

Identifying and Addressing Barriers to HIV Treatment Initiation, Adherence, and Maintenance: Issues of Disparities

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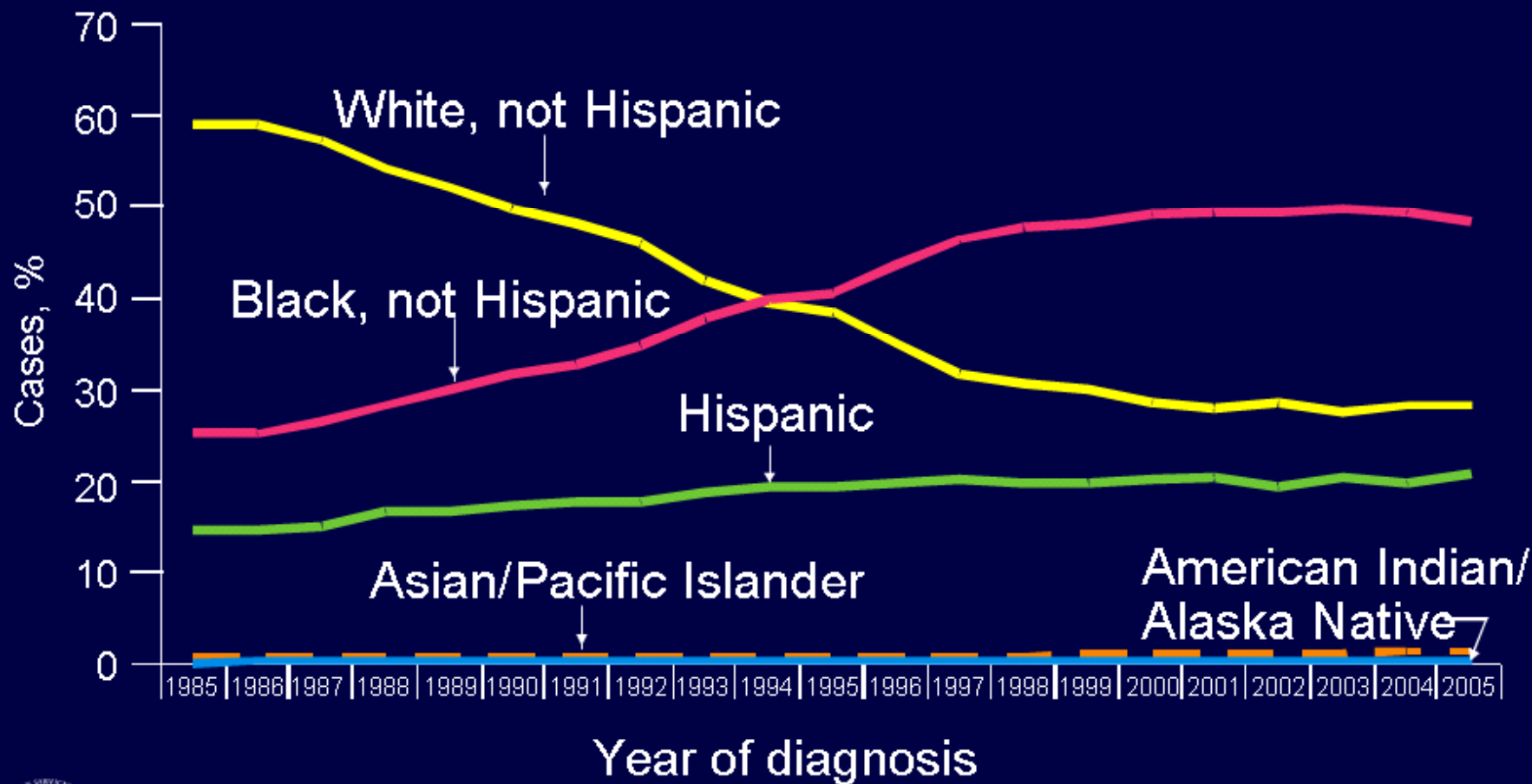
Objectives

- **Give overview of disparities in HIV**
- **Highlight common risk factors in HIV primary and secondary prevention**
- **Give an example of a completed intensive intervention**
- **Describe a forthcoming intervention to increase ART uptake and adherence**

Disparities in HIV

- **Higher rates of HIV/AIDS cases among non-White men and women**
- **Lower rates of testing**
- **Later presentation for care (Keruly and Moore, 2007)**
- **Higher mortality rates**
- **Evidence that African Americans, Women, and those with IDU histories less likely to be on ART**
 - ❖ **Some evidence that the gaps are narrowing between some groups**
- **Poorer treatment adherence**

Proportions of AIDS Cases among Adults and Adolescents, by Race/Ethnicity and Year of Diagnosis 1985–2005—United States and Dependent Areas



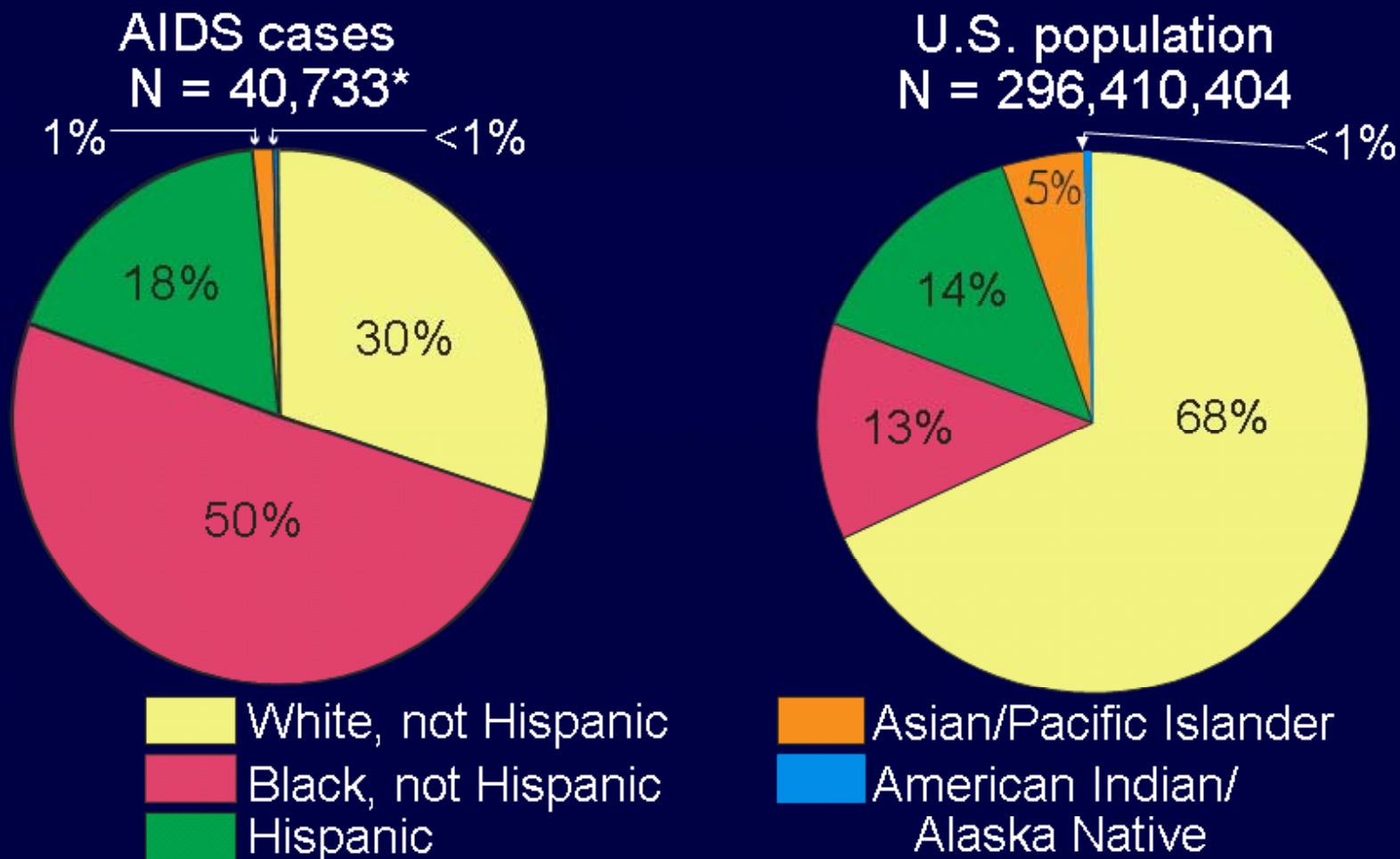
Note. Data have been adjusted for reporting delays.



Revised June 2007



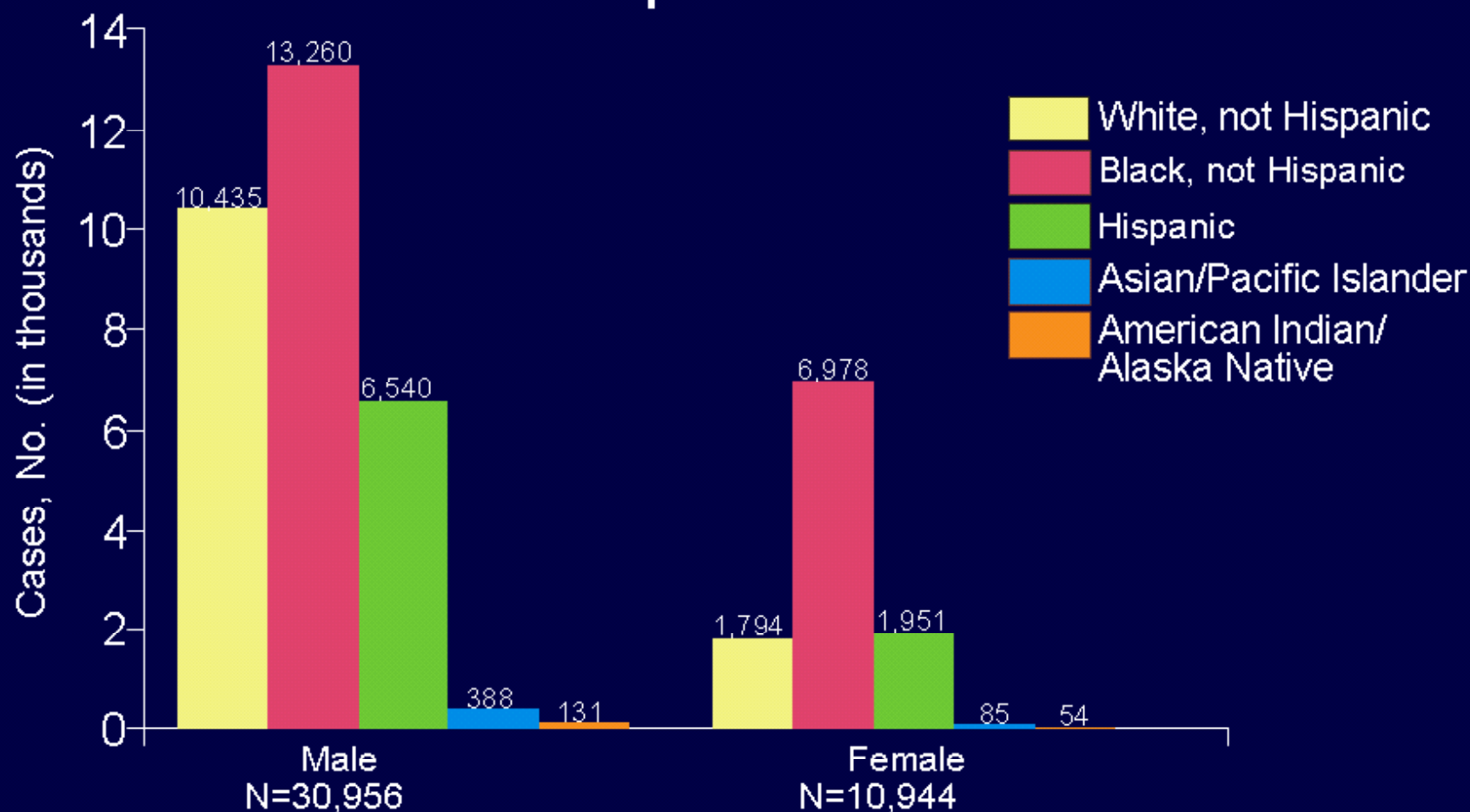
Proportions of AIDS Cases and Population by Race/Ethnicity, Reported in 2005—50 States and DC



* Includes 283 persons of unknown race or multiple races.



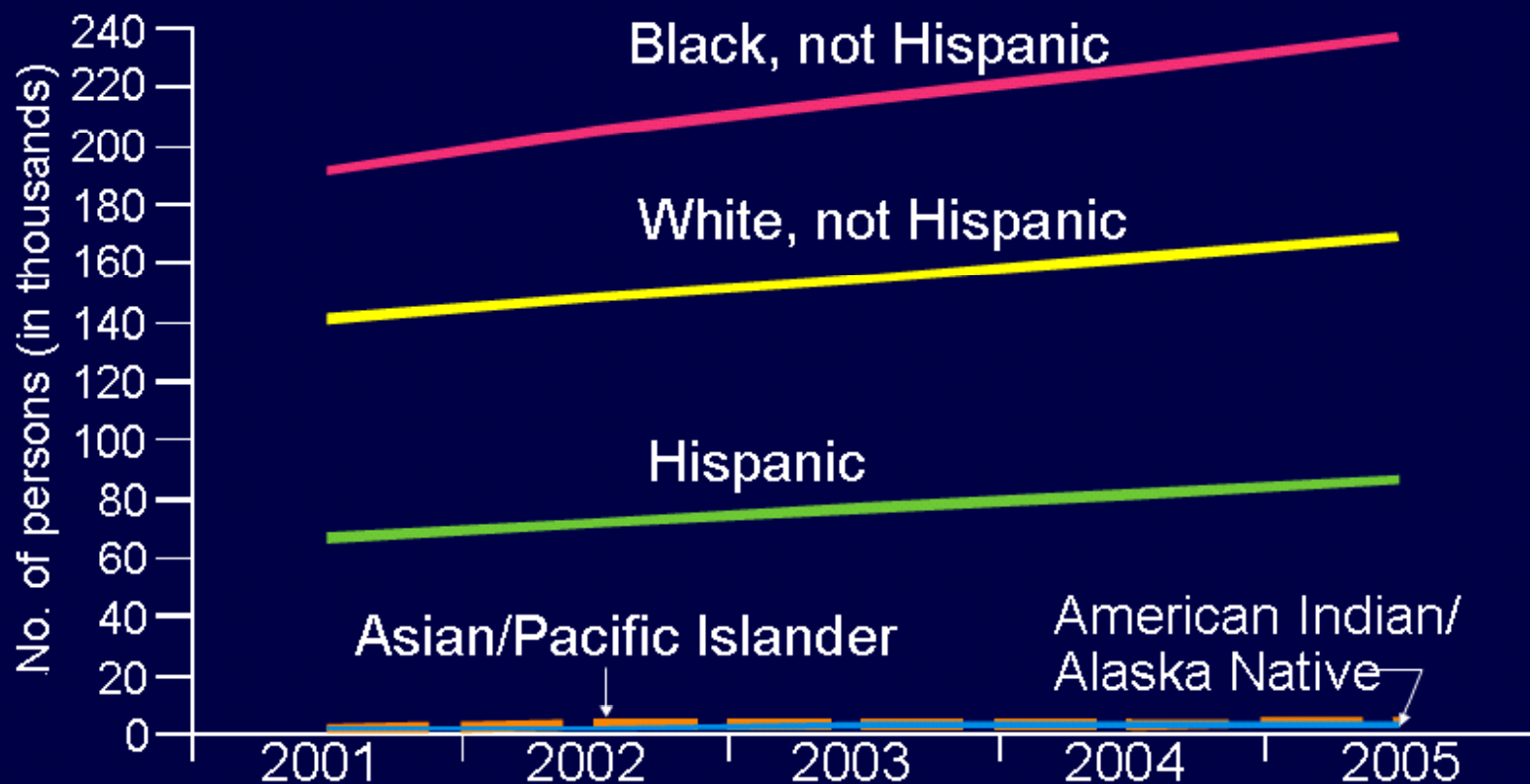
Reported AIDS Cases among Adults and Adolescents by Sex and Race/Ethnicity, 2005—United States and Dependent Areas



Note. Includes persons of unknown race or multiple races.



Estimated Number of Persons Living with HIV/AIDS, by Race/Ethnicity, 2001–2005—33 States



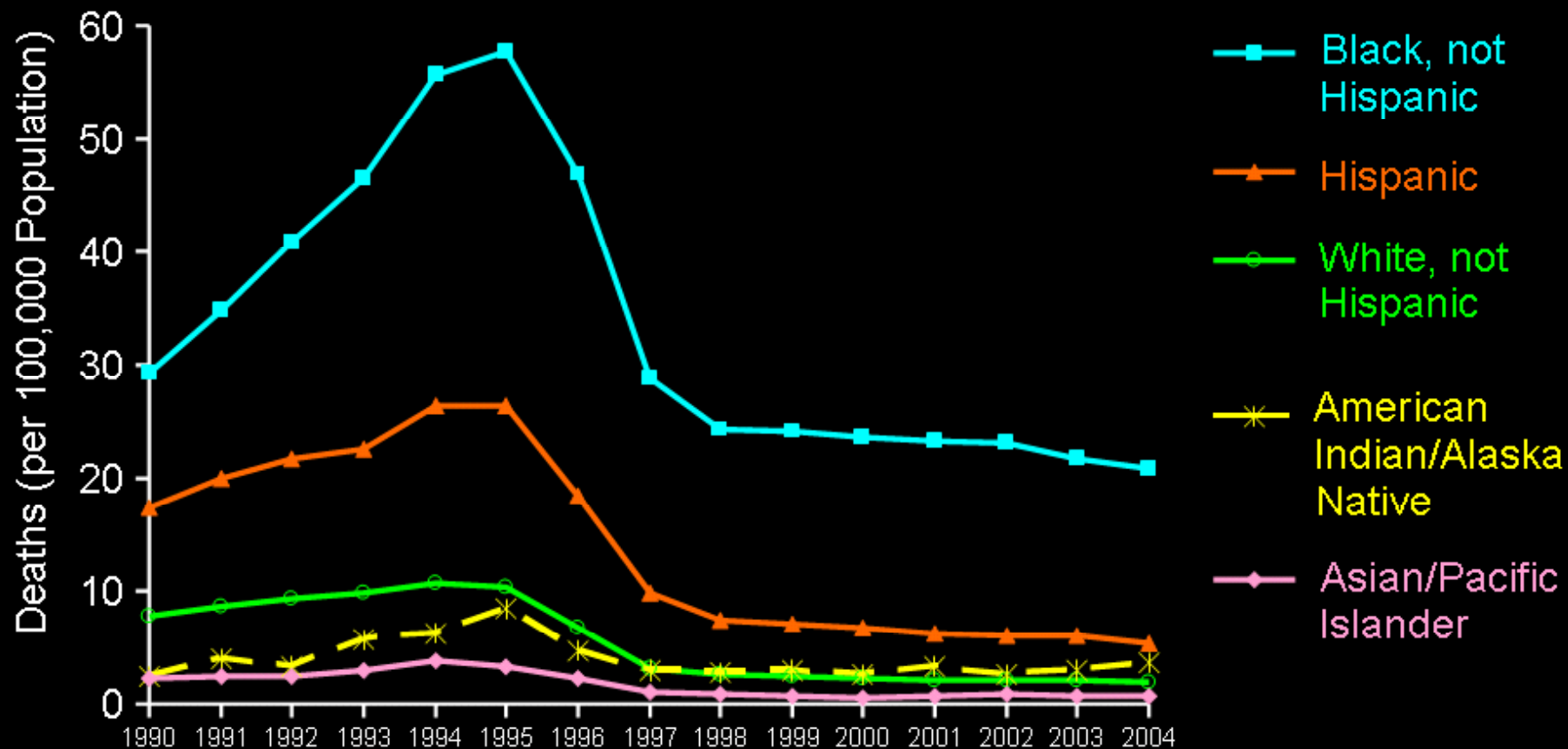
Note. Data include persons with a diagnosis of HIV infection regardless of their AIDS status at diagnosis. Data from 33 states with confidential name-based HIV infection reporting since at least 2001. Data have been adjusted for reporting delays.



Revised June 2007



Trends in Age-Adjusted* Annual Rates of Death due to HIV Disease, by Race/Ethnicity, United States, 1990–2004



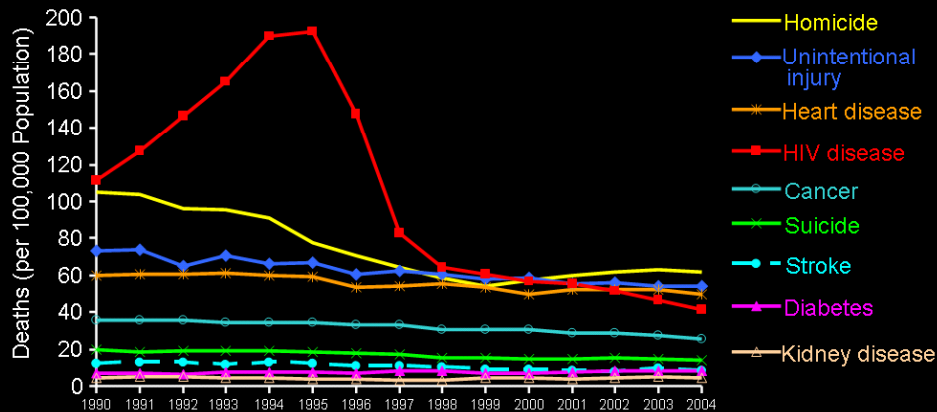
Note: For comparison with data for 1999 and later years, data for 1990–1998 were modified to account for *ICD-10* rules instead of *ICD-9* rules.

*Standard: age distribution of 2000 US population



Black Men

Trends in Annual Rates of Death due to the 9 Leading Causes among Black, not Hispanic Men 25–44 Years Old, United States, 1990–2004

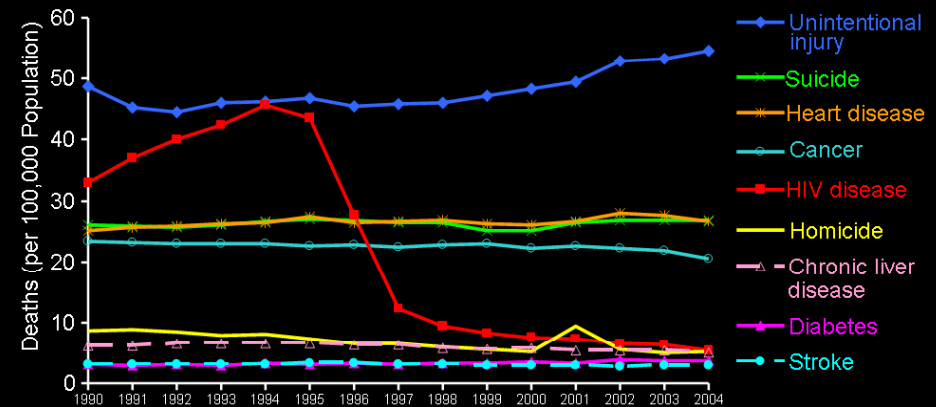


Note: For comparison with data for 1999 and later years, data for 1990–1998 were modified to account for ICD-10 rules instead of ICD-9 rules.



White Men

Trends in Annual Rates of Death due to the 9 Leading Causes among White, not Hispanic Men 25–44 Years Old, United States, 1990–2004



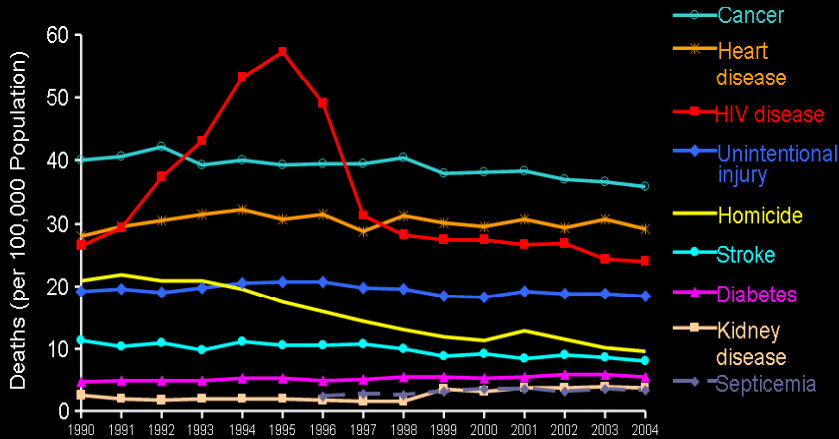
Note: For comparison with data for 1999 and later years, data for 1990–1998 were modified to account for ICD-10 rules instead of ICD-9 rules.



Black Women

White Women

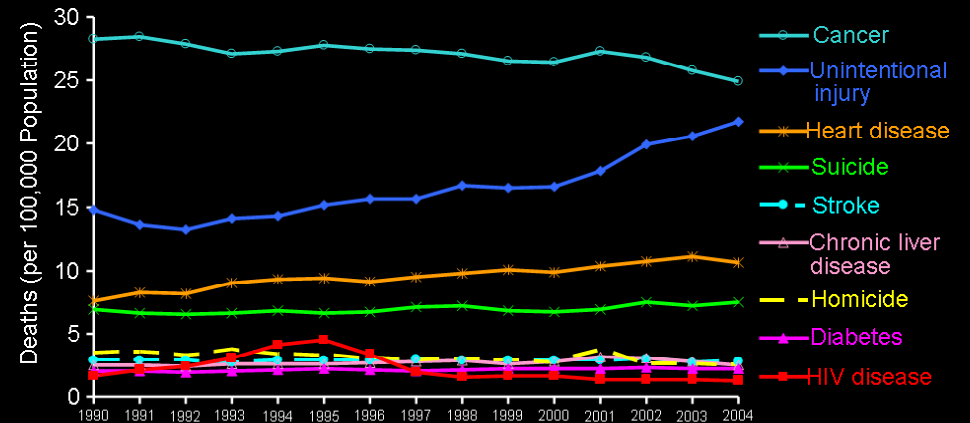
Trends in Annual Rates of Death due to the 9 Leading Causes among Black, not Hispanic Women 25-44 Years Old, United States, 1990-2004



Note: For comparison with data for 1999 and later years, data for 1990-1998 were modified to account for ICD-10 rules instead of ICD-9 rules.



Trends in Annual Rates of Death due to the 8 Leading Causes and HIV among White, not Hispanic Women 25-44 Years Old United States, 1990-2004



Note: For comparison with data for 1999 and later years, data for 1990-1998 were modified to account for ICD-10 rules instead of ICD-9 rules.



Women and new cases

- ➔ **in 2005, black women accounted for two-thirds of newly diagnosed HIV/AIDS cases among U.S. women**

Among MSM

For the years 2001-2004

- Black and Hispanic MSM had higher rates of HIV/AIDS diagnoses across all age groups compared to white MSM.**
- The percentage of men who progressed to AIDS within three years of their HIV diagnoses was higher among black and Hispanic MSM than among white MSM.**
- Three-year survival among black MSM was lower than that for Hispanic or white MSM.**

Among Veterans

- ➔ **Non-White HIV+ veterans had higher mortality than white veterans with HIV**

Associated with Less than 90% Adherence

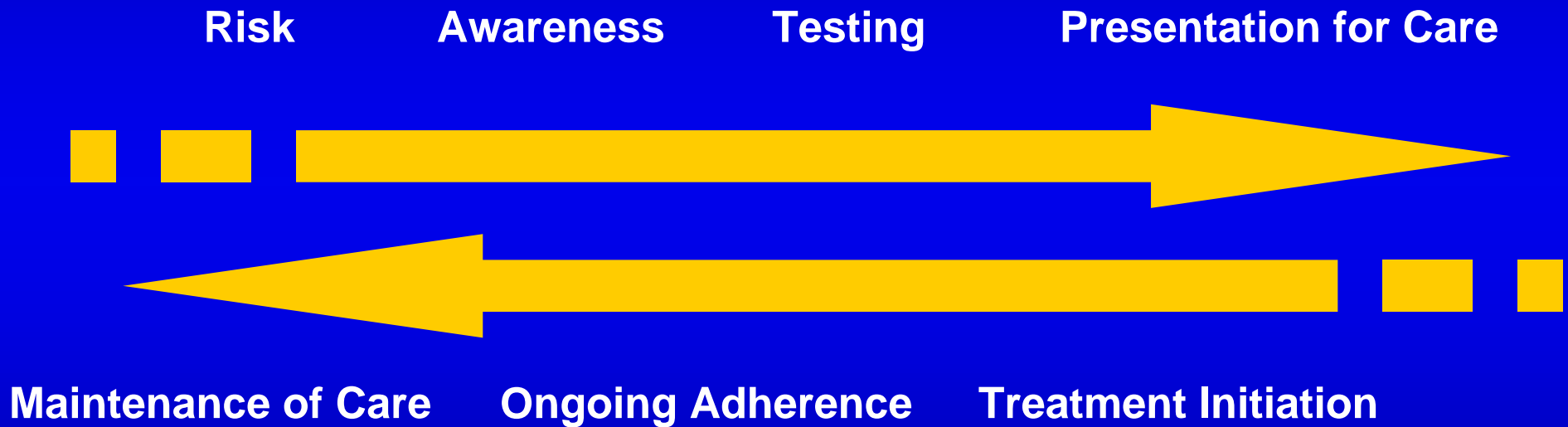
Variable (N=2478)	MV OR (95% CI) ^a	p
Black/ African American	1.62 (1.32-1.97)	<.0001
In Primary Relationship	1.50 (1.24-1.82)	<.0001
Number of Doses per Day	1.32 (1.07-1.63)	.011
Total Symptom Bother	1.01 (1.00-1.02)	.008
Current Crack Cocaine Use	1.34 (1.04-1.72)	.021
Injection Drug Use (Past Year)	1.91 (1.36-2.68)	.0002
Homeless/Shelter (Past Year)	1.38 (1.02-1.85)	.035
* Adherence Self-Efficacy	0.97 (0.97-0.98)	<.0001
It is hard to fit my medications into my daily routine.	1.40 (1.24-1.57)	<.0001
* I have figured out ways to manage side effects from medications.	0.87 (0.80-0.95)	.002

Sources of Disparities?

HIV Prevention and Treatment Common Concerns

- Depression
- Self Efficacy
- Problem Solving
- Communication
- Social Support
- Coping Skills
- Access to Resources
- Beliefs (perceived risk/threat)
- Homophobia
 - ❖ Incl internalized
- Marginalization
- Racism
- Sexism
- Mistrust
- Stigma
- Substance use
- Trauma
- Competing needs
- Food insecurity

Prevention-Treatment Continuum



Risk, Awareness, and Testing

- **MSM in 5 cities participating in CDC's National HIV Behavioral Surveillance System**
 - ❖ **46% of black MSM were HIV+**
 - 67% were unaware of their infection
 - ❖ **17% of Hispanic MSM were HIV+**
 - 48% were unaware of their infection
 - ❖ **21% of White MSM were HIV+**
 - 18% were unaware of their infection

Women and HIV

Prevention

❖ Biological facilitators of infection

- ☞ 50% AA teenage girls had an STI, compared to 25% overall (CDC, 2008)

❖ Social facilitators of infection

- ☞ Power differential, survival sex, high-risk partners
- ☞ < awareness of risk

Care

❖ Less access to information, support, medical care

❖ Competing demands (childcare, transportation)

❖ Reproductive health needs

Rates of ART prescribed?

- ☞ “Depression and substance abuse may negatively affect adherence and response to therapy and should therefore be addressed, whenever possible, before therapy is initiated. However, no patient should automatically be excluded from consideration for antiretroviral therapy simply because the clinician judges that the patient exhibits behaviors or characteristics affecting adherence.”

Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents January 29, 2008

Presentation for Care

- **African Americans more likely to present for care later than other groups**
- **Differences in insurance coverage results in differing access and/or quality of care**
- **Barriers related to mistrust of healthcare**

Beliefs about HIV among African Americans

- **A lot of information about AIDS is being withheld from the public (59%)**
- **There is a cure for AIDS but it is being withheld from the poor (53%)**
- **HIV is a man made virus (48%)**
- **People who take HIV meds are guinea pigs for gov't (44%)**
- **Also common in HIV+ African Americans**
 - ❖ **Mixed findings relating to adherence**

NIMH Healthy Living Project

- 👉 **Objective**: To examine the effect of a 15-session, individually delivered cognitive behavioral intervention on a diverse sample of people living with HIV at risk of transmitting to others.
- 👉 **Design**: A multisite, two-group, randomized controlled trial.
- 👉 **Participants**: 936 HIV-infected participants considered to be at risk of transmitting HIV out of 3,818 screened were randomized into the trial. Participants were recruited in Los Angeles, Milwaukee, New York, and San Francisco.
- 👉 **Primary outcome**: transmission risk
- 👉 **Secondary outcomes**: coping and adherence

Healthy Living Project

- **3818 HIV+ adults screened IN NYC, SF, LA and MKE**
- **936 enrolled in RCT**
- **Randomized to intervention or WLC**
- **Follow up to 25 months**
- **Primary outcome HIV transmission risk**

Baseline Data

- 👉 **3818 total screened**
 - ❖ **2765 on ART**
 - ❖ **569 previously stopped ART**
 - ❖ **399 never taken ART**
- 👉 **936 enrolled in trial**

Baseline for those on ART n=2765

- **Mean age 42 (7.6)**
- **74% male**
- **49% AA, 18% Hispanic/Latino**
- **25% < HS education**
- **32% reported <90% adherence on 3 day AACTG**
- **Mean CD4 = 431, 46% reported undetectable VL**

Associated with Less than 90% Adherence

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Baseline among those not on ART

☞ **n = 400 never on ART**

❖ **57% AA, 75% male, 14% history of IDU, CD4 = 558, 76% detectable VL**

☞ **n = 569 previously on ART**

❖ **53% AA, 68% male, 19% history of IDU, CD4 = 421, 82% detectable VL**

Reasons for Never Taking ART

👉	Waiting for CD4/VL Counts to Worsen	63%
👉	Prefer Alternative Treatment	50%
👉	Concerned About Toxicity	43%
👉	Didn't Want Side Effects	39%
👉	Worry About Resistance	30%
👉	Provider Did Not Offer ART	25%
👉	Didn't Think ART Would Work	20%
👉	Wanted to Hide HIV Status	9%

Reasons for Stopping ART

➡	Wanted to Avoid Side Effects	56%
➡	CD4/VL Counts Were Good	39%
➡	Provider Said to Stop	38%
➡	Prefer Alternative Treatment	36%
➡	Reported Being on Too Many Meds	27%
➡	Became Resistant to Medications	21%
➡	Medications Did Not Work	18%
➡	Changed Provider or Clinic	16%
➡	Wanted to Hide HIV Status	10%

Reasons for not taking ART

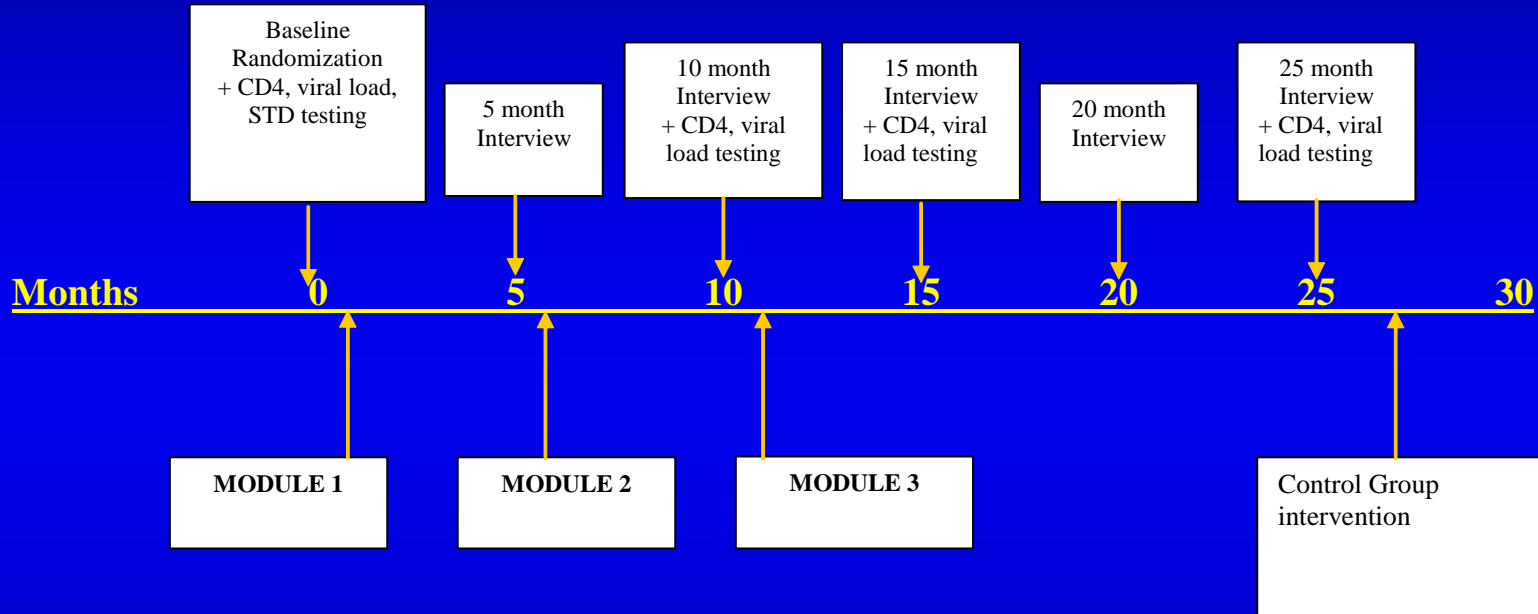
Comparing Black with non-Black respondents

- 1.9 OR of reporting never being offered ART (95%CI 1.2-3.1)
- 3.4 OR of wanting to hide HIV status as a reason for stopping ART (95%CI 1.8-6.9)

Controlled for most recent CD4 and time since testing HIV+

HLP Design and Timeline

Assessment



Intervention

HLP Intervention

15 sessions (45-90 minutes each)

Module 1: Stress, Coping, and Adjustment

1. Orientation and overview
2. Stress and coping I
3. Stress and coping II
4. Social support
5. Adaptive coping

Module 2: Safer Behaviors

1. Knowledge
2. Safer behavior
3. Assertive communication/ negotiation skills
4. Disclosure decisions
5. Keeping safe

Module 3: Health Behaviors

1. Current health behaviors
2. Maintenance
3. Social support and adherence
4. Staying on track
5. Future choices

RCT participants

- **N= 936**
- **45% AA, 15% Latino, 79% male**
- **Mean age 39.8 years**
- **9.3 mean # TRA in past 3 months**
- **12% IDU in past 3 months**
- **Randomized to 15 sessions or WLC**

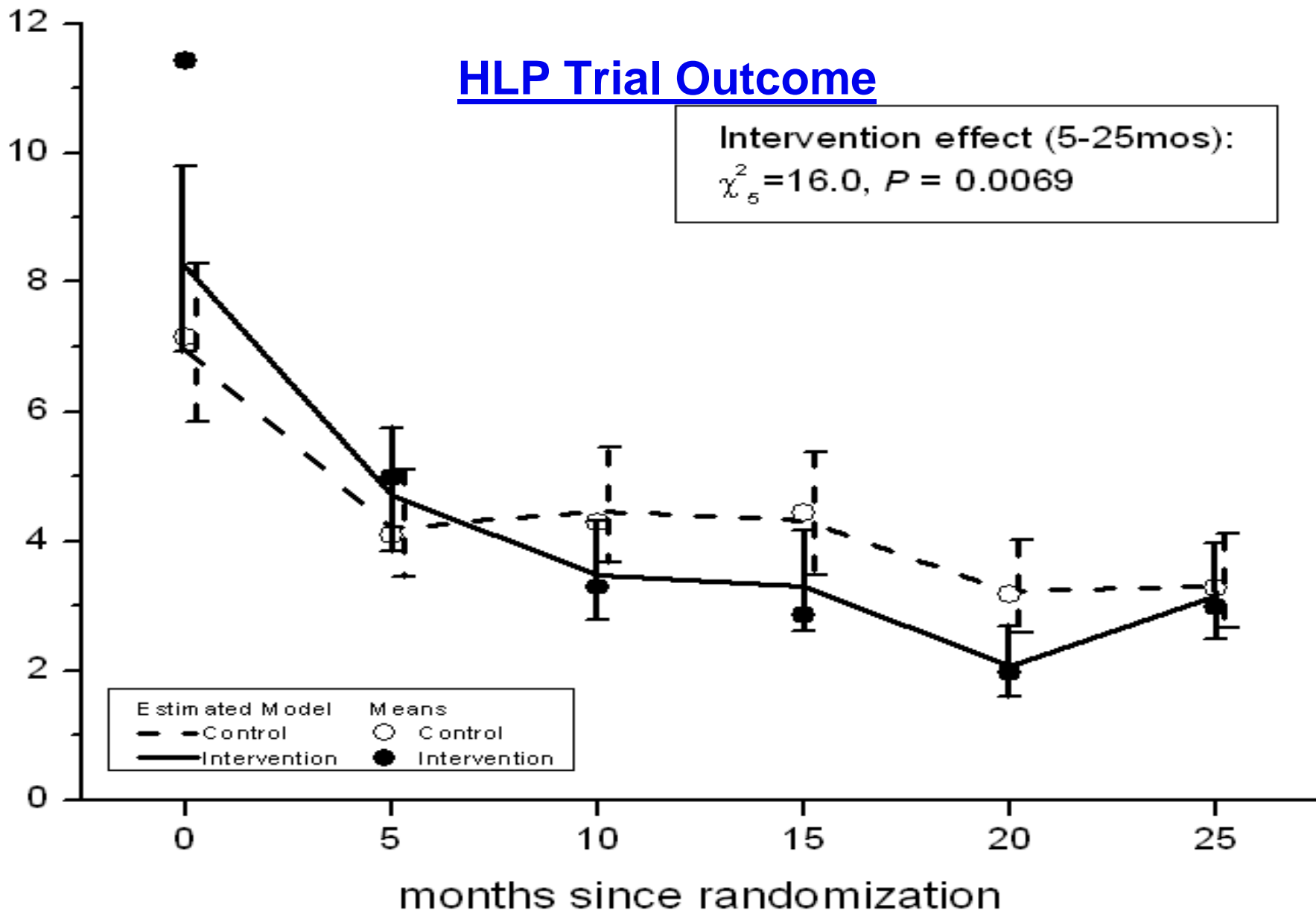
Healthy Living Project Trial

- Overall, a significance difference in mean transmission risk acts was shown between the intervention and control arms over 5 to 25 months ($p = 0.007$).
- A significant reduction in transmission risk acts from baseline was observed for both intervention and control groups ($P < 0.0001$ for both arms).
- Mean transmission risk acts was lower in the intervention arm compared to the control arm at 15 months and 20 months, but the differences were not significant at 5, 10, and 25 months.
- The greatest reduction in transmission risk acts occurred at the 20 month follow-up, with a 36% reduction in the intervention group compared to the control group.

HLP Trial Outcome

Intervention effect (5-25mos):
 $\chi^2_5 = 16.0, P = 0.0069$

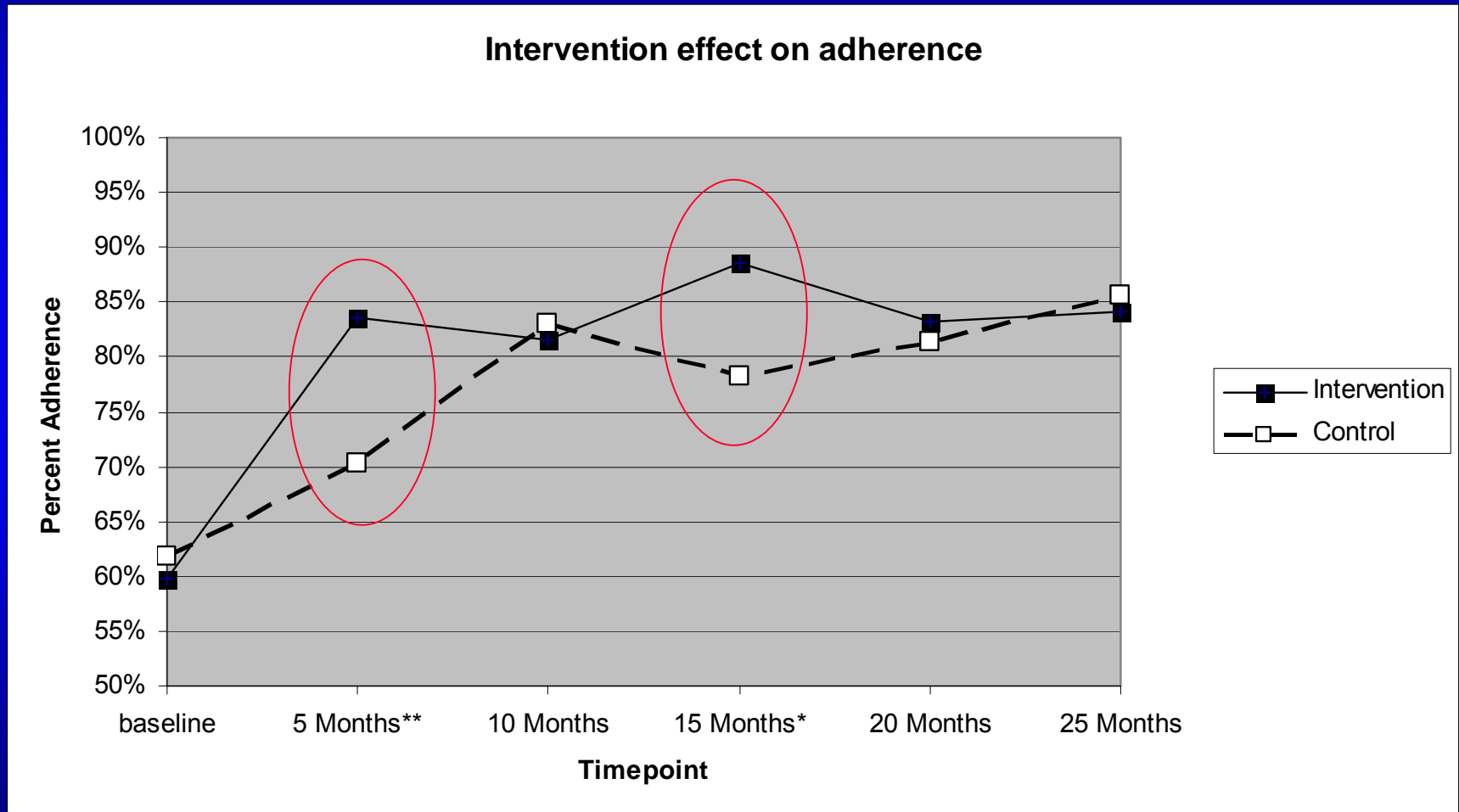
transmission risk acts



Intervention effect on adherence

- ➔ **Sub-sample of 204 with <85% adherence at baseline**
 - ❖ **Measured with 3 day recall AACTG**
- ➔ **Mean age 40, 56% AA, 7% Latino**

Intervening on Non-Adherence



Summary

- **Modest increases in adherence among those with low adherence at BL**
- **Effect dissipated over time**
- **No effect on maintenance**

The PATH Project: Preparing Patients to Start Antiretroviral Therapy: An RCT

Specific aims

Evaluate the effect of a theory-driven intervention on ART uptake (rates of uptake and time to uptake);

Secondary aims:

- ☞ To examine the effect of the intervention on relevant treatment-related outcomes including CD4 and viral load, and medication adherence among those who initiate ART,
- ☞ To explore differences in health status and morbidity between the two experimental arms.

R01MH09700

PATH Project

- ➔ **Target N = 300**
- ➔ **CD4 \leq 250**
- ➔ **Never on >30 days continuous ART**
- ➔ **Randomized to intervention or WLC**
- ➔ **Primary outcome ART uptake**
- ➔ **Secondary outcome ART adherence**



Figure 1. IMB Model of HIV Treatment

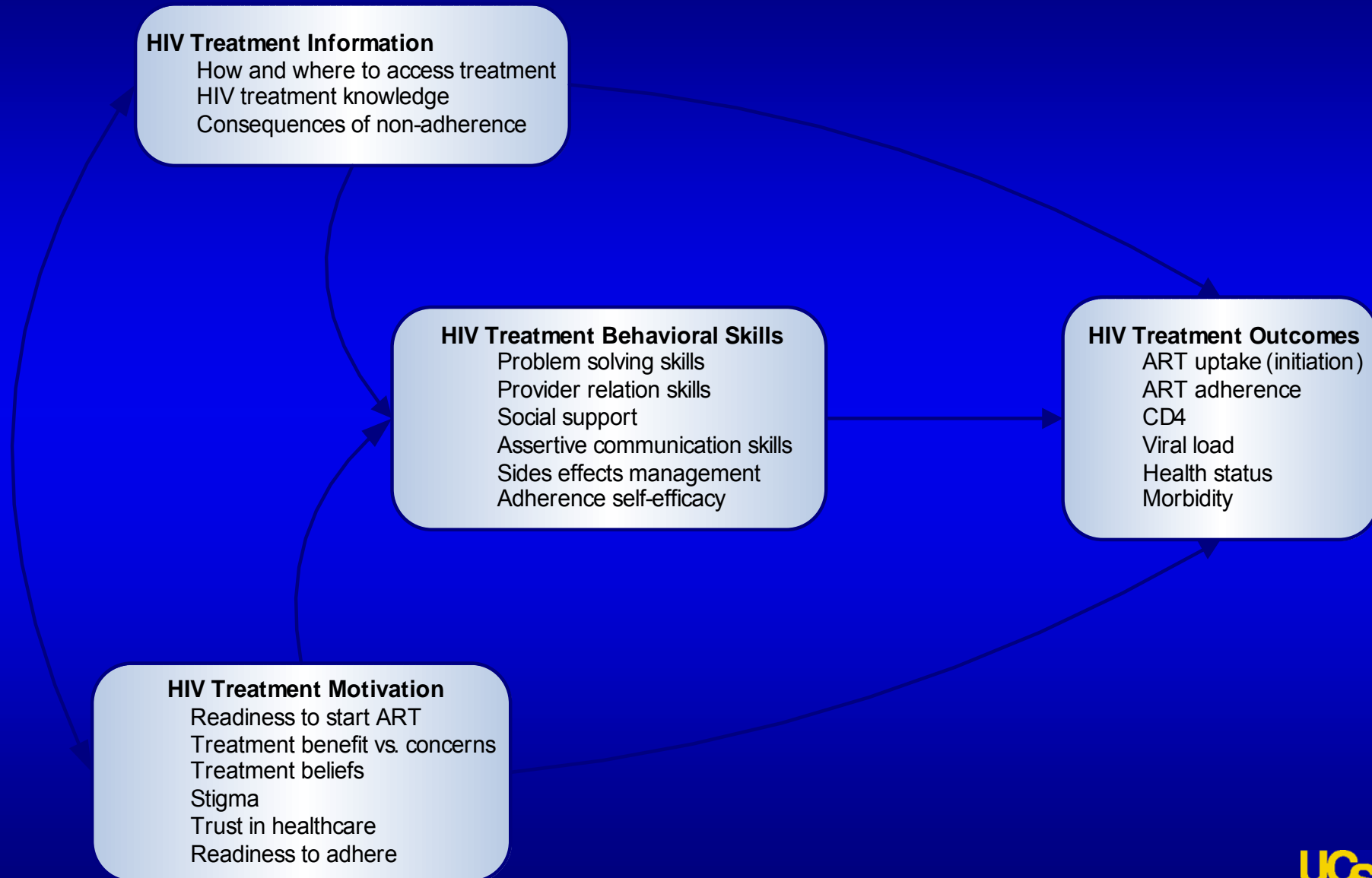
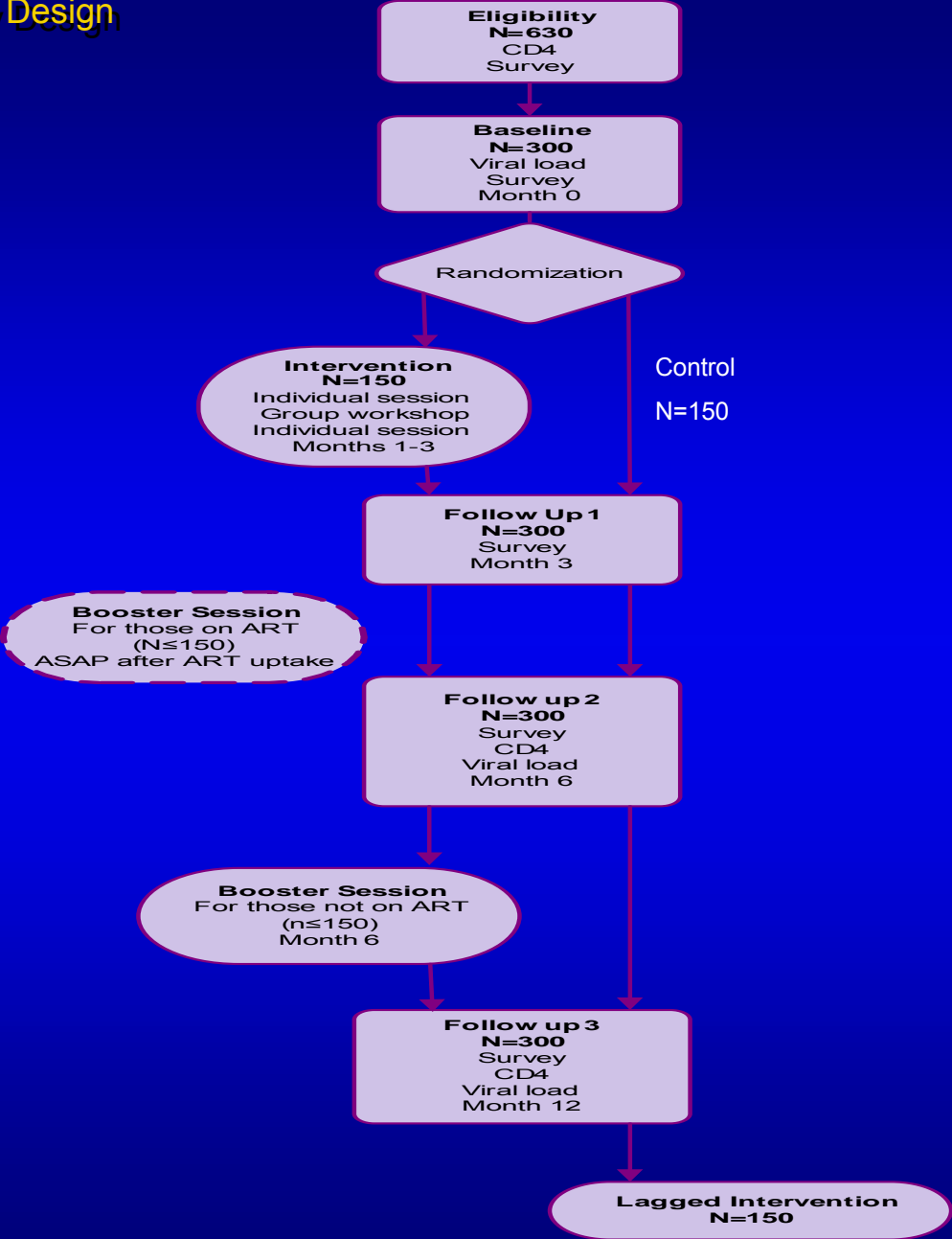


Figure 2. Study Design



Summary

- **Overlapping risk factors in HIV primary and secondary prevention**
- **Disparities can emerge at many points in the prevention-treatment continuum**
- **Interventions that take into account this complexity are needed**

Acknowledgements

- **Multiple fantastic recruiters, interviewers, facilitators and support staff**
- **Thousands of men and women with HIV who participated in the research**
- **NIH Grants**
 - ❖ **U10MH57616: Healthy Living Project**
 - ❖ **R01MH09700: PATH Project**
 - ❖ **CAPS Innovative Grants Program**

Collaborators

➤ **NIMH HLP Steering Committee**

➤ **Susan Folkman**

➤ **Margaret Chesney**

➤ **Tor Neilands**

➤ **Judy Moskowitz**

➤ **Robert Remien**

➤ **Joey Taylor**

➤ **David Bangsberg**

➤ **Jeffrey Fisher**

➤ **Eunice Stephens**

➤ **Stephen Morin**

➤ **Carol Dawson Rose**

➤ **Jeffrey Burack**

Thank you



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