

HPTN 065

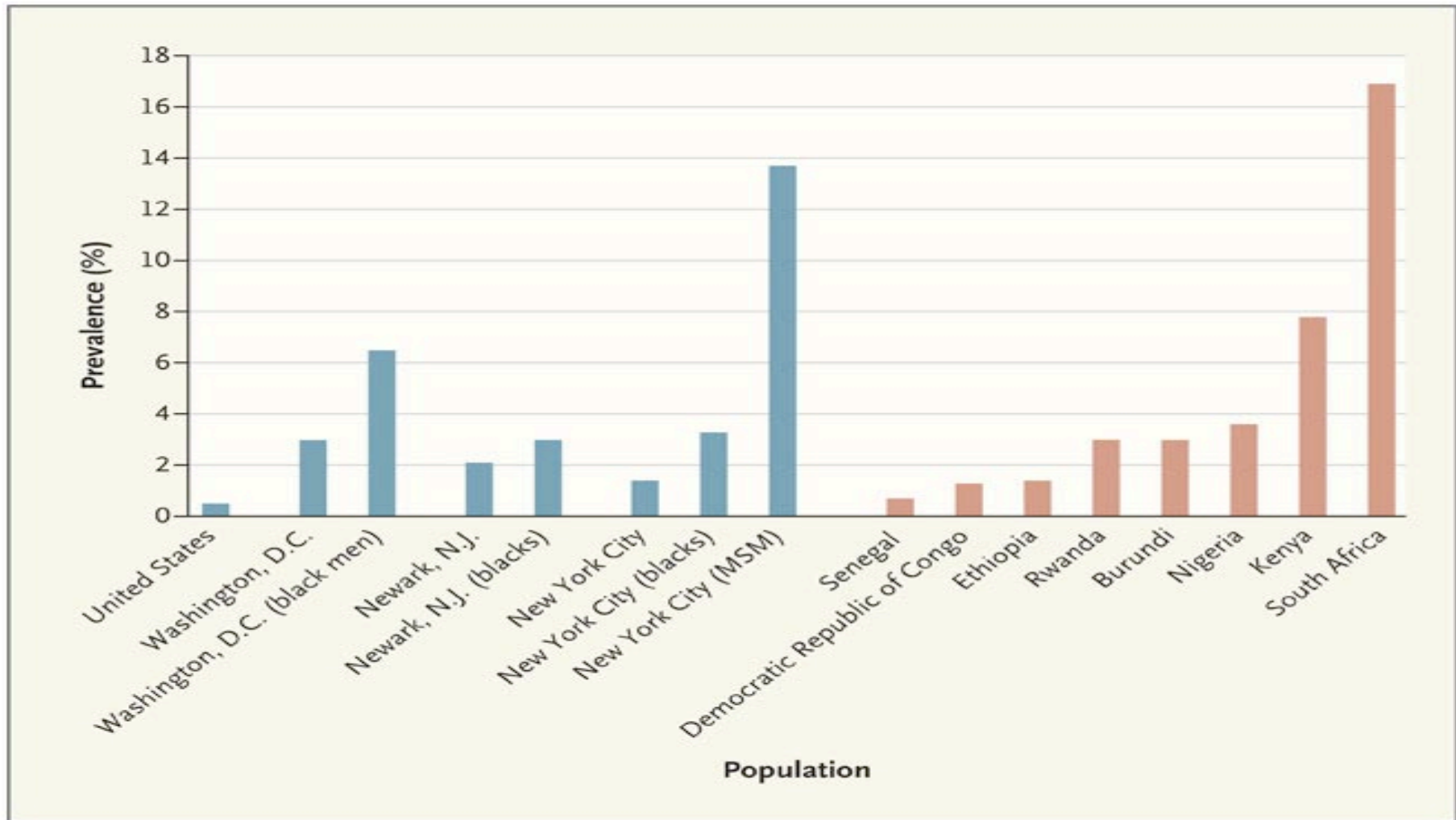
TLC-Plus:

**Feasibility of an enhanced test, link-to-care plus
treat approach for HIV prevention in the U.S.**

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Study Chair**

April 2010

AIDS in America: As Severe as in Africa in some Subpopulations in the US

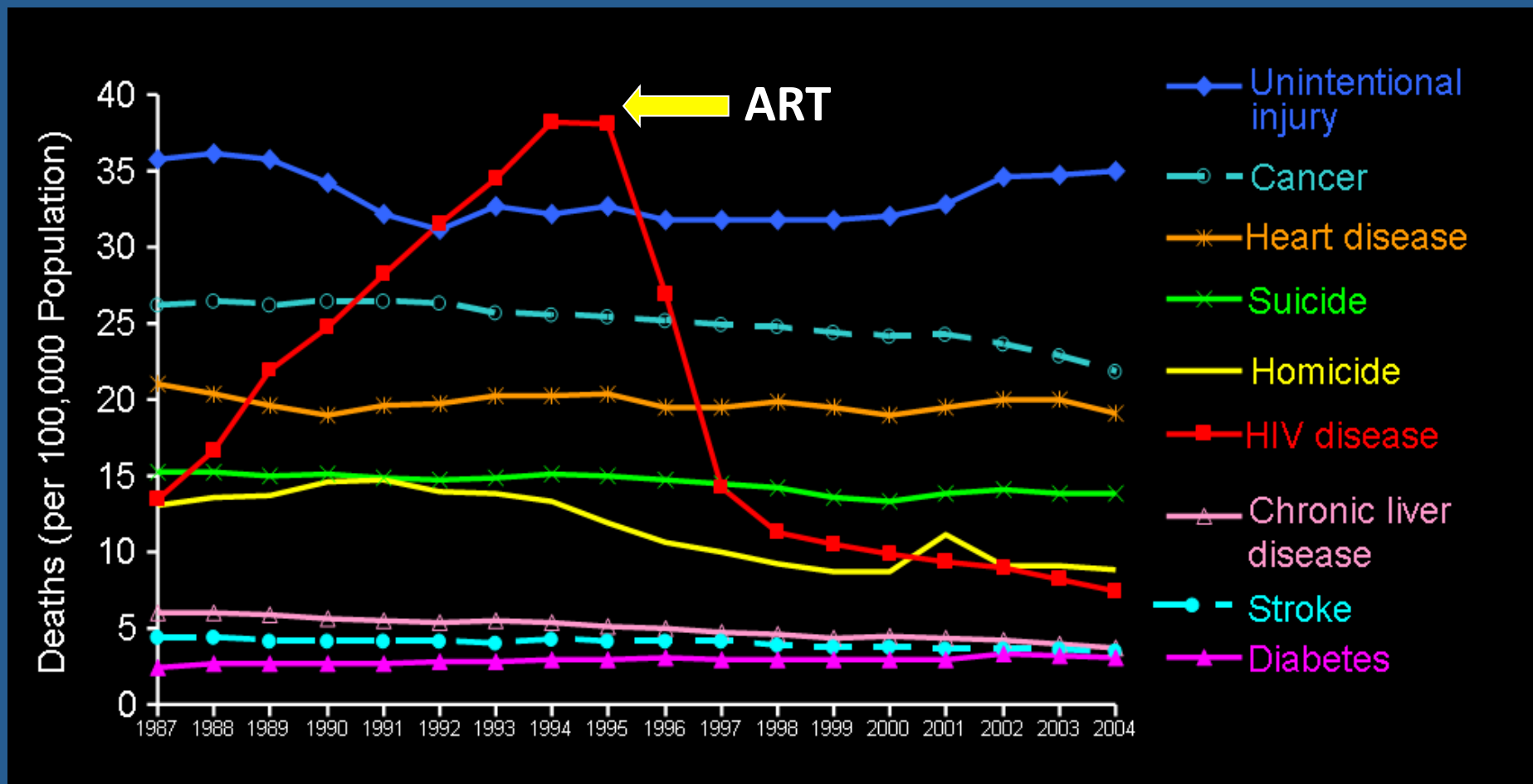


What about HIV Prevention?

In the US, one person becomes infected with HIV every 9 ½ minutes



Effect of Antiretroviral Therapy on HIV/AIDS-related Mortality in USA



Use of ART for Prevention

- HIV uninfected individuals:
 - PreP: Pre exposure prophylaxis
 - PEP: Post exposure prophylaxis
- HIV infected individuals:
 - Treatment for prevention

Possible Effects of ART on HIV Transmission

↓ Plasma HIV RNA



↓ Genital Tract HIV



↓ HIV Transmission

↑ Survival

↑ Persons living with HIV

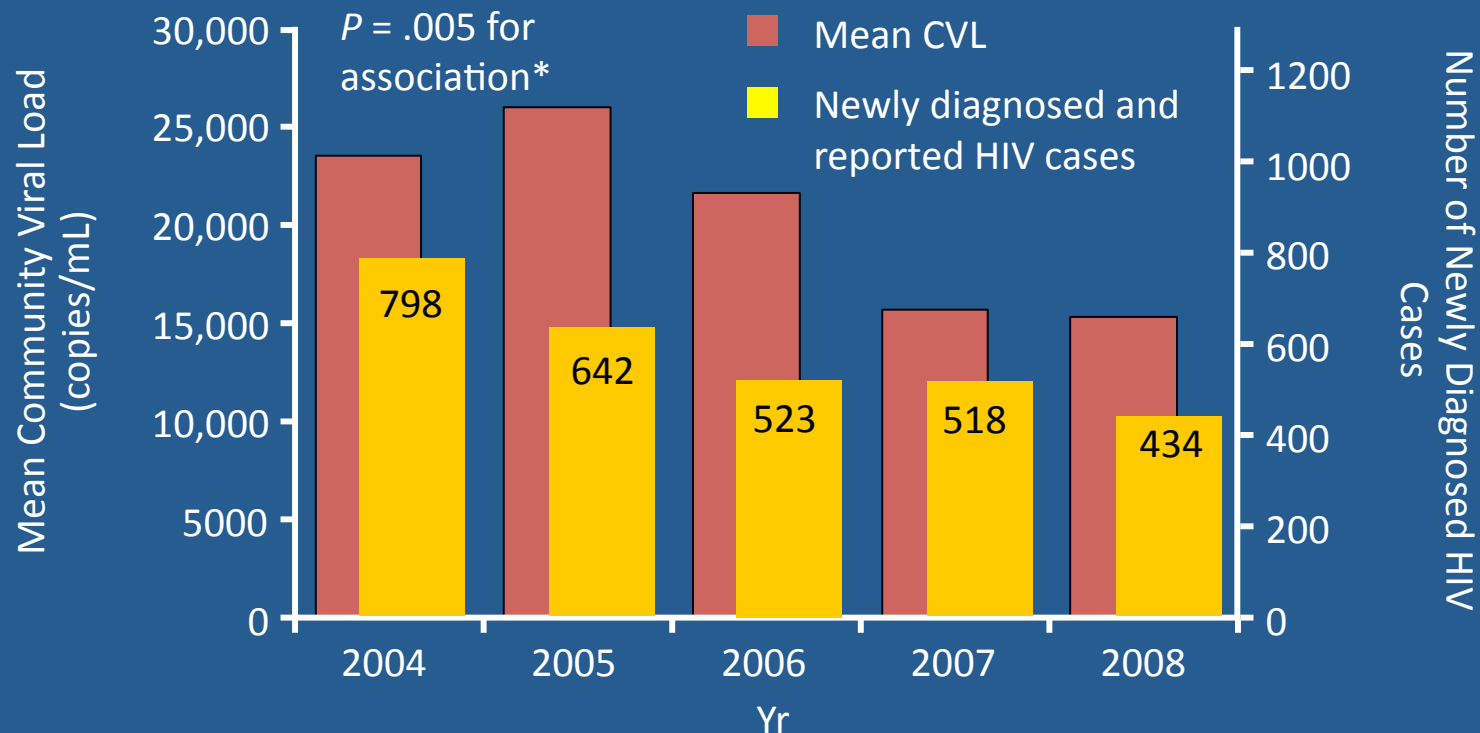


↑ Duration of Infectiousness



↑ HIV Transmission

“Community Viral Load” and Rate of New HIV Cases in San Francisco



Retrospective analysis of relationship between community viral load (mean of summed individual HIV-1 RNA per yr) and new HIV diagnoses

*Data insufficient to prove significant association with reduced HIV incidence.

Moupali et al, CROI 2010

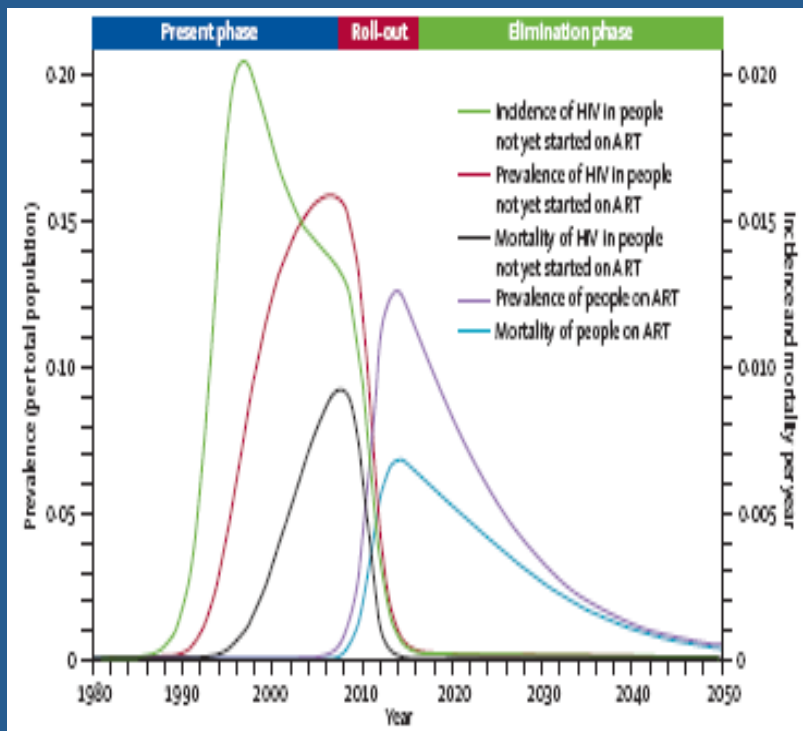
Test and Treat?



Test and Treat

Universal voluntary HIV testing with immediate antiretroviral therapy as a strategy for elimination of HIV transmission: a mathematical model

Reuben M Granich, Charles F Gilks, Christopher Dye, Kevin M De Cock, Brian G Williams



Universal voluntary HIV testing and immediate ART combined:

- 95% reduction in new HIV cases in 10 years
- HIV Incidence reduced from 15-20,000 to 1000 per million
- Prevalence decreases to less than 1% by 2050

Test and Treat Conceptual Framework

Test



Adoption of safer
behaviors by
HIV+ persons

+

Treat with ART

+

Adherence



Maintain viral
suppression



Decrease in HIV
Transmission



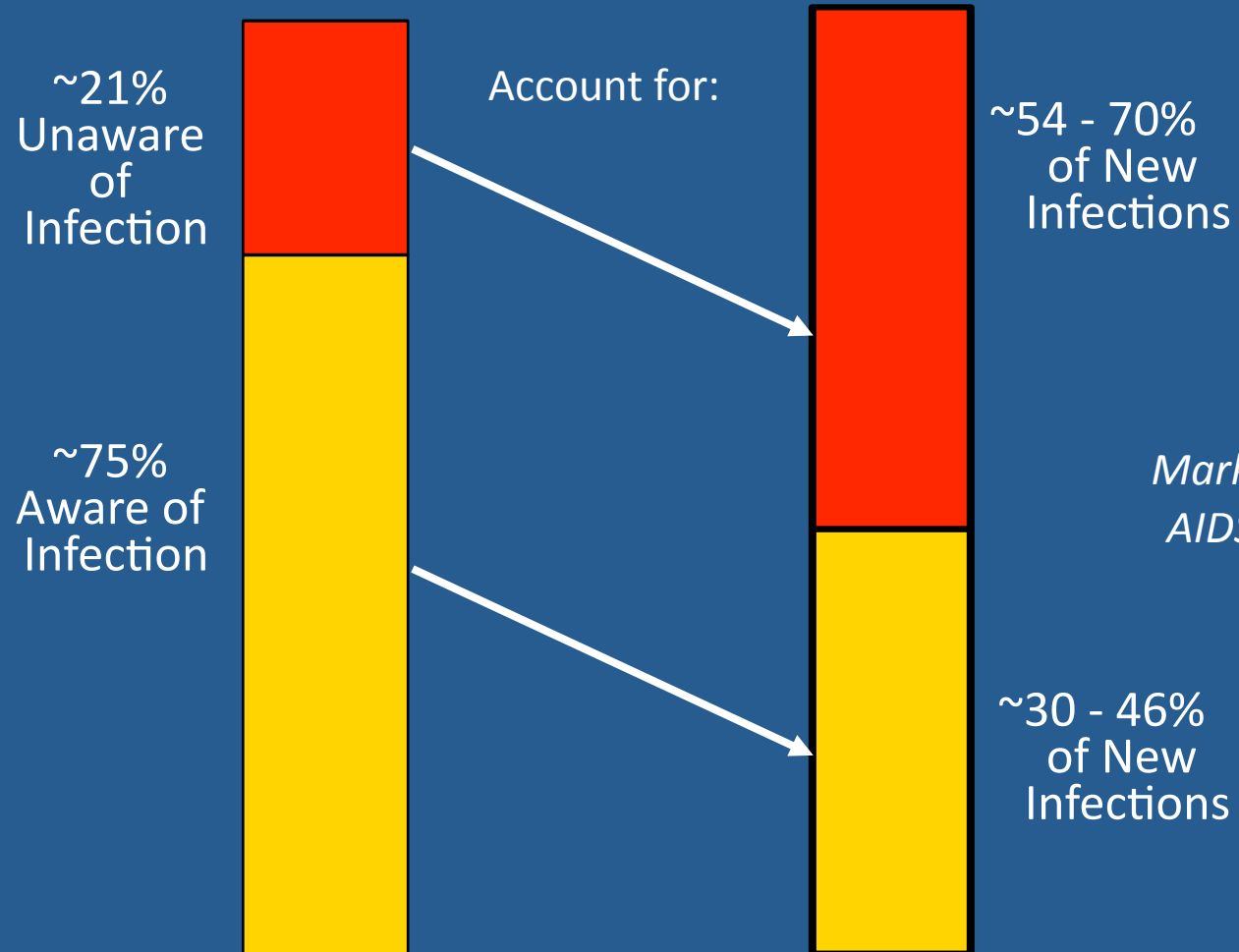
HIV Testing



HIV Testing Within Preceding Year

Country	% Tested in preceding 12 months	
	Woman	Men
Congo	6.5	4.8
Cote d'Ivoire	3.7	3.2
Ethiopia	2.3	2.3
Namibia	10.6	17.6
Rwanda	12.0	11.0
Swaziland	21.9	8.9
Uganda	12.0	10.4
Zambia	18.5	11.7
Zimbabwe	7.0	7.0
United States	10%	

Awareness of Serostatus Among People with HIV and Estimates of Transmission



*Marks, et al
AIDS 2006*

People Living with HIV/AIDS: 1,106,400
New Sexual Infections Each Year: ~56,000

Sexual Risk Behavior and Knowledge of HIV Status

Percent Reduction in Unprotected Anal or Vaginal Intercourse with HIV-negative partners
HIV-pos Aware versus HIV-pos Unaware

68%

Late Diagnosis of HIV

- NYC: 27% of persons newly diagnosed with HIV had concurrent diagnosis of AIDS in 2005
- Concurrent HIV/AIDS diagnosis (1 month)
 - More than twice risk of death within 4 months
HR: 2.27 (95% CI 1.94-2.65)

Linkage from HIV Testing Sites to HIV Care



Delay in Initiation of Care

- Of 1,928 patients,
 - 1,228 (63.7%) initiated care within 3 months of HIV diagnosis
 - 369 (19.1%) initiated care >3 months
 - 331 (17.2%) never initiated care

Treatment with ART



Early versus Later ART

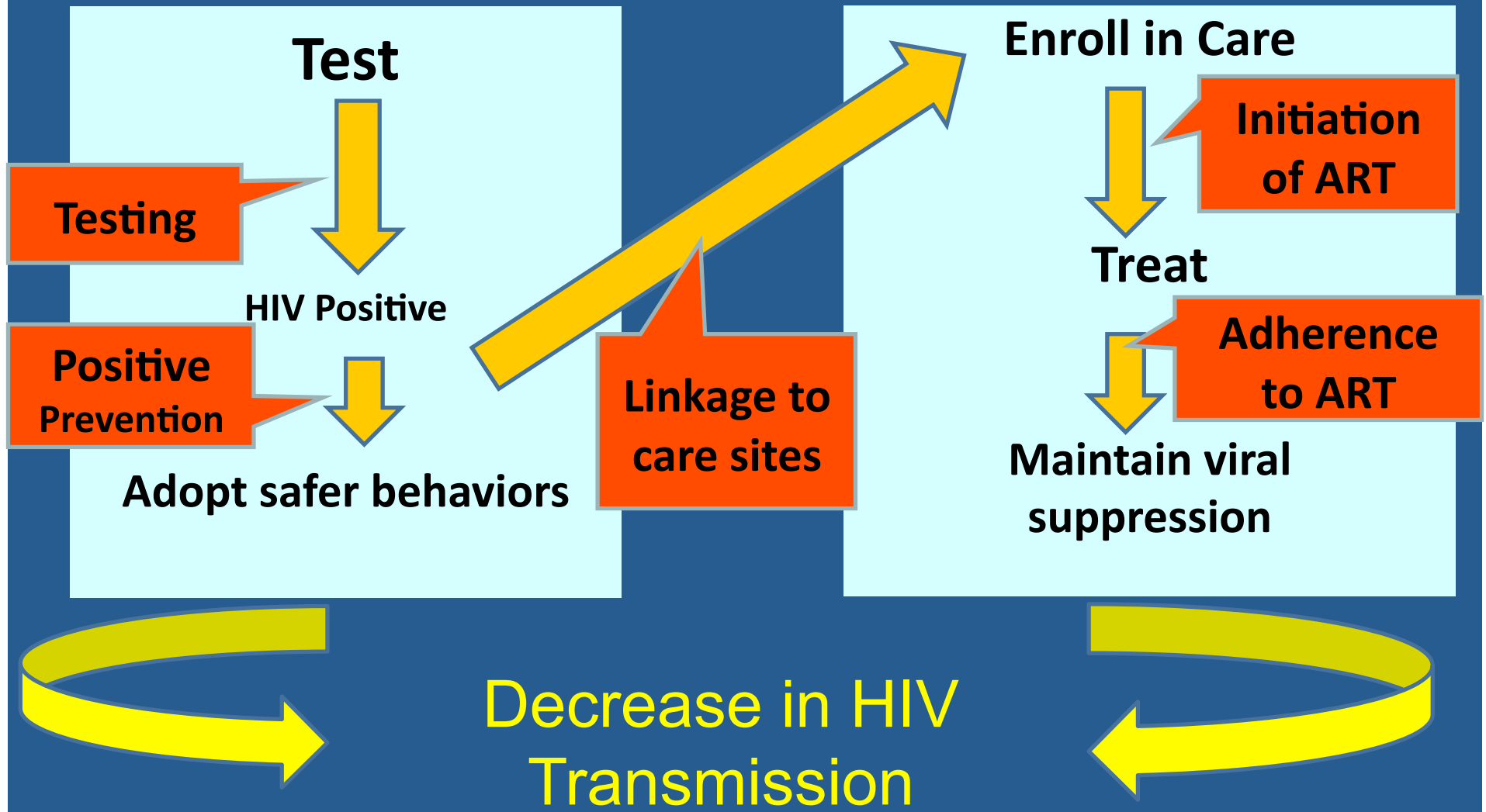
	Possible Benefits	Possible Risks
Later ART initiation	<ul style="list-style-type: none">• Lower medication and monitoring costs• Lower incidence of long term drug toxicity• Decrease in risk of development of HIV resistance	<ul style="list-style-type: none">• Lower preservation of immune function• Increased risk of disease progression• Risk of HIV transmission prior to ART initiation
Earlier ART initiation	<ul style="list-style-type: none">• Improved preservation of immune function• Prolonged disease-free survival• Decreased risk of HIV transmission	<ul style="list-style-type: none">• Increased medication and monitoring costs• Increased incidence of long term drug toxicities• Increased risk of development of HIV resistance

ART for Prevention

Need for Definitive Evidence



HPTN 065: TLC-Plus Study



TLC-Plus HPTN 065

PURPOSE

To evaluate the feasibility of an enhanced
community-level HIV
test, link-to-care plus treat strategy in the U.S.

Study Communities

- **Intervention communities**
 - Washington DC
 - Bronx, NY
- **Comparison communities**
 - Houston
 - Philadelphia
 - Chicago
 - Miami

Study Components

- I. Testing
- II. Linkage to care
- III. Viral suppression
- IV. Positive prevention
- V. Patient and provider survey

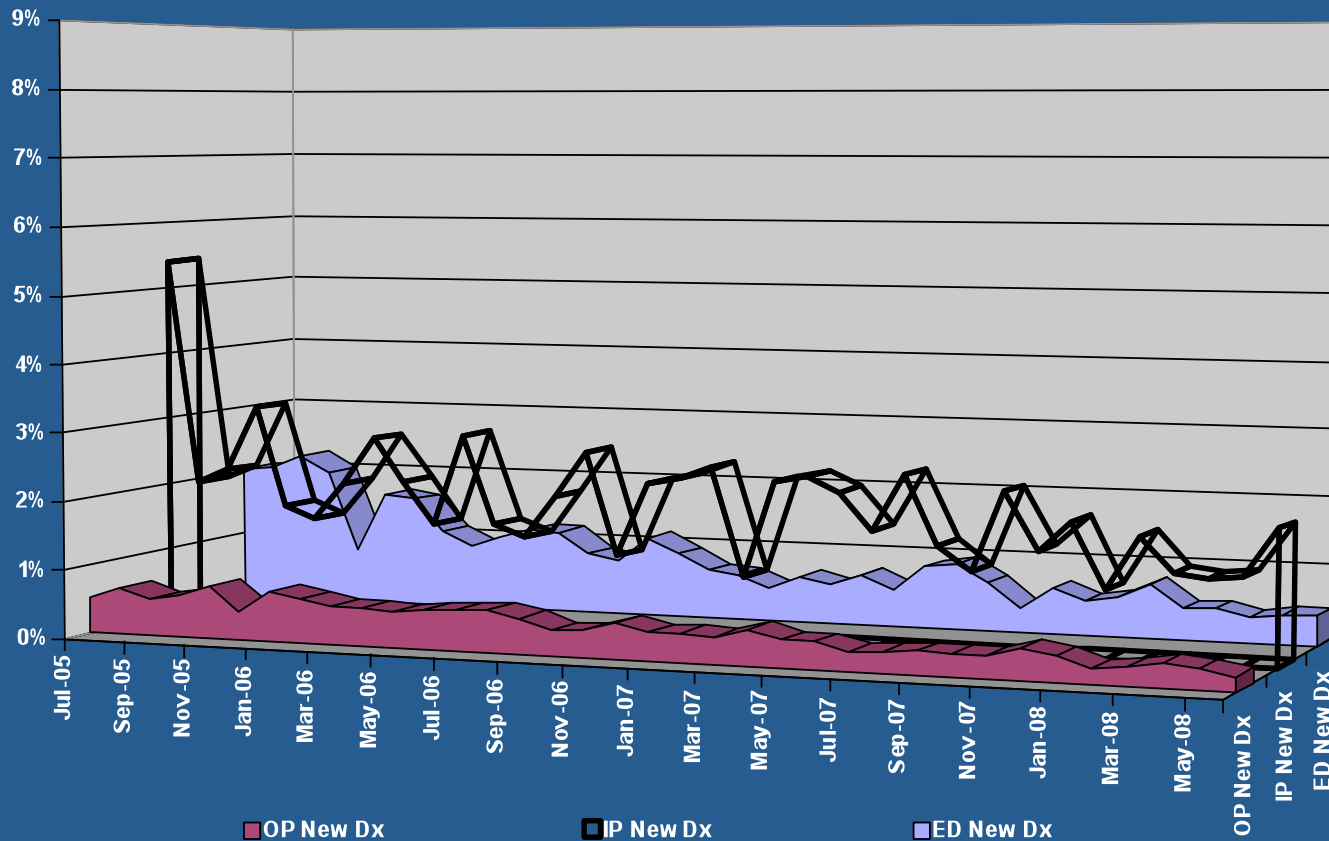
Study Components

I. Expanded HIV Testing

- social mobilization, with targeted messaging to promote testing
- Build on ongoing activities in the intervention communities



Universal offer of HIV testing in emergency departments (EDs) and hospital inpatient admissions



Source of HIV Tests and Positive Tests

40% of adults age 18-64 have been tested

18 million adults age 18-64 tested annually in U.S.

	HIV tests*	HIV+ tests**
Private doctor/HMO	53%	17%
Hospital, ED, Outpatient	18%	27%
Community clinic (public)	5%	21%
HIV counseling/testing	5%	9%
Correctional facility	0.4%	5%
STD clinic	0.1%	6%
Drug treatment clinic	0.4%	2%

*National Health Interview Survey, 2006

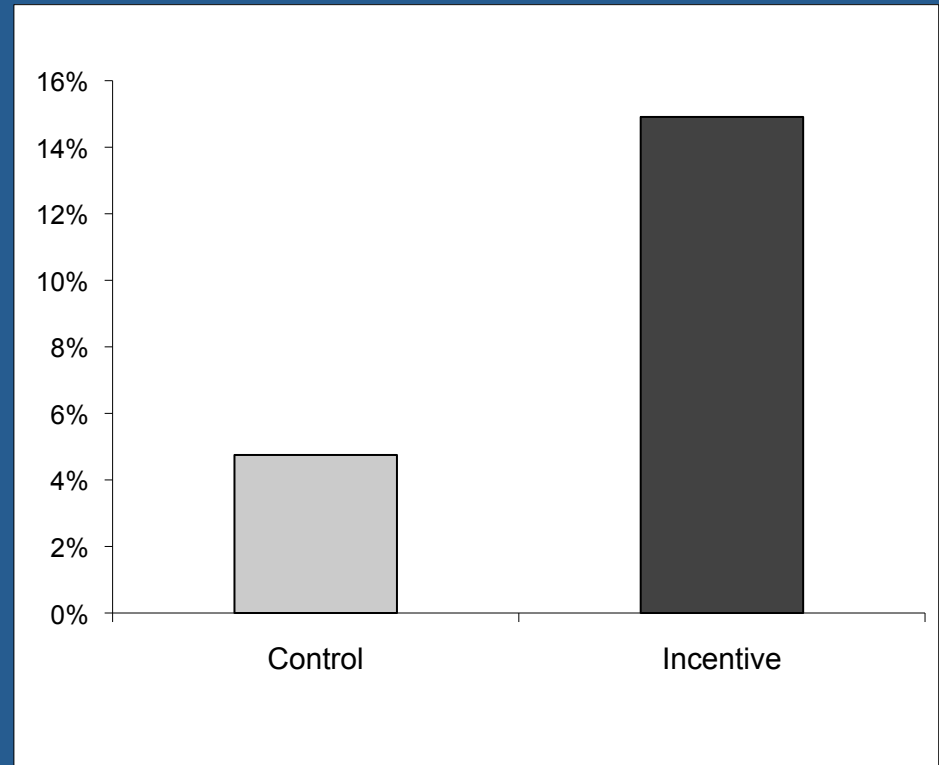
**Suppl. to HIV/AIDS surveillance, 2000-2003

Financial Incentives for Achieving Health Outcomes Gift Card, Cash, other

- Smoking cessation
- Weight control
- School attendance
- Primary care

Financial Incentives for Achieving Health Outcomes

- Smoking cessation study
- 2-arm RCT:
 - Information about programs
 - Incentives worth up to \$750 for program completion
 - short-term cessation, long-term cessation
- Eligibility for incentives tied to quitting within first 6 months of enrollment



p-value for difference < 0.0001

Study Components II. Linkage to Care



This component involves:

- test site randomization (20 per community)
- determine feasibility and effectiveness of
 - » financial incentives vs.
 - » standard of care (SOC)

Outcome: Proportion of newly identified HIV+ patients from HIV test sites who complete two clinical visits at HIV care sites



Study Components III. Viral Suppression



This component involves:

- care site randomization (20 per community)
- determine feasibility and effectiveness of
 - » financial incentives vs.
 - » standard of care (SOC)

Outcome: Proportion of patients at HIV care site achieving and maintaining viral suppression

Study Components

IV. Prevention for Positives

This involves:

- individual randomization of patients (6 care sites per community)
- determine effectiveness in decreasing risk behaviors
 - » computer-delivered intervention vs.
 - » standard of care (SOC)

Study Components

Prevention for Positives

The computer-delivered intervention is:

- A modification of the Computer Assessment and Risk Reduction Education for HIV-positives (CARE+) platform, integrated with an audio-narrated self-interview (ACASI)



Study Components

V. Patient and Provider Surveys

- knowledge, attitudes and practices regarding early initiation of ART
- knowledge and attitudes regarding financial incentives for linkage to care and viral suppression

Summary of Study Components

Study Component	Design	Outcomes
Expanded HIV Testing	Descriptive, ecologic study	Feasibility
Linkage-to-Care	Two-arm, site-randomized, prospective	Feasibility and effectiveness
Viral Suppression	Two-arm, site-randomized, prospective	Feasibility and effectiveness
Prevention for Positives	Two-arm, individual-randomized, prospective	Effectiveness
Patient and Provider Surveys	Quantitative survey	Knowledge, attitudes, practices

TLC-Plus (HPTN 065)

Expanded HIV Testing

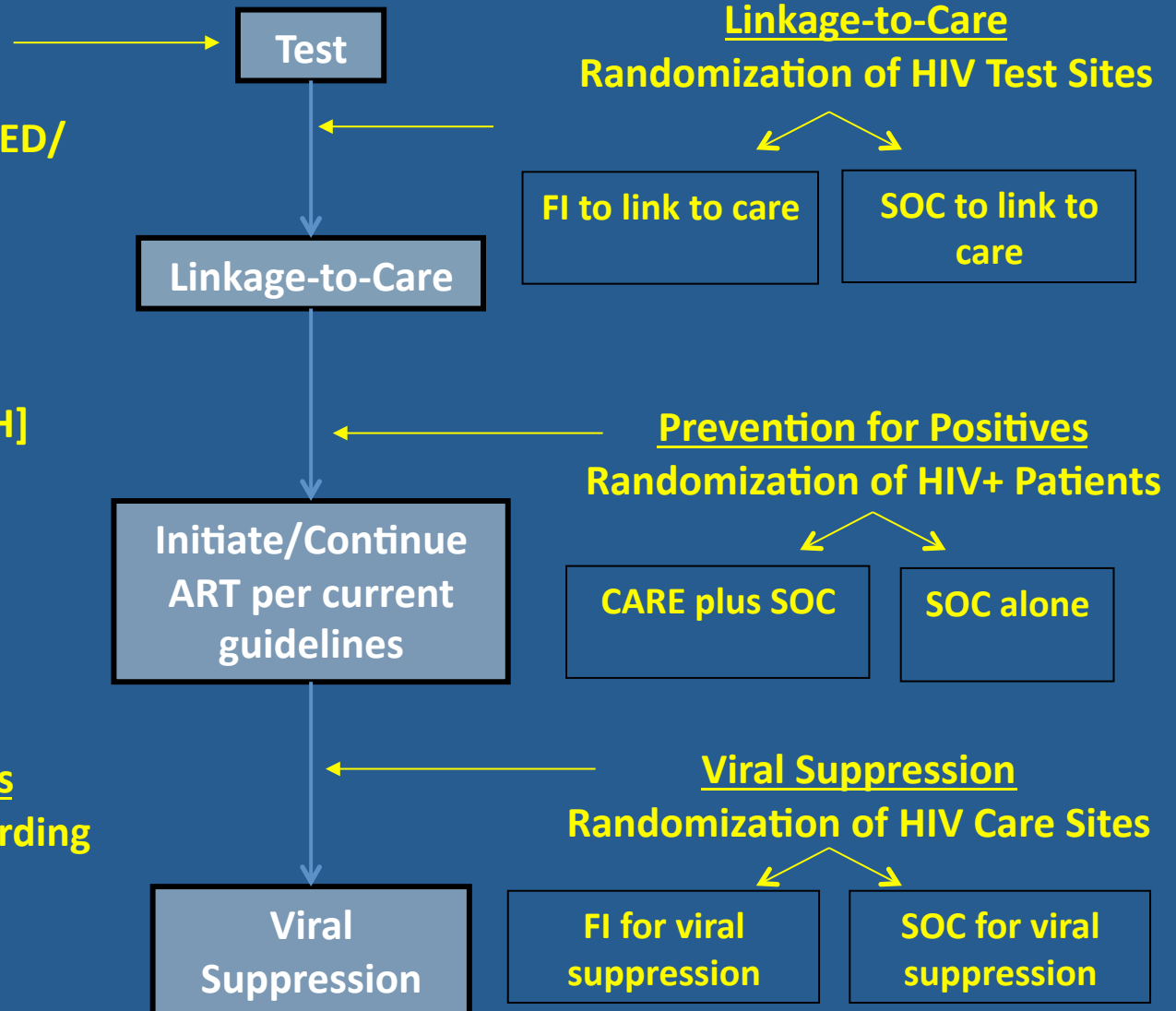
- Social mobilization
- Universal offer of testing in ED/hospital admissions

Provider Training

- Linkage to services [SA, MH]
- HIV prevention counseling
- Maximize ART initiation per current guidelines

Provider & Patient Surveys

- Knowledge & attitudes regarding ART & FIs



Conclusions

- Great interest in potential for use of ART as a prevention strategy
- Benefit of ART on HIV transmission is plausible
- Evidence from studies is critical
- Important issues remain to be addressed:
 - Feasibility as a prevention strategy
 - Balancing of risks to individual versus benefits to community
 - Urgent need to expand ART for those with most need for their own health
- TLC-Plus will determine feasibility of this strategy and inform further definitive studies

Acknowledgements

- HPTN 065 protocol team
- NYC and Washington, DC Departments of Health
- Houston, Philadelphia, Chicago, and Miami Departments of Health
- Community advisors and CAB members
- Community, network, and NIH reviewers

CDC
NIH