PrEP May Cause a Revolution in HIV Prevention: Time to Get Ready

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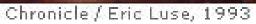


A New Team of Two in Charge of HIV Prevention



Photo Courtesy of Bernie Branson - CDC







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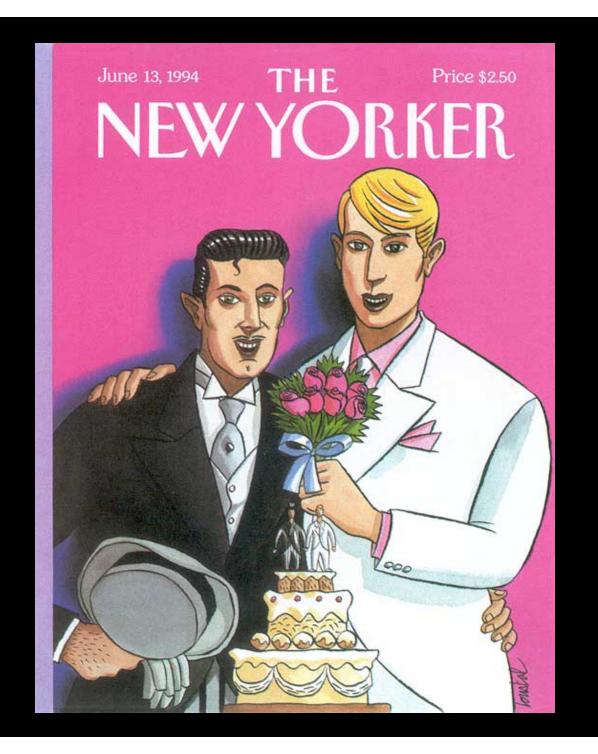
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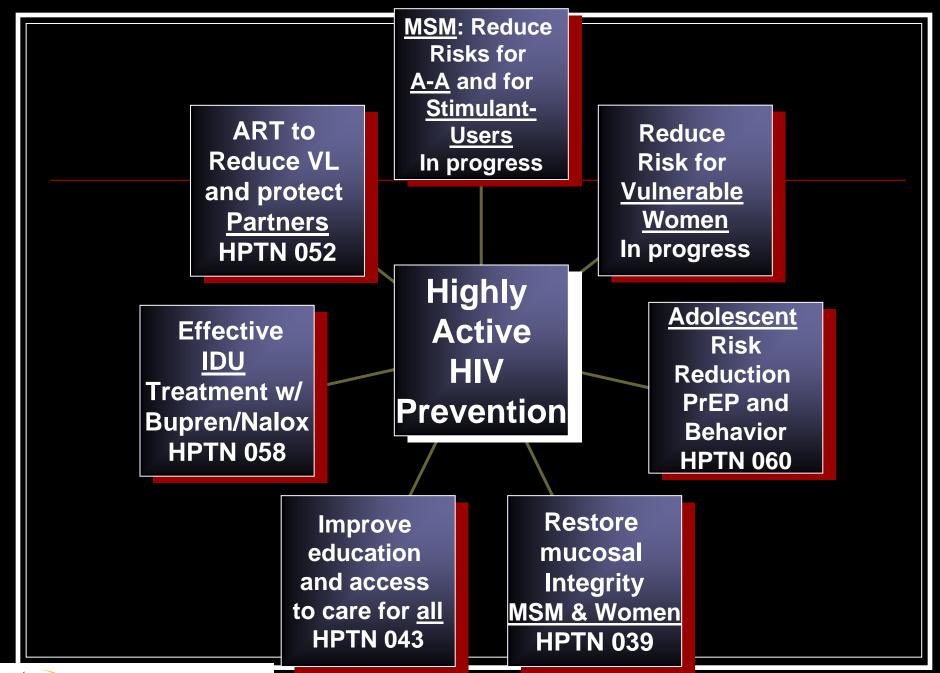


DOES SOMEONE YOU CARE FOR HAVE AIDS











The 9 Best Things in HIV Prevention

 1. Demonstrations that HIV prevention is possible and requires radical, not subtle, behavioral change



Progress is Possible!

- Not simple
- Not subtle
- Not simplistic and usually multisectoral
- No magic bullet
- But change has happened
- We have an idea of what made it happe



The 10 Best Things in HIV Prevention

- Demonstrations that HIV prevention is possible and requires radical, not subtle, behavioral change
- 2. Knowledge of what does not work
- 3. The male and female condom
- 4. Other behavioral options—delay, reduction in partner number
- 5. The HIV test—given to individuals, couples, families, communities
- 6. Prevention of mother-to-child transmission using anti-HIV treatment
- 7. Access to clean needles and syringes for drug users; drug treatment; substitution therapy for drug use
- 8. Male circumcision
- 9. Treatment for HIV (we think)
- 10. Pre-exposure prophylaxis (we hope)

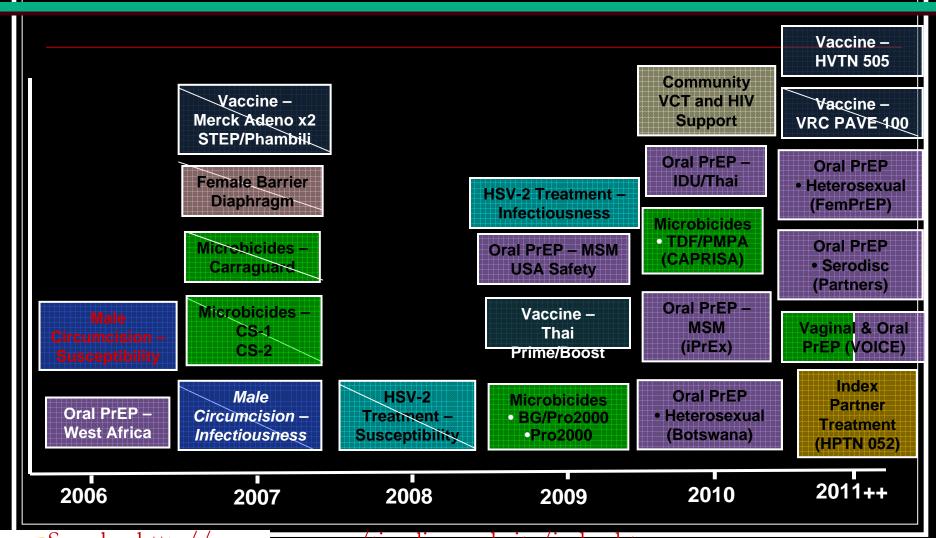


The 3 Worst Things in HIV Prevention

- 1. Unparalleled impediments
- 2. Driven by ideology
- 3. Lack of preparation for innovation



Clinical Trials of Biomedical Prevention Strategies: 2006 and Beyond



Getting Ready for the Revolution Issue #1: Context and Messaging

Safer sex in a pill

19 November 2008 by Clare Wilson Magazine issue 2683. Subscribe and get 4 free issues.



Preparing for PrEP (Pre-Exposure Prophylaxis): Policy Implications of a Prevention Pill for HIV/AIDS Agenda

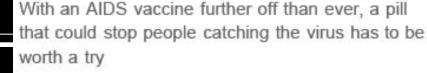
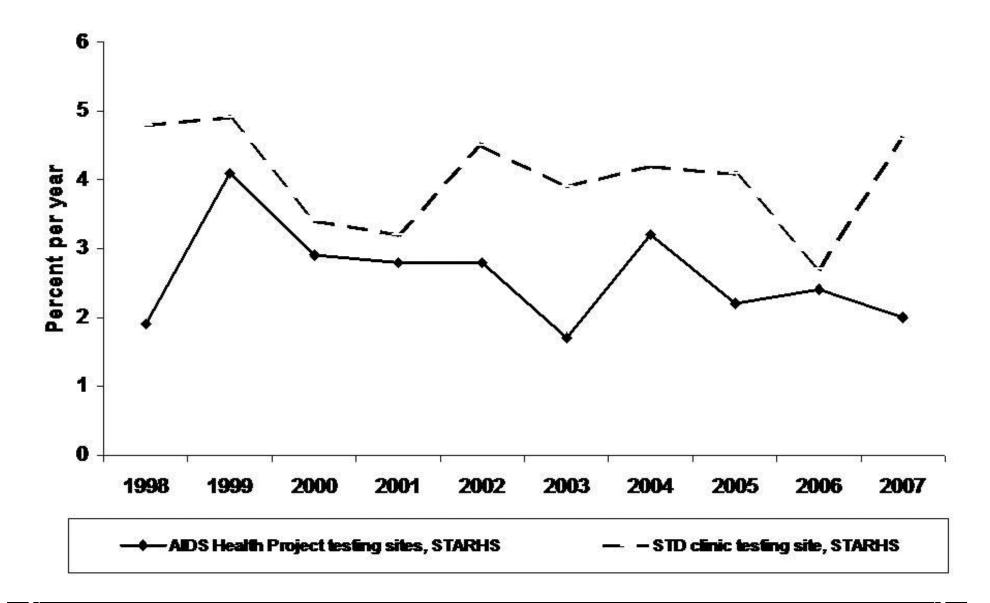




Figure 1. HIV incidence among MSM seeking HIV testing using the STARHS assay, San Francisco, 1998-2007.





Interventions to Prevent HIV

↑ Counseling and Testing for HIV



Newly HIV+



- ↓ exposing others
- ↓ infectiousness



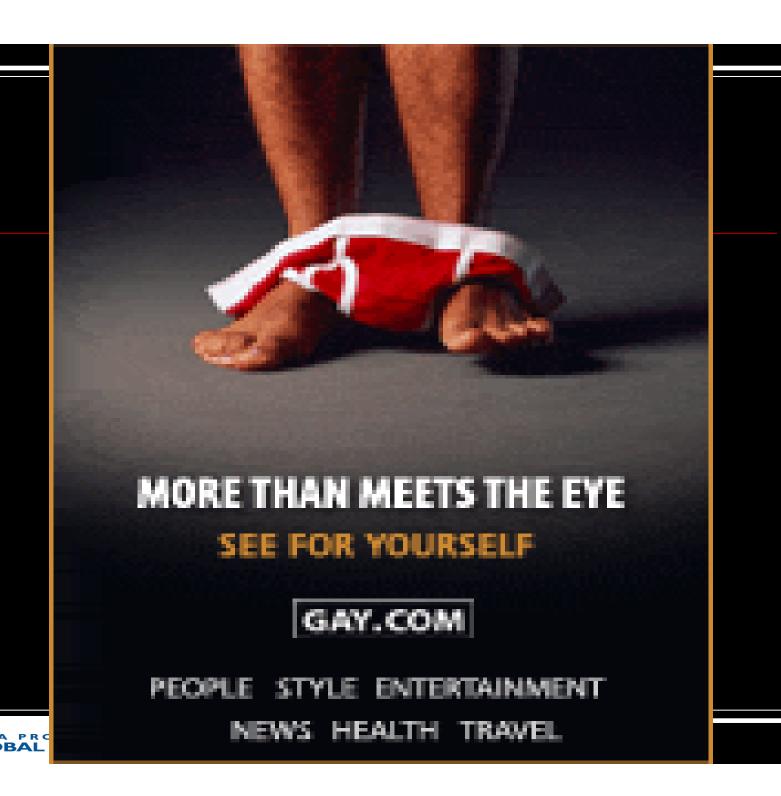
- ↓ exposure
- ↓ susceptibility



ART to Prevent Sexual Transmission of HIV

- Pre-exposure Prophylaxis (PREP)
 - -oral
 - -topical
 - -parenteral
- Post-exposure prophylaxis (nPEP)
 USPH Guidelines 2003
- Treatment of the infected person (index case)
 - -observational results
 - -HPTN 052/ACTG5245





Craigslist Serosorting

I'm 26, 6' 165 white guy who wants a guy to fuck me raw tonight. I'm neg/std free and you should be too. Get back to me if interested..



Getting Ready for the Revolution Context and Messaging

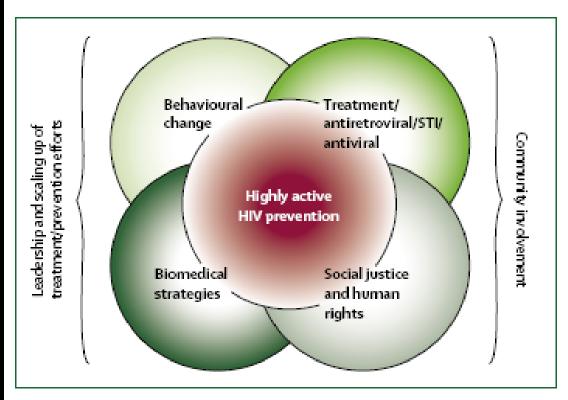
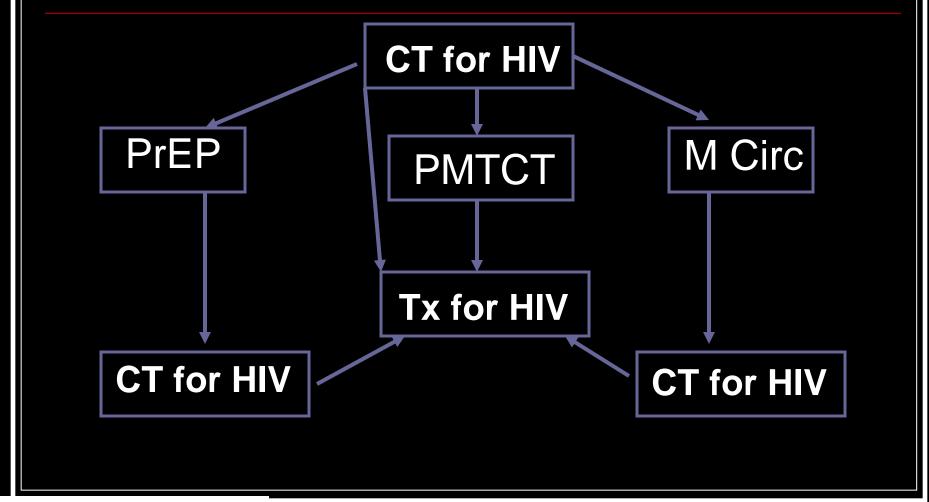


Figure 1: Highly active HIV prevention

This term was coined by Prof K Holmes, University of Washington School of Medicine, Seattle, WA, USA.5 STI=sexually transmitted infections.



Focus, Clarity of Goals, Precise Outcomes, Clear Management





Implications of the New Framework Range of Behaviors Is of Interest

- Testing and retesting
- Care-seeking
 - And barriers to care
- Adherence to medications
- Actions to avoid spreading HIV
- Disclosure



Success Stories: 076, 012



Reduction of Maternal-Infant Transmission of Human Immunodeficiency Virus Type 1 with Zidovudine Treatment. Pediatric AIDS Clinical Trials Group Protocol 076 Study Group

Edward M. Conner, et al.

THE LANCET

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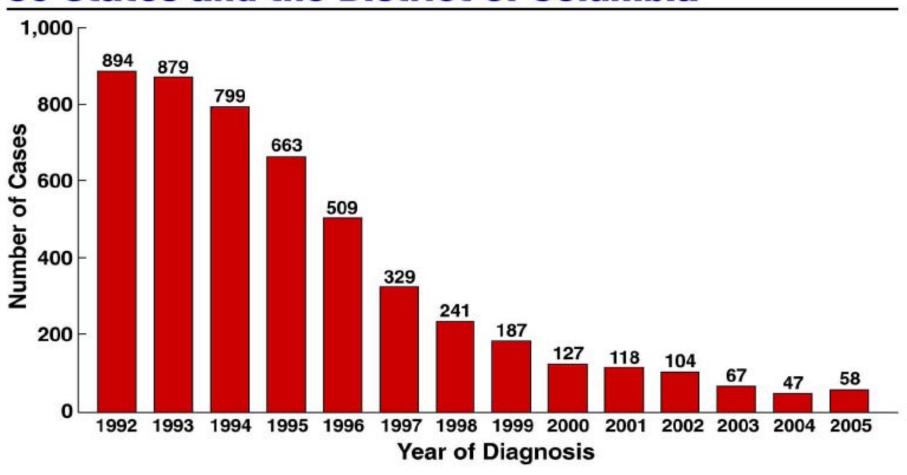
Volume 354

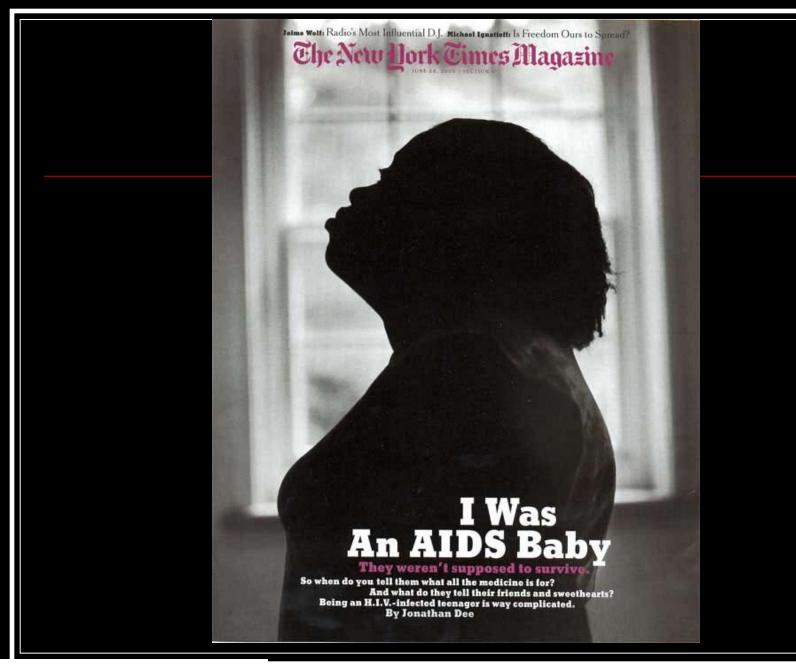
4 September 1999

Intrapartum and Neonatal Single-Dose Nevirapine Compared with Zidovudine for Prevention of Mother-to-Child Transmission of HIV-1 in Kampala, Uganda: HIVNET 012 Randomised Trial

Laura A. Guay et al.

Estimated Numbers of AIDS Cases in Children <13 Years of Age, by Year of Diagnosis, 1992-2005, 50 States and the District of Columbia







Getting Ready for the Revolution Issue #3: Will HIV Prevention Be An Indication for Use?



Getting Ready for the Revolution Issue #4: Getting PrEP to the Right People



Get the Simple Things Right









Size of Risk Groups

Men

- 27% black/Hispanic MSM
- ~ 16% black/Hispanic non-MSM
 - 7% heterosexual
 - 9% IDU
- ~ 24% white MSM
- ~ 3% white non-MSM men
 - 1% heterosexual
 - 2% IDU

Women

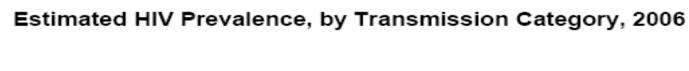
- ~ 19% black/Hispanic heterosexual women
- ~ 5% black/Hispanic female IDU
- ~ 4% white heterosexual women
- ~ 2% white non-heterosexual women

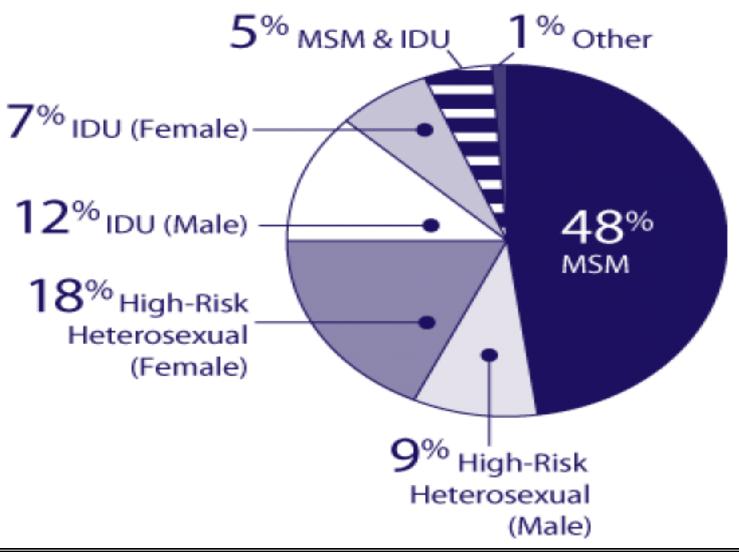
HIV Incidence by Frequency of Stimulant Use, EXPLORE

Overall Seroincidence 2.1/100 p-yrs

Frequency of use	HIV	% of cohort	% of
	incidence		infections
None	1.6	75%	56%
Less than weekly	3.4	20%	32%
Weekly or more	6.4	5%	12%



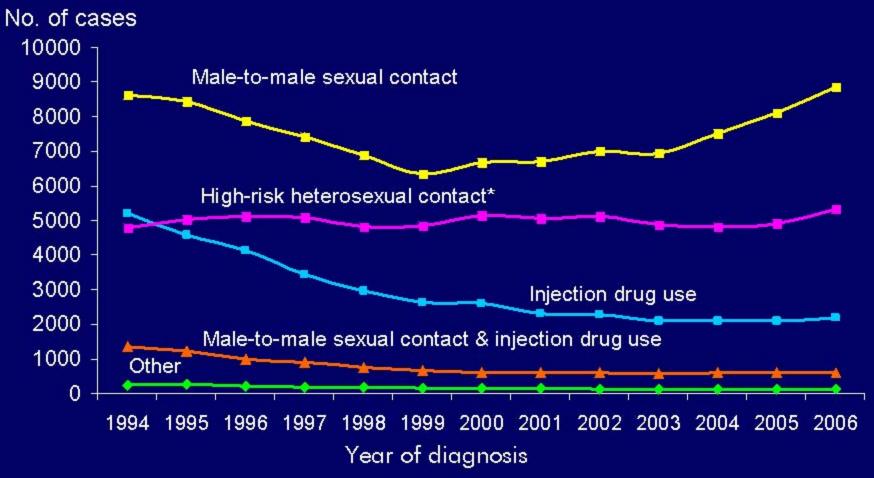






Source: http://www.cdc.gov/hiv/topics/surveillance/resources/factsheets/prevalence.htm

HIV/AIDS Cases among Adults and Adolescents, by Transmission Category, 1994–2006—25 States



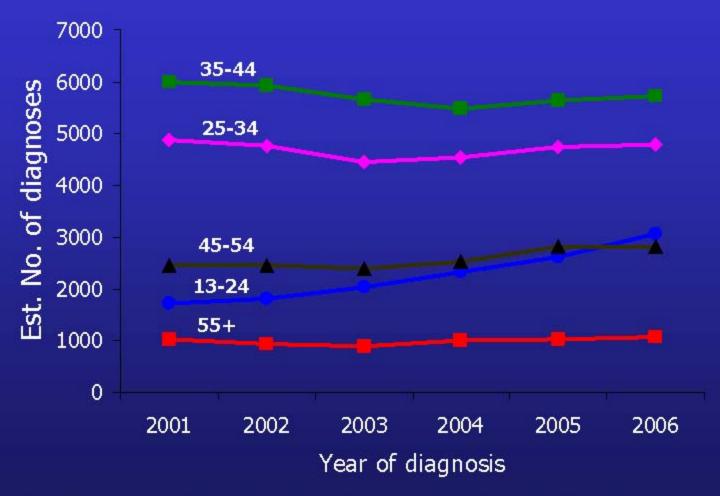


Note. Data statistically adjusted for reporting delays and redistribution of cases in persons initially reported without an identified risk.

*Heterosexual contact with a person known to have, or to be at high risk for, HIV infection.



HIV/AIDS Cases among MSM by Age Group, 2001 – 2006, 33 States

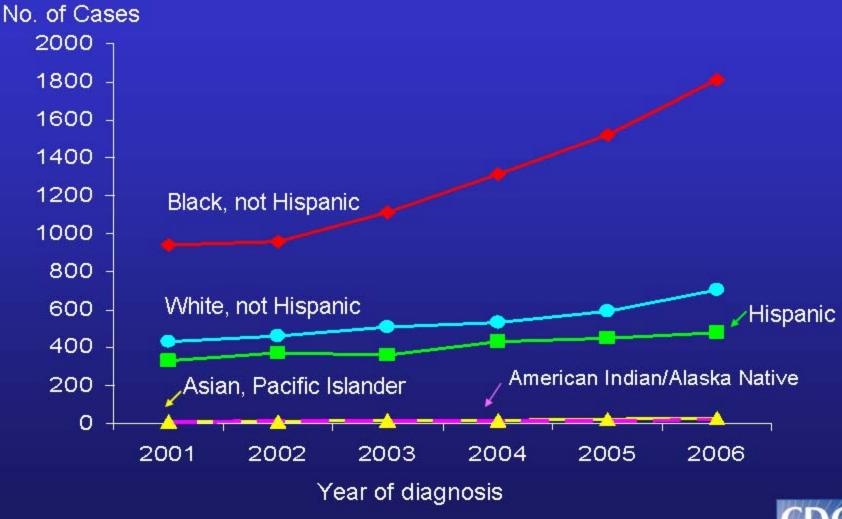




Note: Data adjusted for reporting delays and estimated proportional redistribution of cases initially reported without risk. "Estimated Number of HIV/AIDS Diagnoses among Adult and Adolescent MSM, by Race, 2006-33 States."



Estimated HIV/AIDS Cases among MSM Aged 13-24 by Race/Ethnicity, 2001-2006—33 States







HPTN 061: Feasibility Study of a Community-Based, Multi-component HIV Prevention Intervention for Black MSM

(in preparation for a community-randomized efficacy trial)



KENNETH H. MAYER M.D. and BERYL KOBLIN PhD



HIV infections: the World, Africa & South Africa

Population

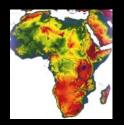
HIV Infections



6.5 billion

33.2 million

2.5 million new infections per year



896.7 million

22.5 million

13.74%

68%



46.8 million

5.7 million

0.72%

17%

>100,000 new infections per year



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

- 4 m people receiving ART by end of 2008
- 6.7m people need treatment and are in danger of losing their lives
- 2.7m became infected in 2007
- Only 1m placed on ART in 2007



Getting Ready for the Revolution Issue #5:

Side effects and disinhibition



Getting Ready for the Revolution Issue #6:

We Need to Plan the Followon Studies Now



Getting Ready for the Revolution Issue #7:

Getting the Advantages of Medicalization of Prevention but Leaving the Baggage Behind



Getting Ready for the Revolution Issue #8: ASOs and Financing

