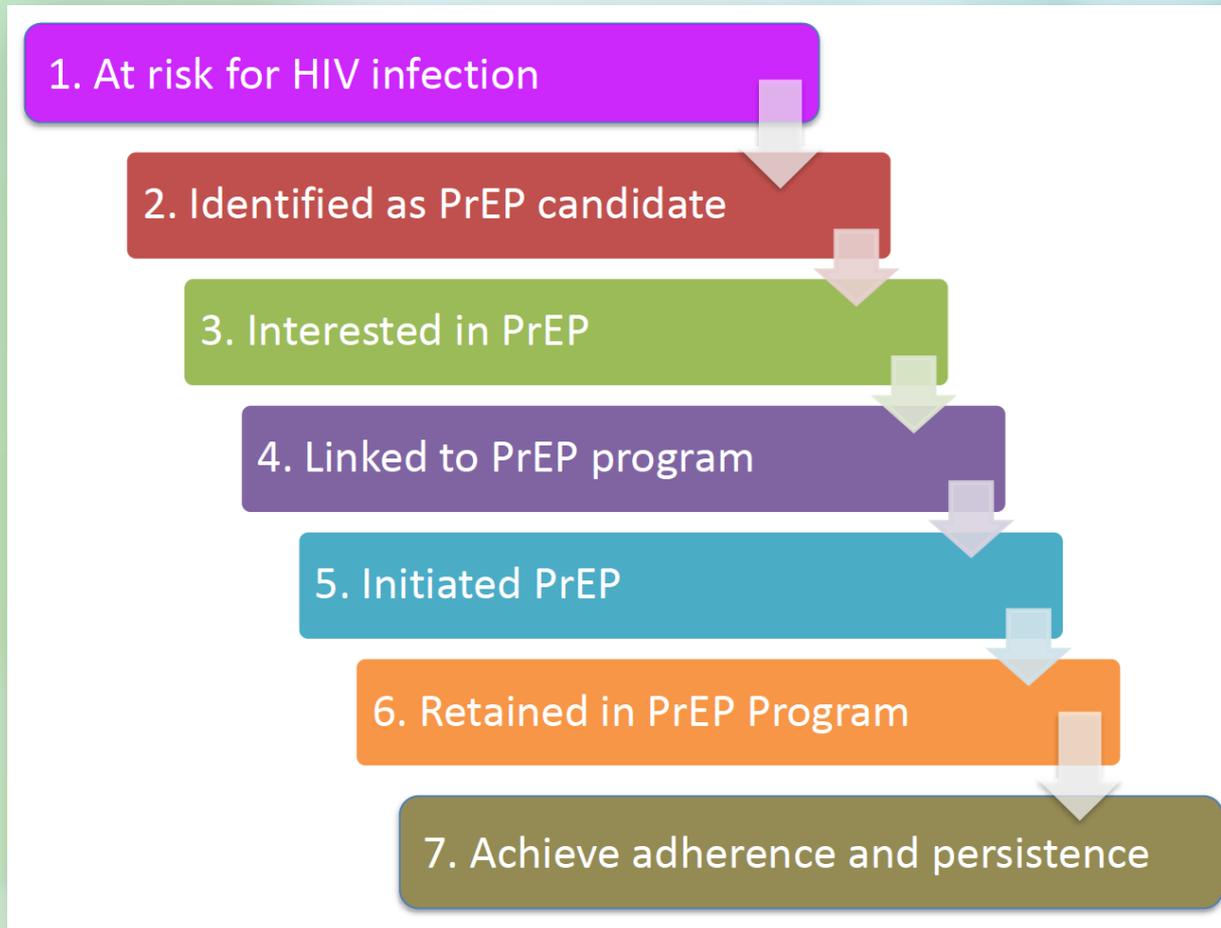
## Time for a Prevention Continuum?

- Missed opportunities
  - Insurance navigation & enrollment
  - Risk assessments for HIV and other health disparities
  - Linkage to HIV-inclusive integrative/comprehensive care
  - Coordination of structural, behavioral and biomedical interventions



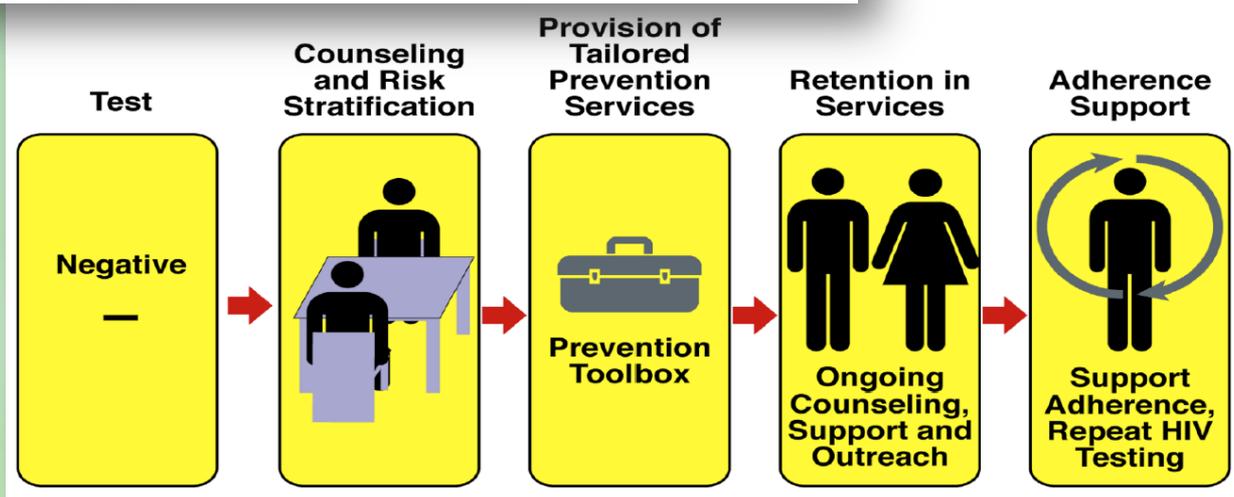
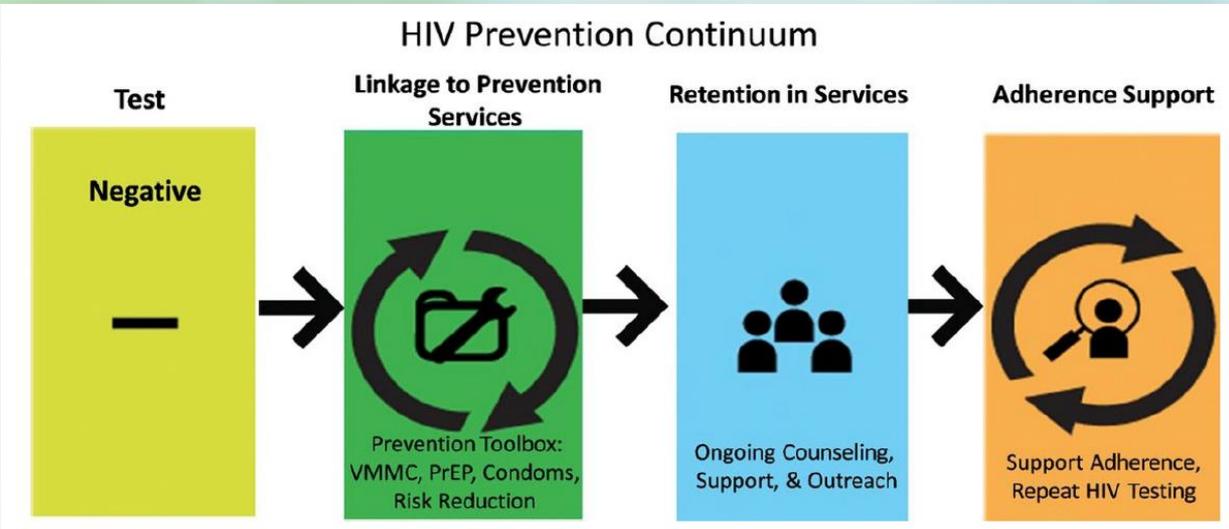


## Intervention-Based Cascade



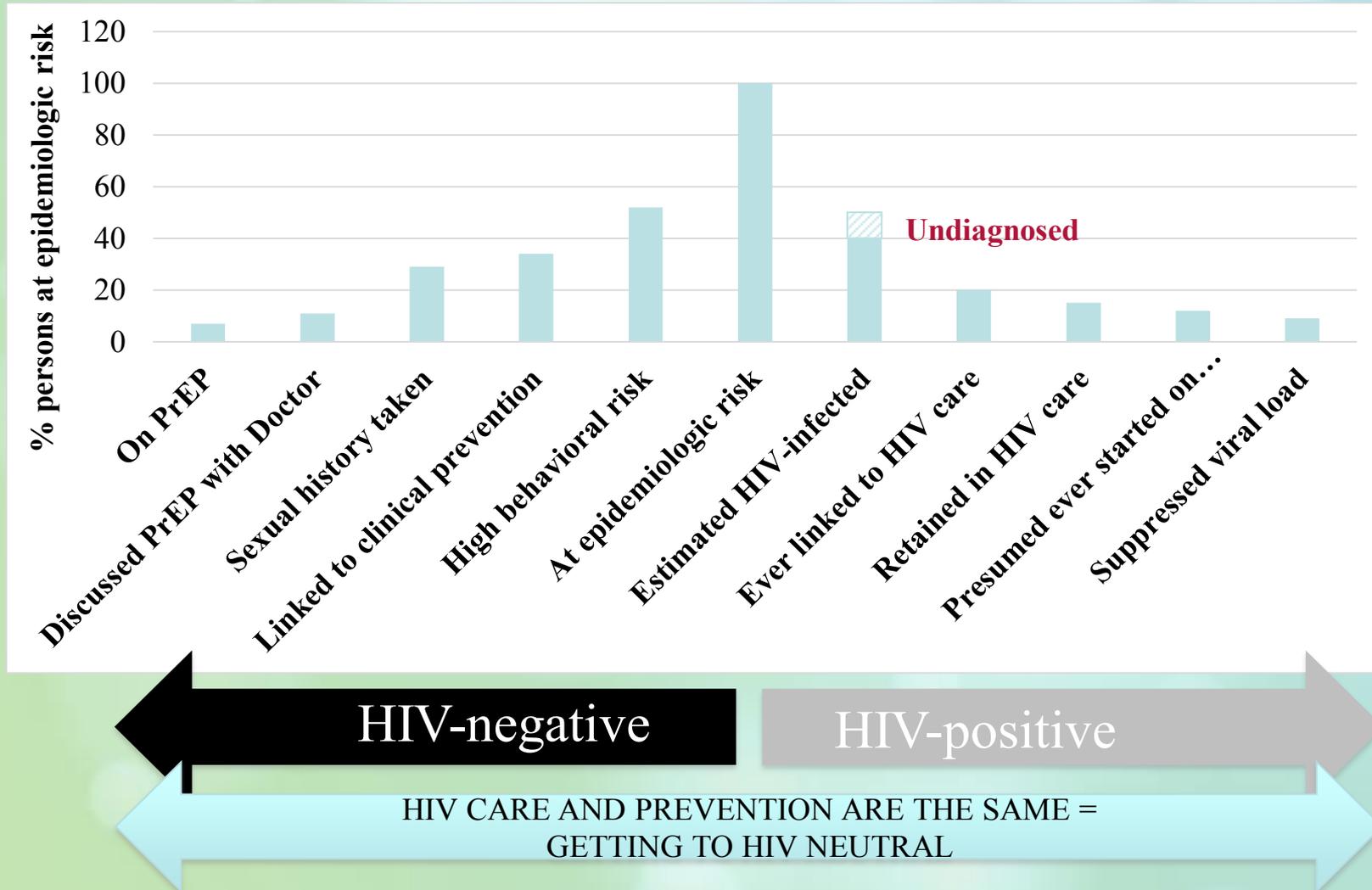


# Population-Based Cascade





# The “HIV Neutral” Continuum of Care





# Infection cascade and prevention pathways model

**Eliminate Virus in community** High uptake of testing; high/complete levels of durable viral suppression; CVL, test, link, treat, retain

Circulating Virus

**Eliminate Proximal Virus** Know partner status; couples testing; 4<sup>th</sup> generation tests; Durable viral suppression in HIV positive partner(s); Status discussions

Viral Presence

**Prevent Viral Entry** Barrier method(s)- male condom/female condom; choice of alternatives to penetrative sex; sexual positioning; treatment of STIs; minimize abrasive (dry) penetration

Viral Entry

**Prevent Establishment of Viral Infection** PEP, PrEP

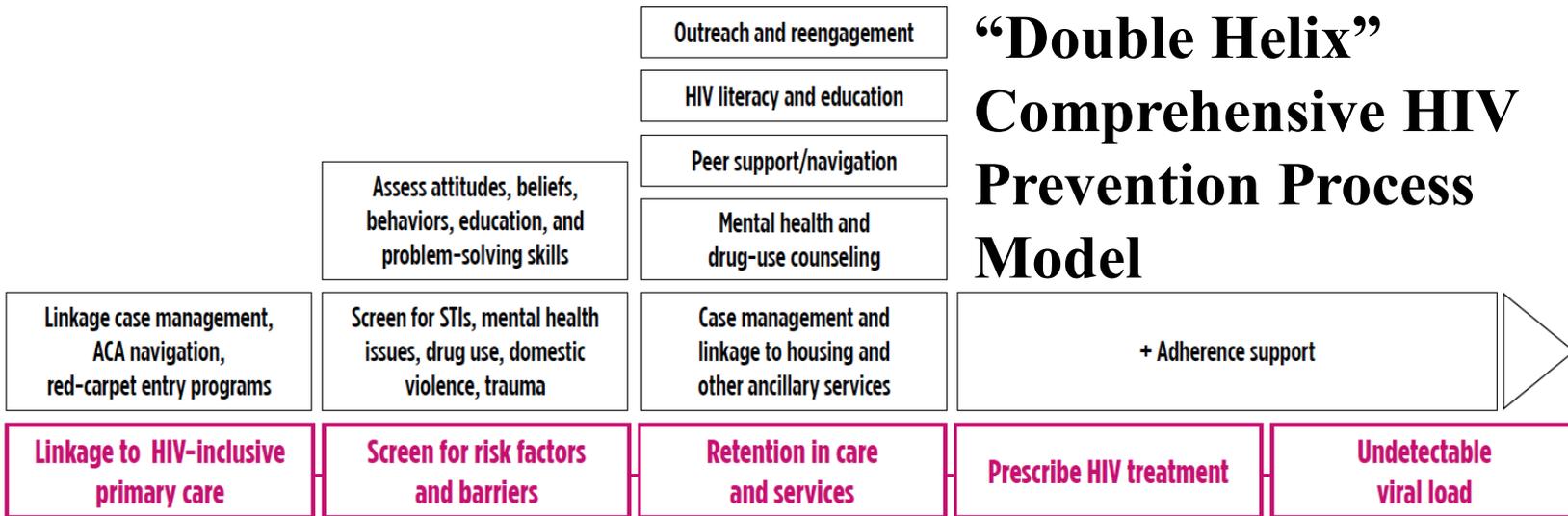
Viral Infection



Amico, KR. Developing an “HIV prevention cascade”: Current approach and future directions. In: Program and abstracts of the 10<sup>th</sup> International Conference on HIV Treatment and Prevention Adherence (Miami). Washington, DC: International Association of Providers in

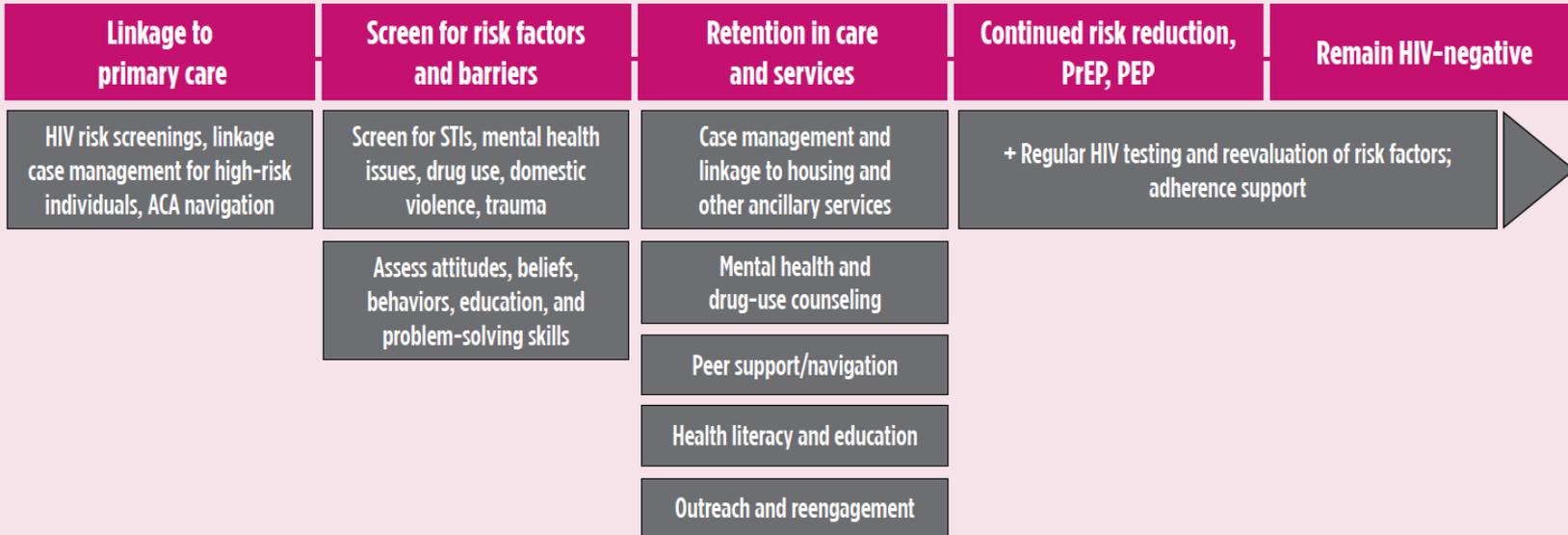


# “Double Helix” Comprehensive HIV Prevention Process Model



## HIV- POSITIVE

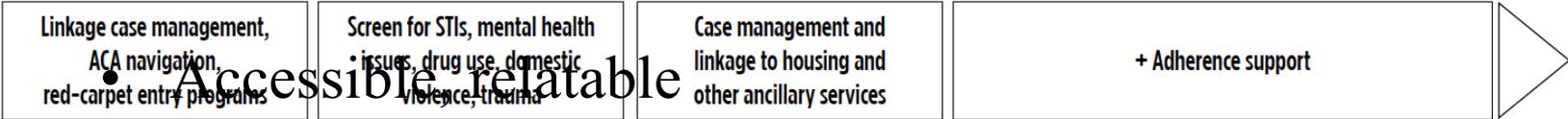
## HIV- NEGATIVE



# Strengths

- Outreach and reengagement
- HIV literacy and education
- Peer support/navigation
- Mental health and drug-use counseling

Assess attitudes, beliefs, behaviors, education, and problem-solving skills



• Accessible, reliable, and care a priority  
 • Not HIV specific

# HIV-NEGATIVE

Robust HIV-inclusive risk screening and primary/preventive/whole health care



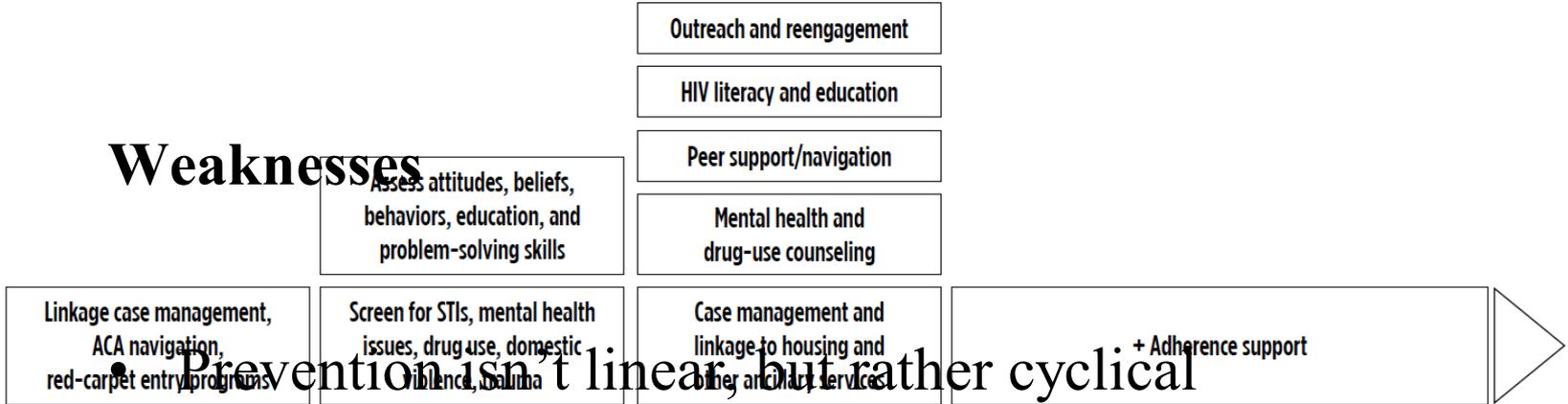
Assess attitudes, beliefs, behaviors, education, and problem-solving skills

- Mental health and drug-use counseling
- Peer support/navigation
- Health literacy and education
- Outreach and reengagement

• Demands coordination of interventions and services (including PrEP)



# Weaknesses

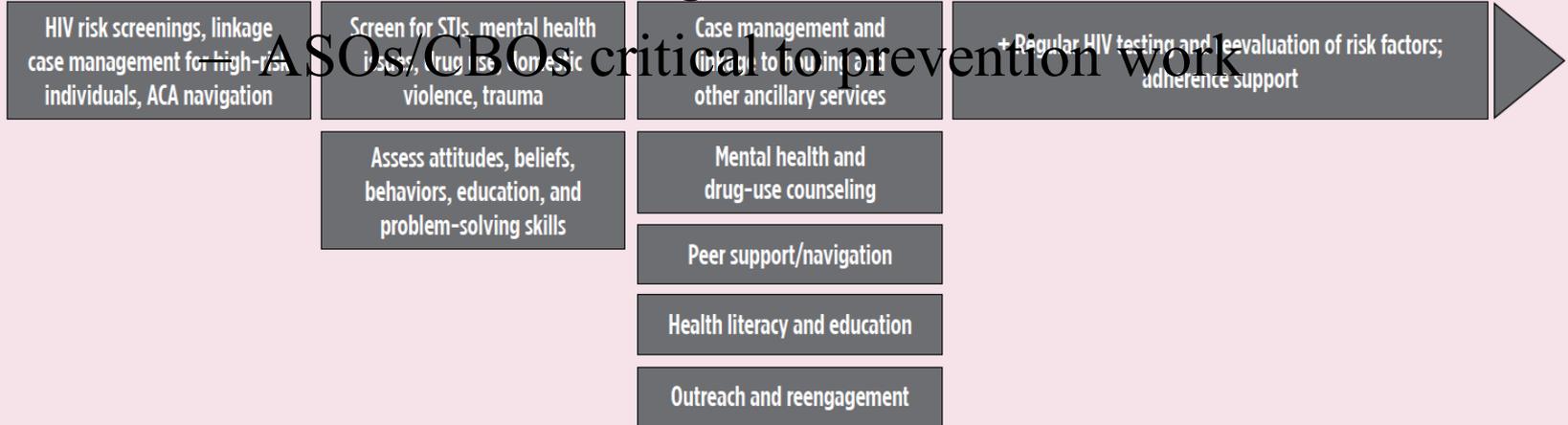


Providers largely unprepared

Primary care not a priority for some populations



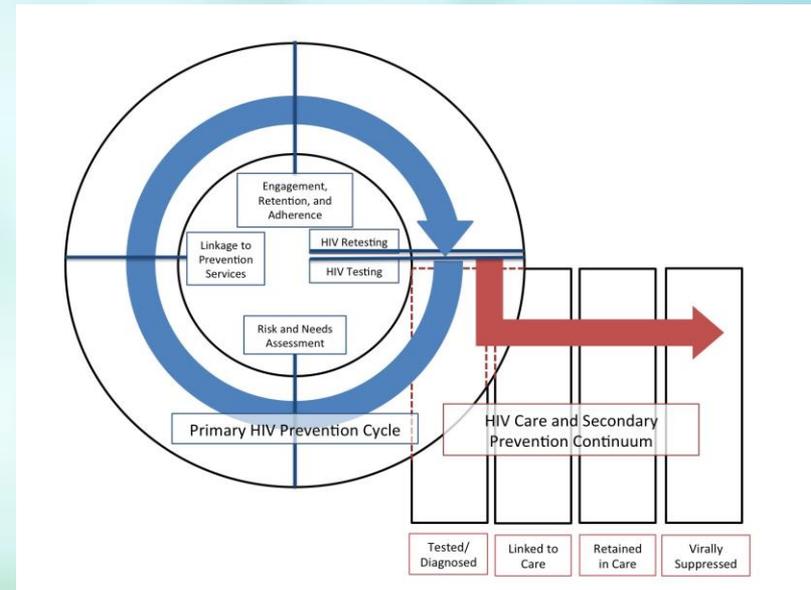
Insurance coverage still fractured





## TAG/amfAR HIV Prevention Continuum

- Conceptual model
  - HIV testing is focal point
  - Identifies relevant:
    - Elements
    - Metrics
    - Potential data sources for points along the process
  - Links primary prevention with secondary prevention





## Let's start by being idealists

- What should prevention look like from start to finish for different individuals?
- How would we, in an ideal world, extrapolate this to population-level strategies?
- Then, how do we take those ideal plans and implement them in the real world?

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**THANK YOU!**

[JEREMIAH.JOHNSON@TREATMENTACTIONGROUP.ORG](mailto:JEREMIAH.JOHNSON@TREATMENTACTIONGROUP.ORG)