

# Prevention with Positives: A Critical Literature Review

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# A Prevention Cocktail

- This talk will:
  - Summarize the existing literature on prevention with positives.
  - Summarize the issues that remain unaddressed in the prevention for positive intervention portfolio.

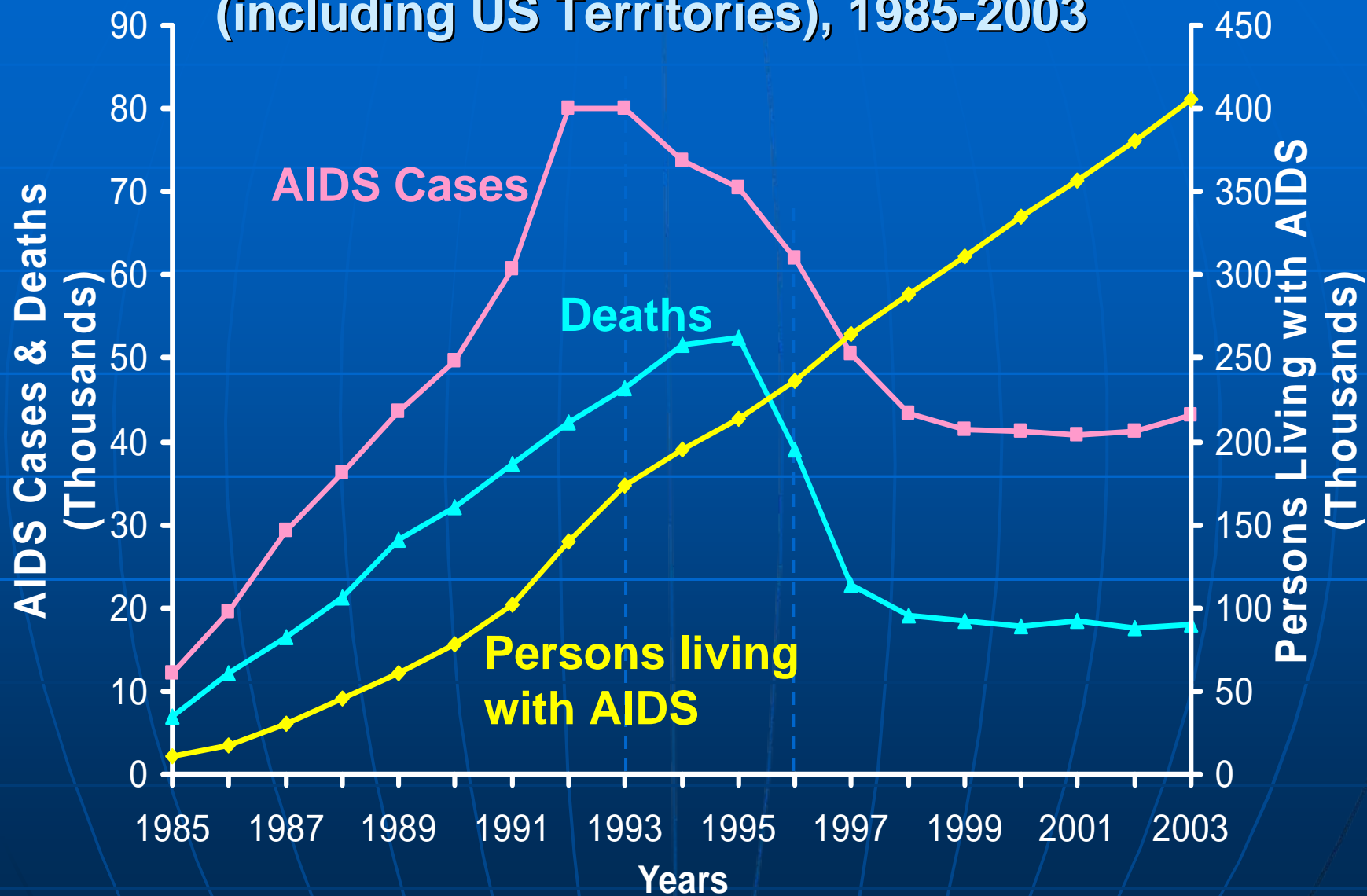
# A Prevention Cocktail

- Argue that multiple mechanisms of potent intervention activity are necessary if we are to meet the challenge of prevention for positives.
- Analogy of HAART: “Cocktails” of drugs attack multiple mechanisms of viral replication to keep HIV in check. We need to consider the design of *prevention* cocktails that attack multiple mechanisms of risk taking.

# Why Prevention with Positives?

- All new HIV infections must involve an HIV seropositive individual.
- It is most effective to intervene with the small minority of Americans who are HIV positive than all US citizens.
- HIV seropositive individuals who have been informed that they are positive generally reduce risk levels
- In the HAART era, prevalence rates for HIV infection will continue to climb.

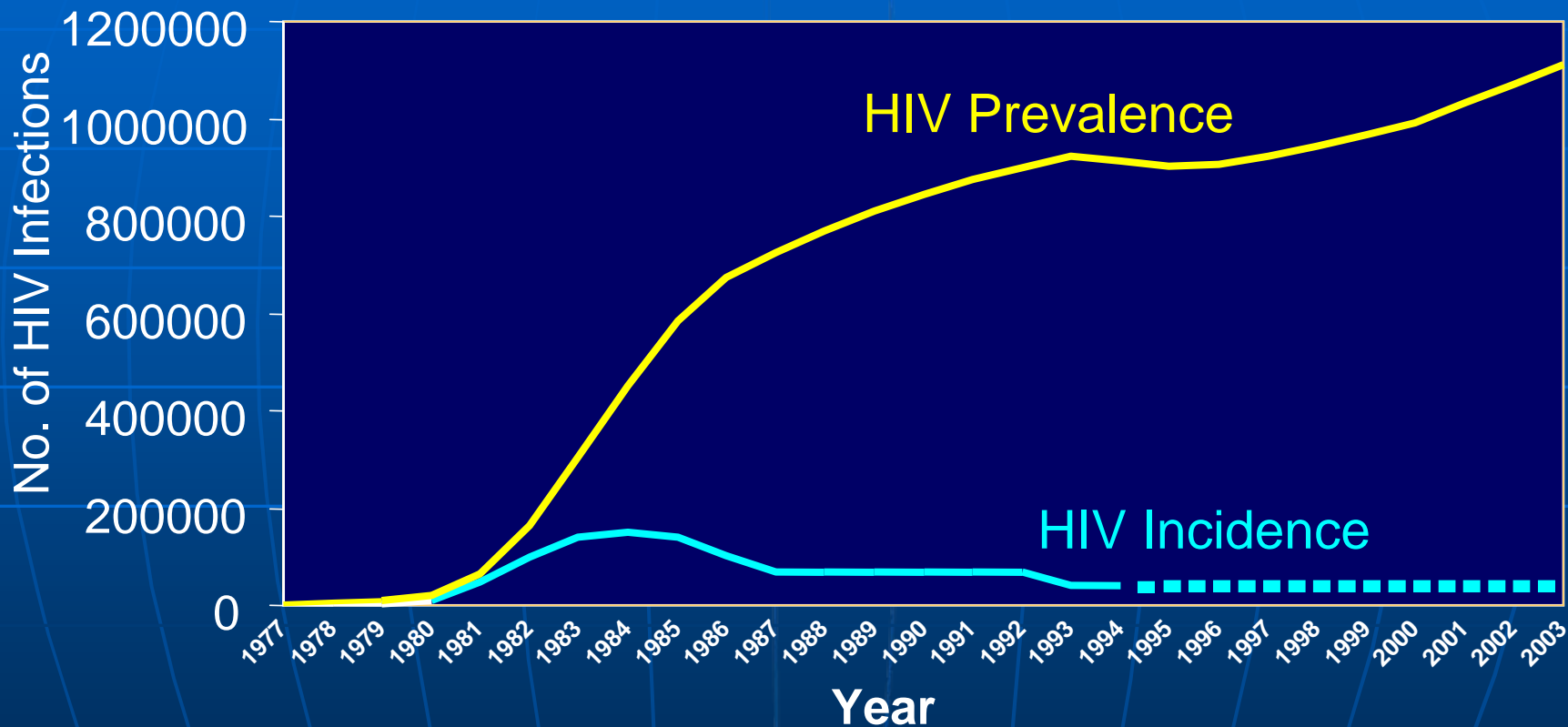
# Annual Numbers of AIDS Cases, Deaths of Persons with AIDS, and Persons Living with AIDS, United States (including US Territories), 1985-2003



Presented at the NY HIV Research Centers Consortium 2007 Scientific Conference - "Living with HIV: Challenges for Interdisciplinary Research"

**Note: Estimates are adjusted for reporting delays**

# Estimated HIV Infection Incidence and Prevalence, by Year, 1977-2003, United States



Note: Estimates are from *Glynn et al., NHPC 2005*. Incidence based on back calculation models and seroprevalence through 1994, and estimated annual HIV incidence of 40,000 after 1994.

# Why Prevention with Positives?

- The CDC estimates that about 1 out of every 4 HIV positive individuals in the US don't know that they are infected
- Helping positives access treatment and prevention services will reduce HIV transmission through behavioral risk reduction and reduction of transmission efficiency via HAART.

# The Challenge of Prevention with Positives

- CDC estimates that there are as many as 1.2 million HIV seropositive Americans and that this number will increase over time
- HAART will increase the lifespan of seropositives by many years, if not decades of life.
- *How can HIV prevention reduce risk among marginalized populations for very long periods of time?*

# Prevention for Positive Behavioral Interventions

- 2 meta-analyses:
- Johnson, et al., (2006) 15 studies, immediate follow-up to 47 weeks
- Crepaz, et al., (2005), 12 studies, 3 months to 1 year follow-up
- All interventions based on some form of cognitive/behavioral theory

# How do we know PwP works?

- *Johnson, et al., (2006) meta-analysis found:*
- Statistically-significant increases in condoms averaged across anal, vaginal and oral sex
- No reductions in number of sex partners
- Greater intervention effects with younger participants, non-MSM samples, inclusion of both motivational and behavioral skill-training elements

# How do we know PwP works?

- *Crepaz, et al., 2005) meta-analysis of 12 studies found:*
- Statistically-significant decreases in HIV risk (OR = 0.57, 95% CI = 0.4-0.7).
- *Intervention efficacy was associated with:*
  - Guidance by behavioral theory
  - Specific emphasis on HIV transmission behaviors

# How do we know PwP works?

- Skill Building -- condom skills, coping, role-playing with partners
- One-on-one intervention delivery
- Delivered by health care providers or professional counselors
- Delivered in settings where HIV positive people receive care
- Substantial delivery time ( > 20 hours) over long duration ( $\geq$  3 months)
- Addressed multiple HIV issues (medication adherence, HIV risk)

# A PwP Intervention: The SUMIT Trial

- 6 three hour sessions; group level intervention for POZ MSM
- Designed to increase accurate *knowledge* of sexual risk-taking
- Increase *motivations* to reduce risk and disclose positive status
- Promote *responsibility* to prevent HIV transmission

# A PwP Intervention: The SUMIT Trial

- Awareness of "*slippery situations*":
  - Substance abuse
  - Mental health issues
  - Assumptions about partner serostatus
  - Main partner relationship
- Promote *self-identification* of triggers to unsafe behaviors
- *Condoms and referrals to CBO's* made at each session

# What is missing from the PwP agenda?

## *Information: What is risk?*

- Poz/poz sex? Negative Viral loads? Positional strategies? Dipping? Negotiated Safety?

## *Are all positives really free to change behavior?*

- Are people mired in the effects of poverty, substance abuse, depression, partner violence, homelessness free to choose safe sex?

# What is missing from the PwP agenda?

## *Who is responsible for prevention?*

- What about an "I'm negative" campaign?  
How can altruism/ responsibility be supported?

## *How can risk reduction become permanent?*

- Theory is currently concerned with the initiation of behavior change rather than maintenance over time.

# What is missing from the PwP agenda?

- *Which knowledge matters most?*
  - Self-knowledge as HIV prevention; setting goals for prevention and helping positives meet and maintain those goals
- *Lowering risk by changing context?*
  - Social network approaches to finding unknown positives and getting them into treatment and so lowering community viral loads

# What is missing from the PwP agenda?

- *Are we reaching the populations at greatest vulnerability?*
  - African American MSM as a case study

# HIV Prevalence and Proportion with Unrecognized HIV Infection in MSM in 5 Cities – NHBS, 2004-2005

<b>Demo's</b>	<b>N</b>	<b>n</b>	<b>%</b>	<b>Unknown + 's</b>	
<b>Total</b>	<b>1,767</b>	<b>450</b>	<b>(25)</b>	<b>217</b>	<b>(48)</b>
<b>Age</b>					
<b>18-24</b>	<b>410</b>	<b>57</b>	<b>(14)</b>	<b>45</b>	<b>(79)</b>
<b>25-29</b>	<b>303</b>	<b>53</b>	<b>(17)</b>	<b>37</b>	<b>(70)</b>
<b>30-39</b>	<b>585</b>	<b>171</b>	<b>(29)</b>	<b>83</b>	<b>(49)</b>
<b>40-49</b>	<b>367</b>	<b>137</b>	<b>(37)</b>	<b>41</b>	<b>(30)</b>
<b>≥ 50</b>	<b>102</b>	<b>32</b>	<b>(31)</b>	<b>11</b>	<b>(34)</b>
<b>Race</b>					
<b>White</b>	<b>616</b>	<b>127</b>	<b>(21)</b>	<b>23</b>	<b>(18)</b>
<b>Black</b>	<b>444</b>	<b>206</b>	<b>(46)</b>	<b>139</b>	<b>(67)</b>
<b>Hispanic</b>	<b>466</b>	<b>80</b>	<b>(17)</b>	<b>38</b>	<b>(48)</b>
<b>API</b>	<b>95</b>	<b>7</b>	<b>(7)</b>	<b>2</b>	<b>(29)</b>
<b>NA/AN</b>	<b>&lt;10</b>	<b>&lt;10</b>	<b>(29)</b>	<b>&lt;10</b>	<b>(100)</b>
<b>Multiracial</b>	<b>123</b>	<b>25</b>	<b>(20)</b>	<b>13</b>	<b>(52)</b>

# Need for Multiple Mechanisms of Prevention Activity

- Individual
  - Knowledge
  - Self knowledge
- Interpersonal
  - Negotiating responsibility
- Community
  - Community norms
  - Address syndemics
  - Addressing community viral loads

# Need for Multiple Mechanisms of Prevention Activity

- Public health infrastructure
  - Programs to lower community viral loads
  - Programs to address syndemics
  - Efficacy into effectiveness
- Policy
  - Funding and scientific leadership

# How can multiple levels of intervention efficacy be addressed?

- It is clear that multiple levels of intervention efficacy need to be addressed in the next generation of prevention work with positives.
- What about interventions that seek to address the context that drives risk among HIV seropositive?

# Homeless Positives:

## A Case Study in Multiple Mechanisms

- About 1 out of every 5 HIV positive people in the US become homeless each year.
- Increased vulnerability for survival sex, lower adherence, heightened drug use, lower access to medical care
- Rather than demand safety of homeless positives, why not just help them retain housing?

# *Housing and Health:*

## A Case Study in Multiple Mechanisms

### *Multiple mechanisms for the intervention:*

- Removal of the individual from risky environment through housing
- Enhanced access to prevention services
- Case management for co-existing conditions
- Improved access to HIV treatment
- Improved adherence to HAART

# A Prevention Cocktail

- The challenges to prevention science posed by the prevention for positives agenda are unprecedented.
- Although the effect sizes for behavioral interventions are impressive, they are still far from perfect and measured for only relatively short periods of time.

# A Prevention Cocktail

- Unless multiple mechanisms for risk reduction are incorporated into prevention strategies supporting long term safety among positives may prove to be an elusive goal.
- Intervention strategy must address:
  - the individual
  - interpersonal factors in risk
  - access to HAART treatment
  - co-morbid conditions/syndemics
  - a supportive policy environment (needle exchange, prison reform).