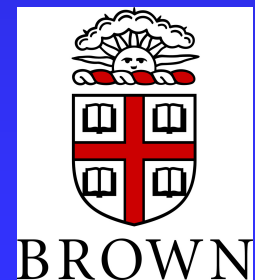


# **Hope in the midst of Despair!**

## **CHALLENGES AHEAD IN THE GLOBAL HIV EPIDEMIC**

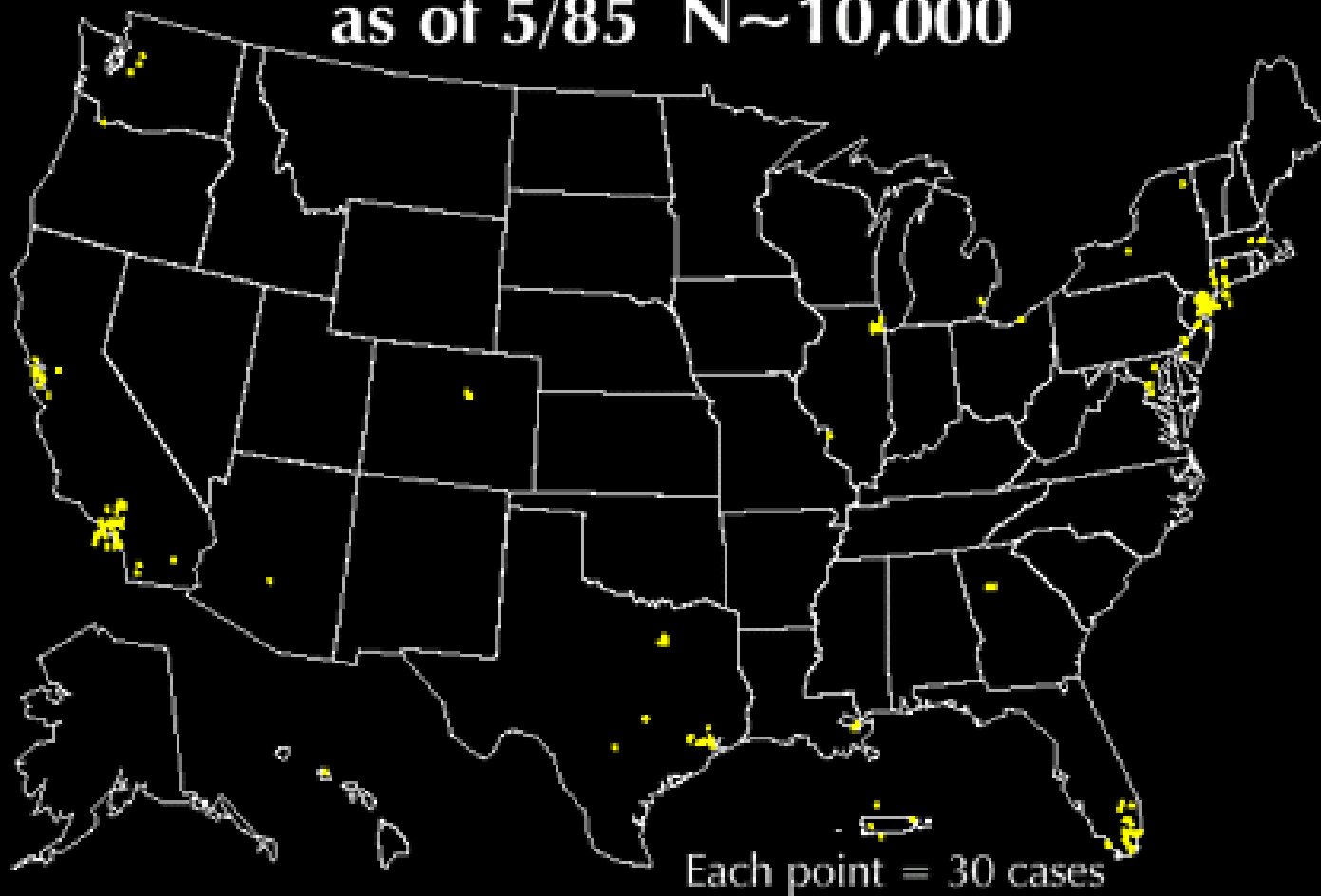
**Timothy P. Flanigan, MD**  
**Professor of Medicine**  
**Chief Division of Infectious Diseases**  
**Brown Medical School**  
**Providence, RI, USA**



## Cumulative U.S. AIDS Cases as of 2/83 N~1,000

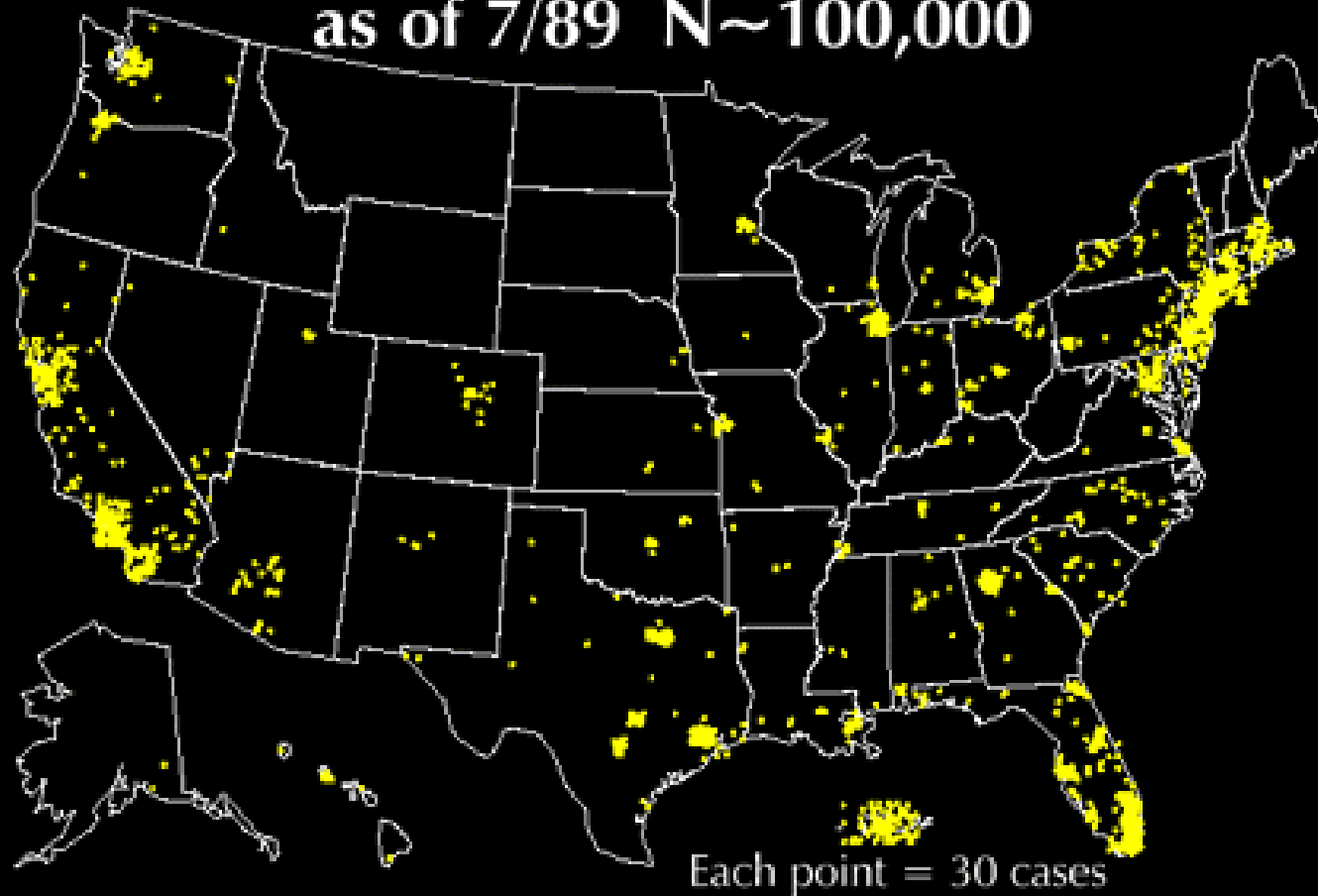


## Cumulative U.S. AIDS Cases as of 5/85 N~10,000



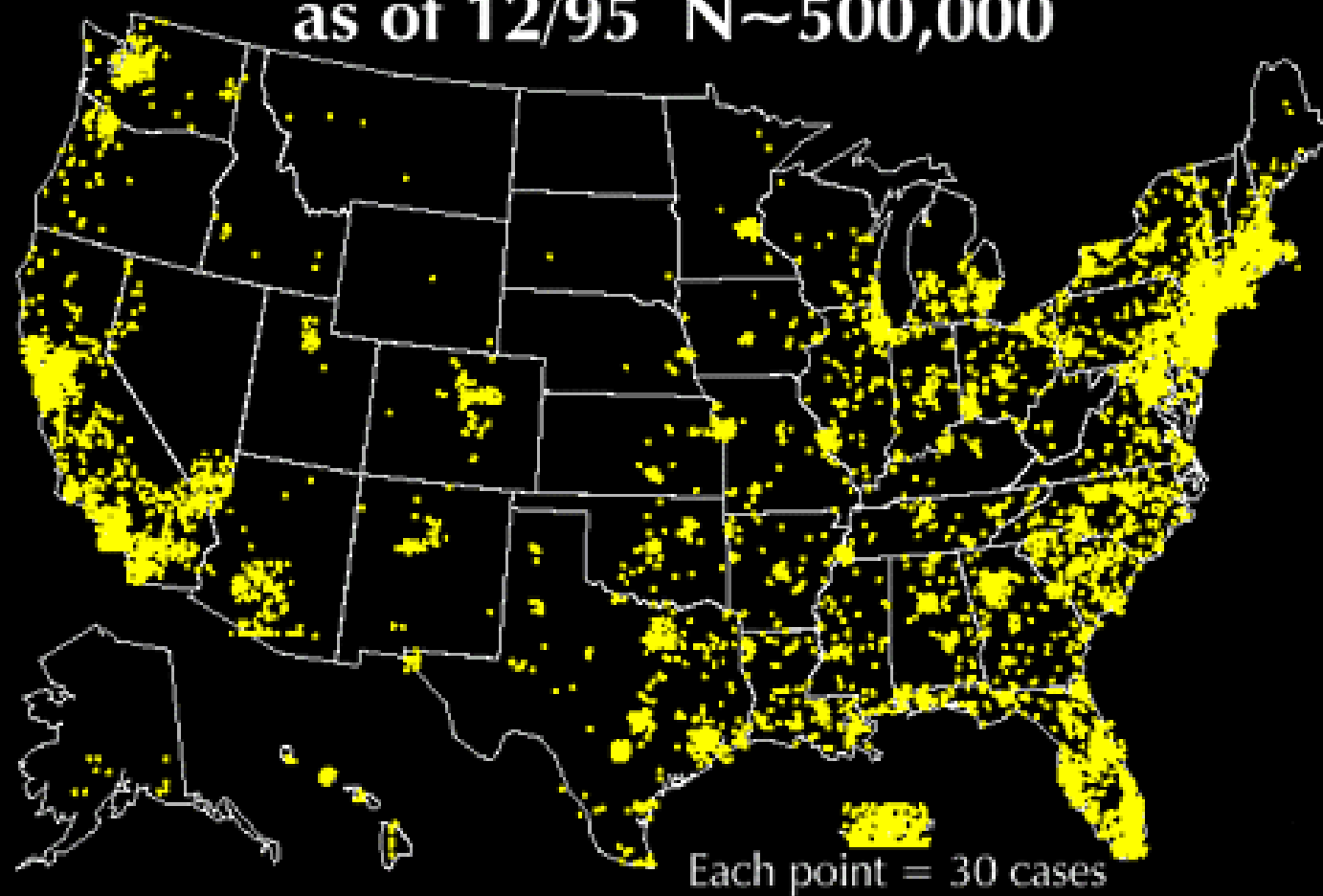
CDC

## Cumulative U.S. AIDS Cases as of 7/89 N~100,000

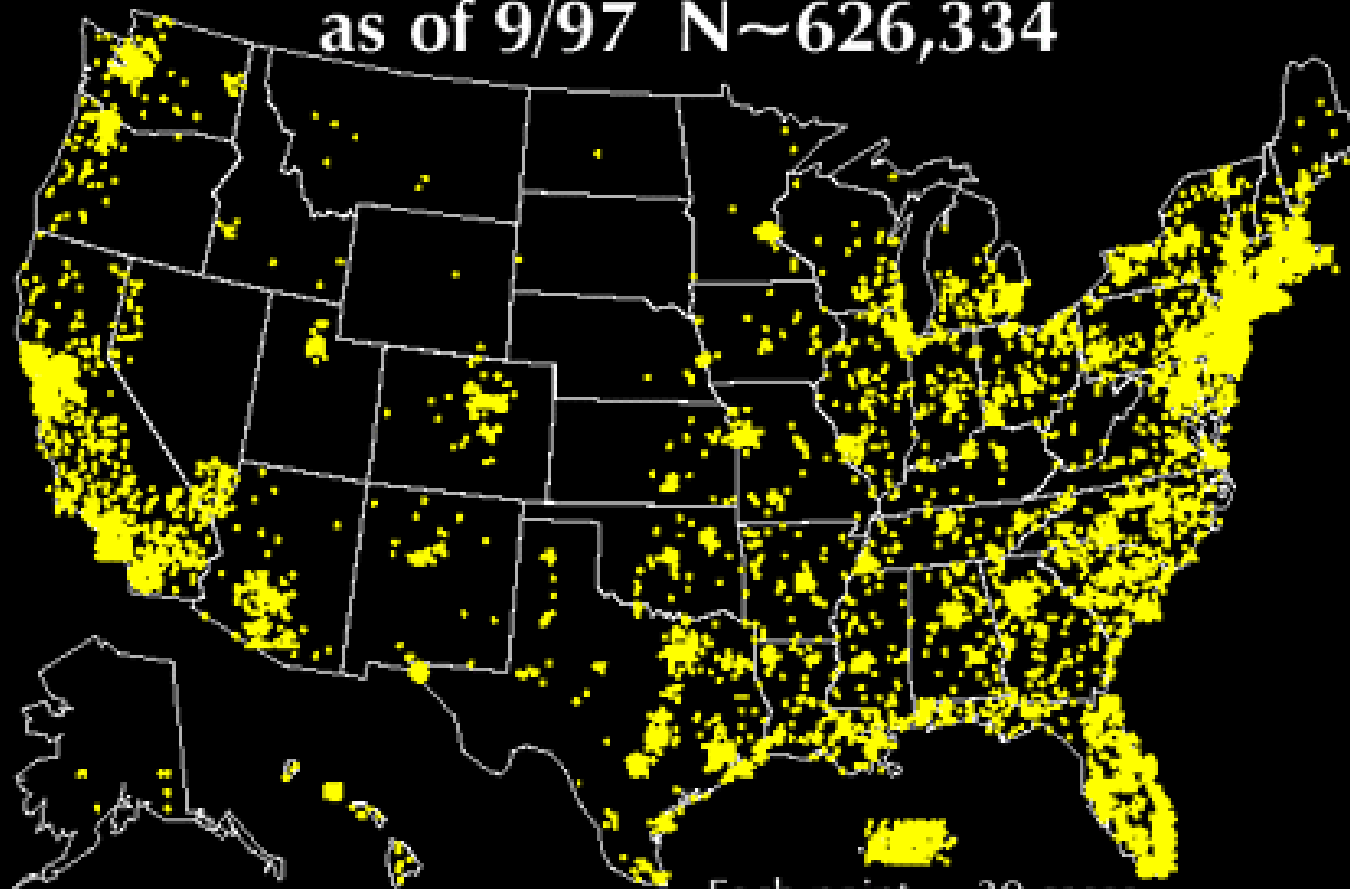


CDC

## Cumulative U.S. AIDS Cases as of 12/95 N~500,000



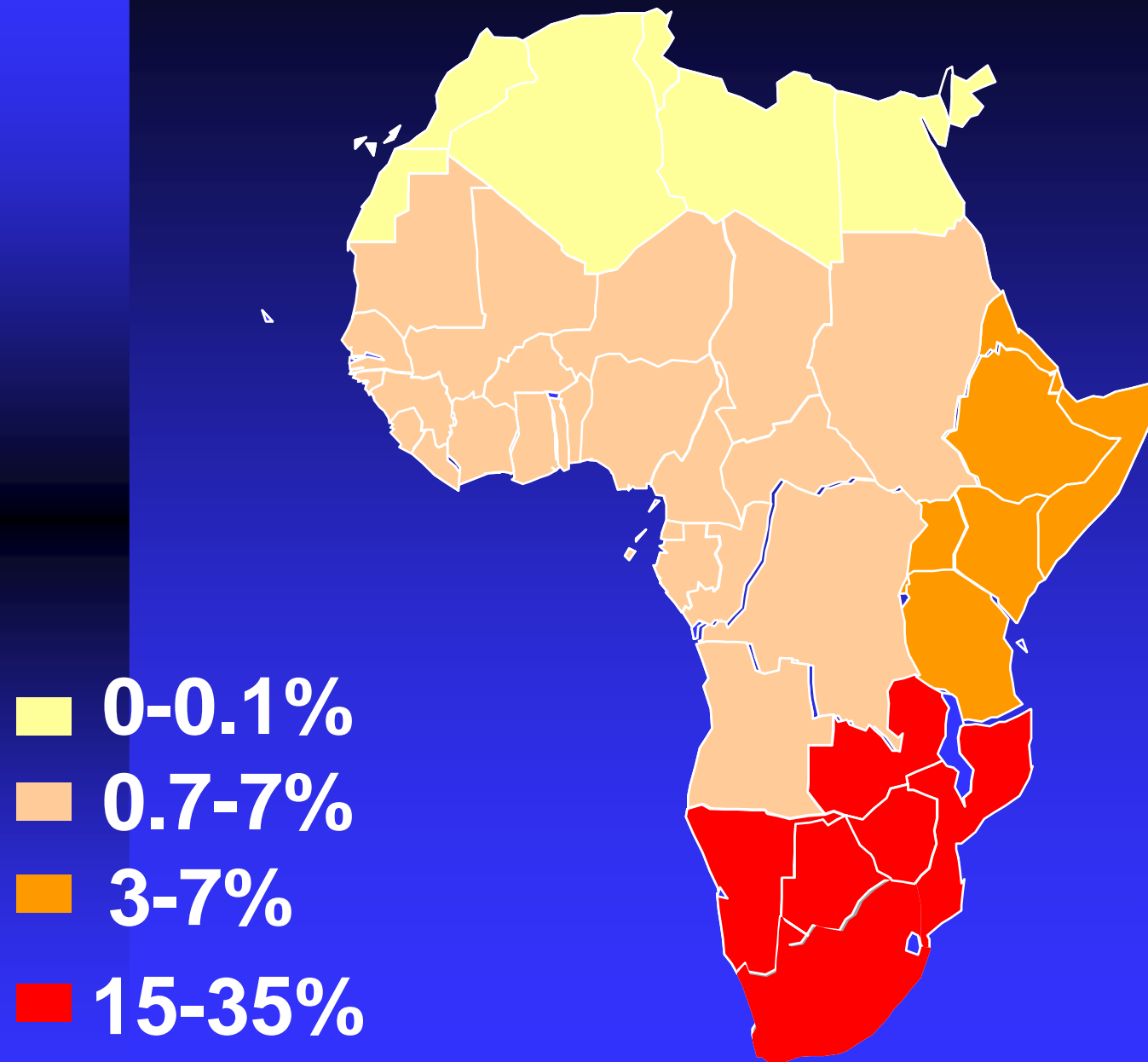
## Cumulative U.S. AIDS Cases as of 9/97 N~626,334



Each point = 30 cases



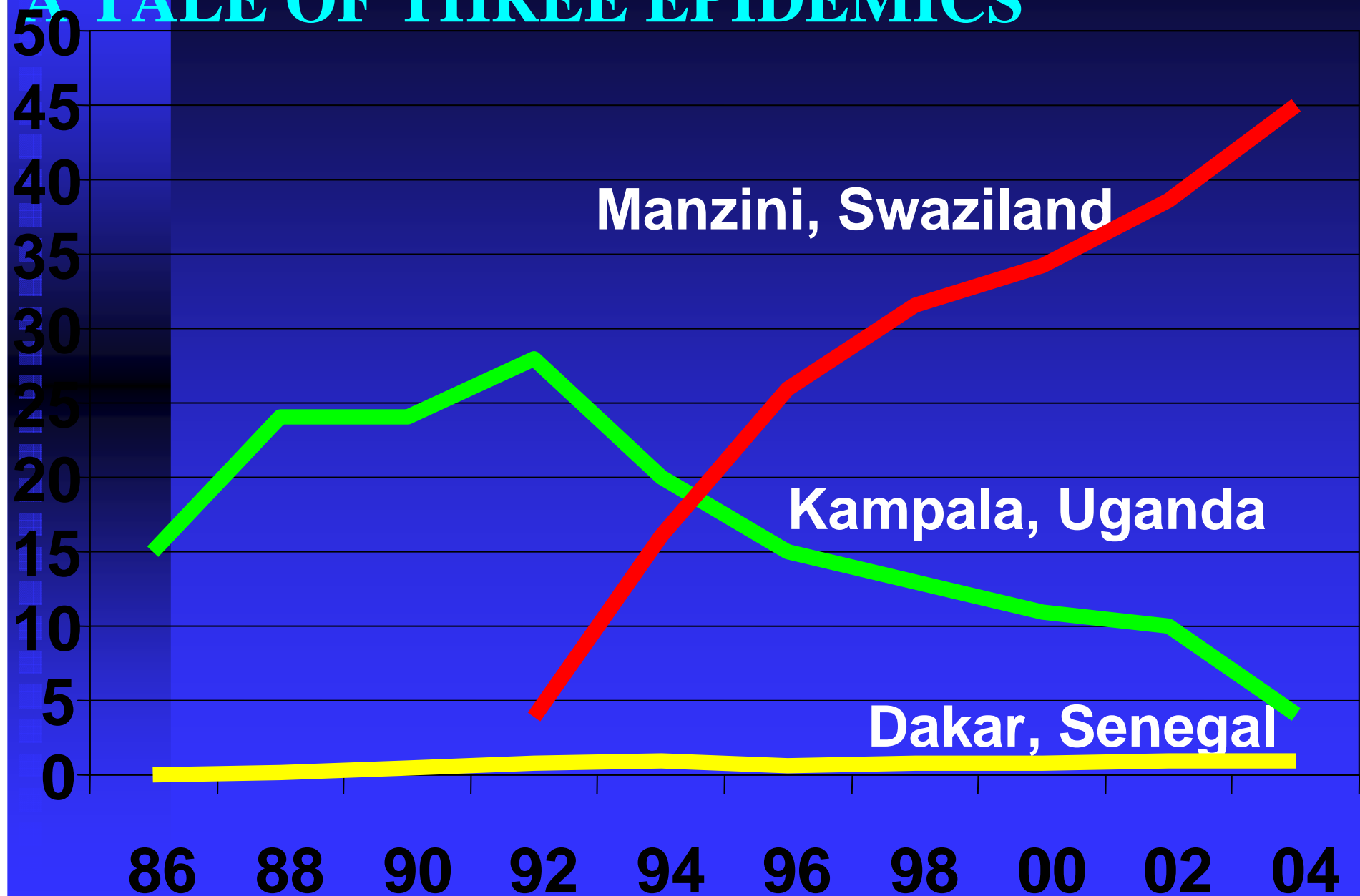
# HETEROGENEITY OF HIV IN AFRICA



Sources: UNAIDS 2004 estimates used unless recent national population-based HIV survey available

# HETEROGENEITY OF HIV IN AFRICA

## A TALE OF THREE EPIDEMICS

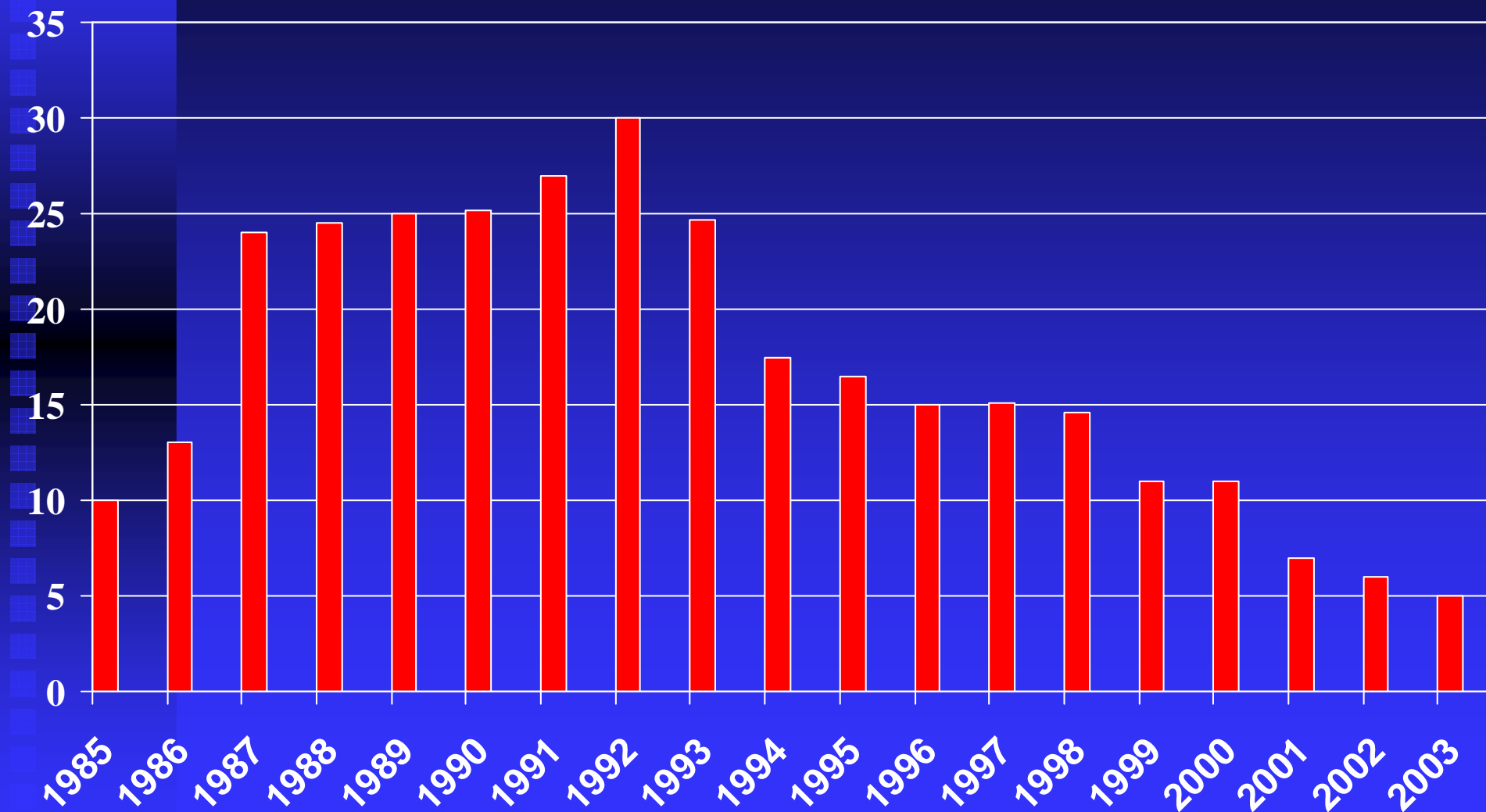




# DECLINING HIV PREVALENCE IN *GENERALIZED* EPIDEMICS <sup>(1-1)</sup>

- National HIV prevalence declines reported in Uganda, Kenya and Zimbabwe
- HIV prevalence declines also reported in *urban* Burkina Faso, Burundi, Ethiopia, Malawi and Rwanda
- Declining HIV prevalence also observed in Haiti, Barbados and Bahamas

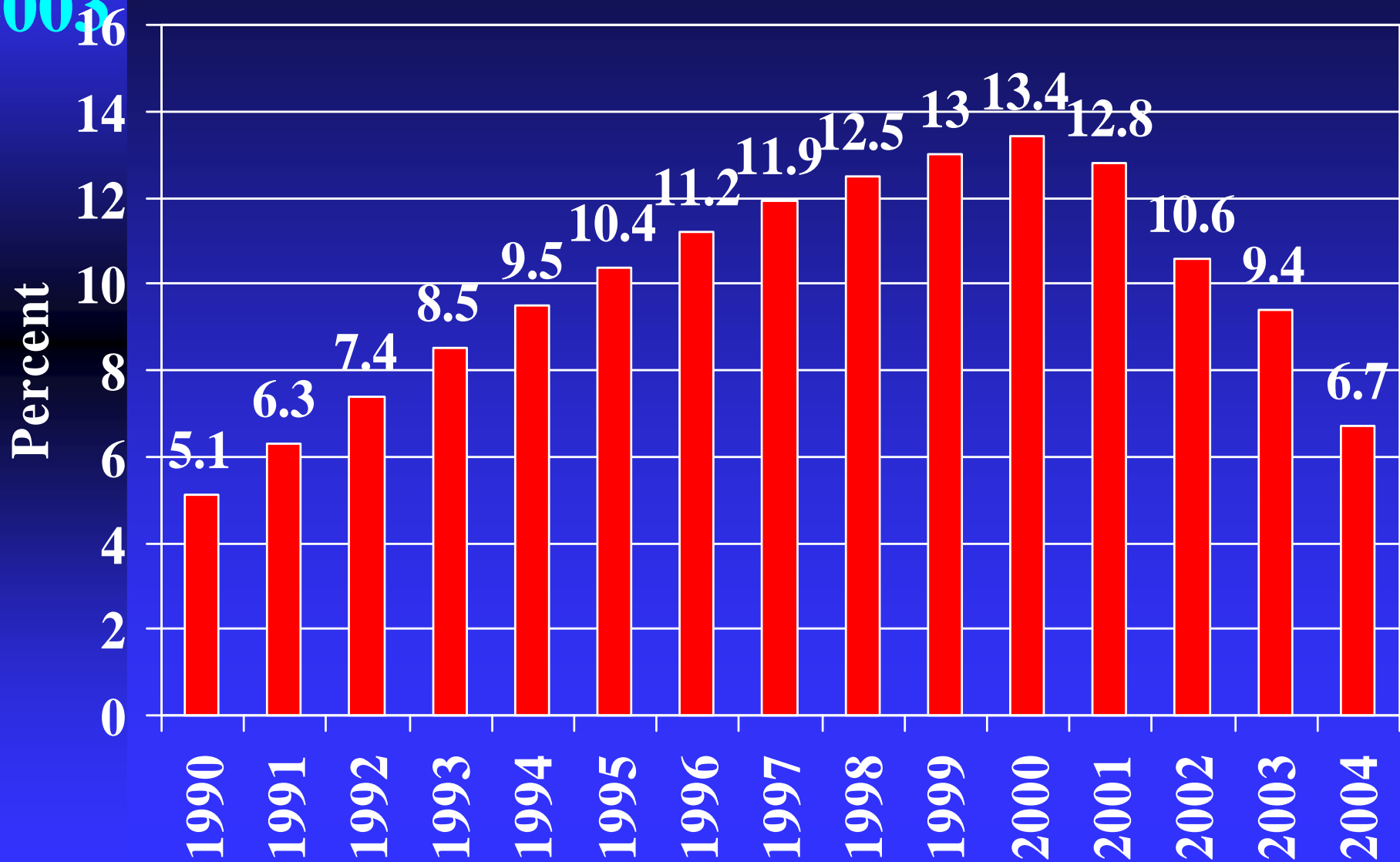
# ANTENATAL PREVALENCE IN KAMPALA, 1985-2003



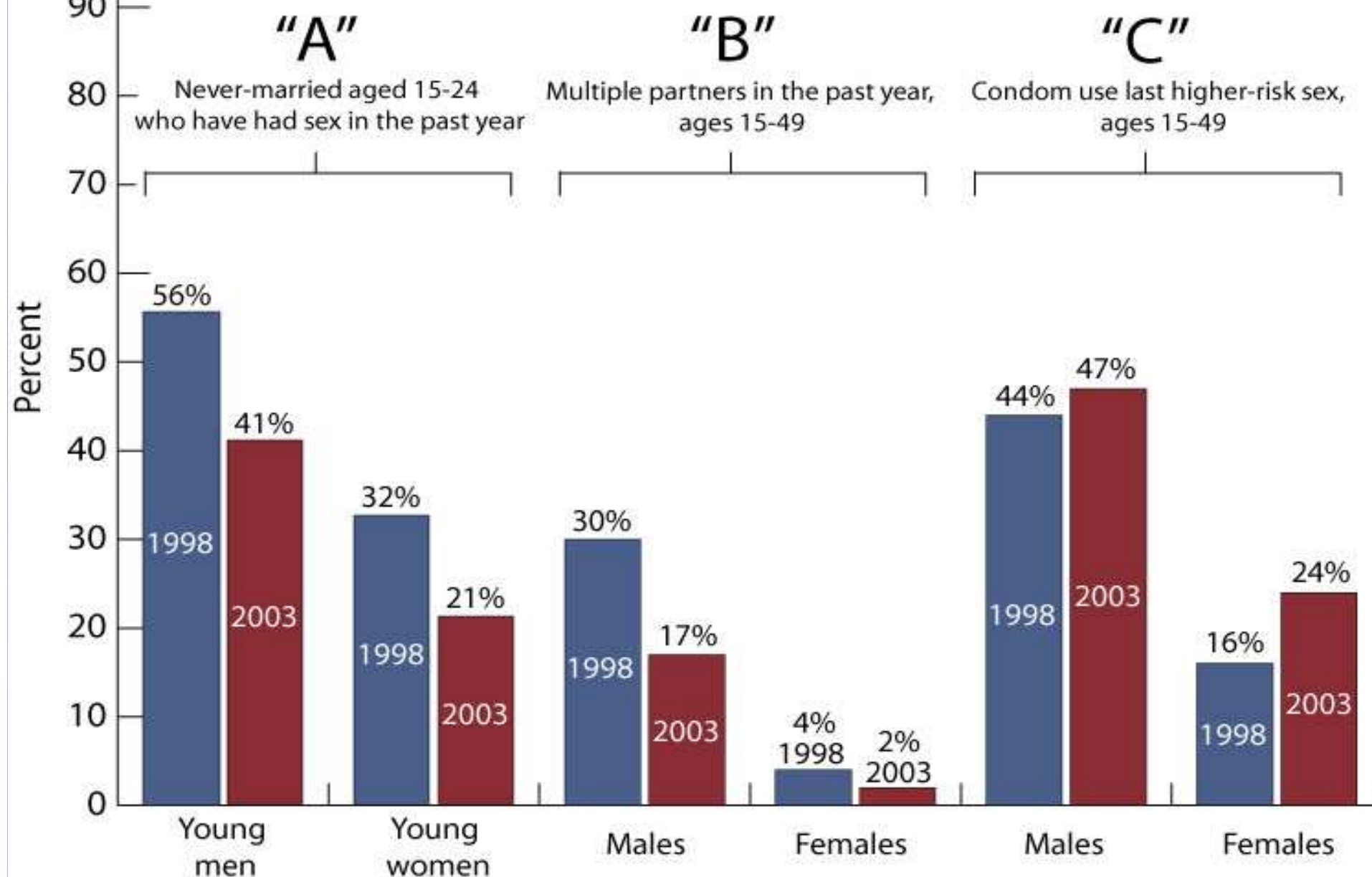
# Success in Uganda

- Uganda was devastated by the HIV epidemic---28% of pregnant women in Kampala were infected by 1990!
- All of the country mobilized--from the president to the bishops to celebrities. National leadership can never be underestimated. Human capital is more potent than financial capital.
- Now the rate of infection in pregnant women is around 5%.....testing is widespread.....sexual behavior changed.....
- Uganda created its own language, sensitive to its own culture and community to respond to the AIDS pandemic...for example, "zero grazing"
- *UGANDAN RESPONSE*

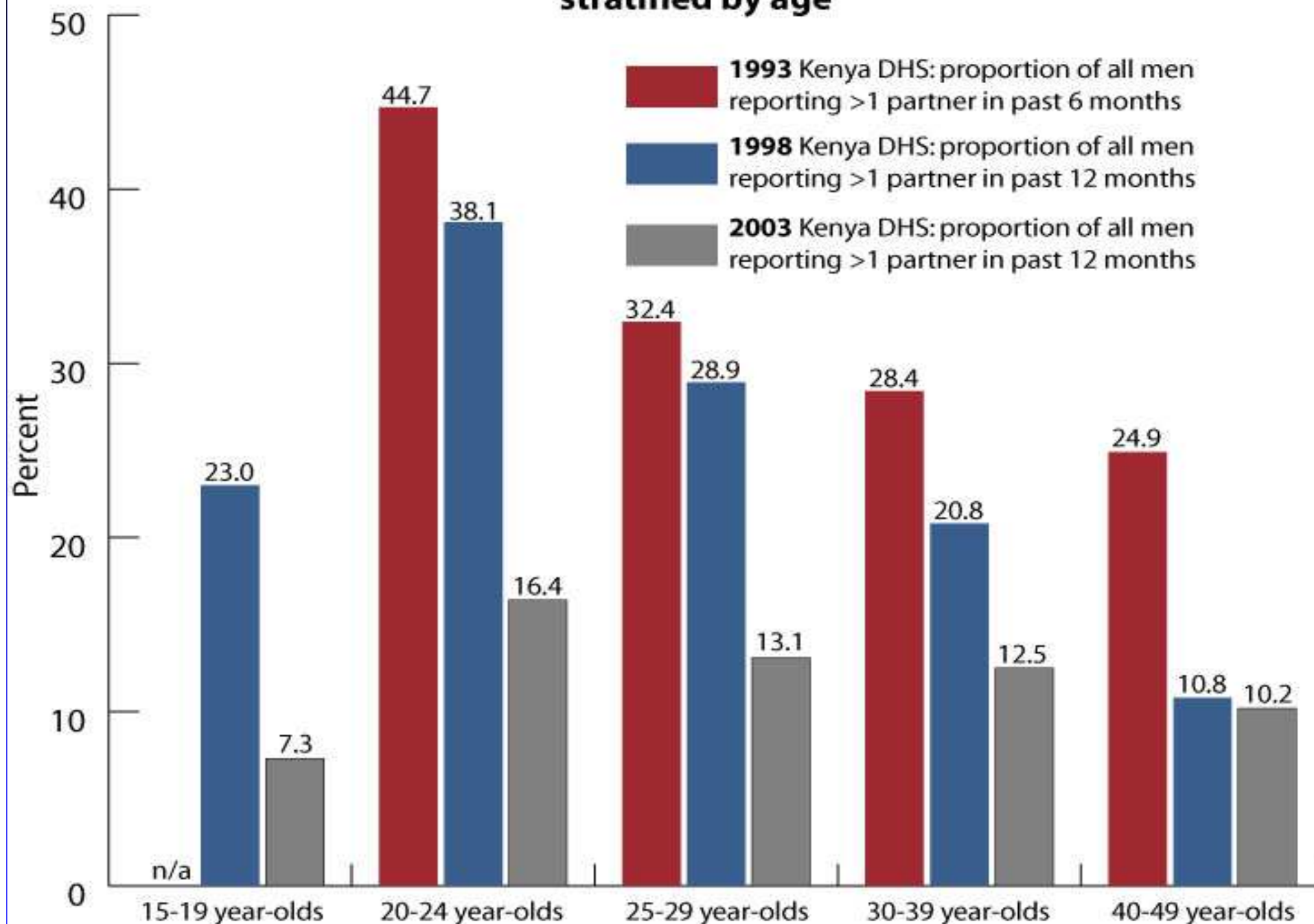
# ANTENATAL HIV PREVALENCE IN KENYA: SENTINEL SURVEILLANCE 1990- 2003



Kenya: Changes in "ABC" indicators between the 1998 and 2003 Demographic and Health Surveys (DHS)



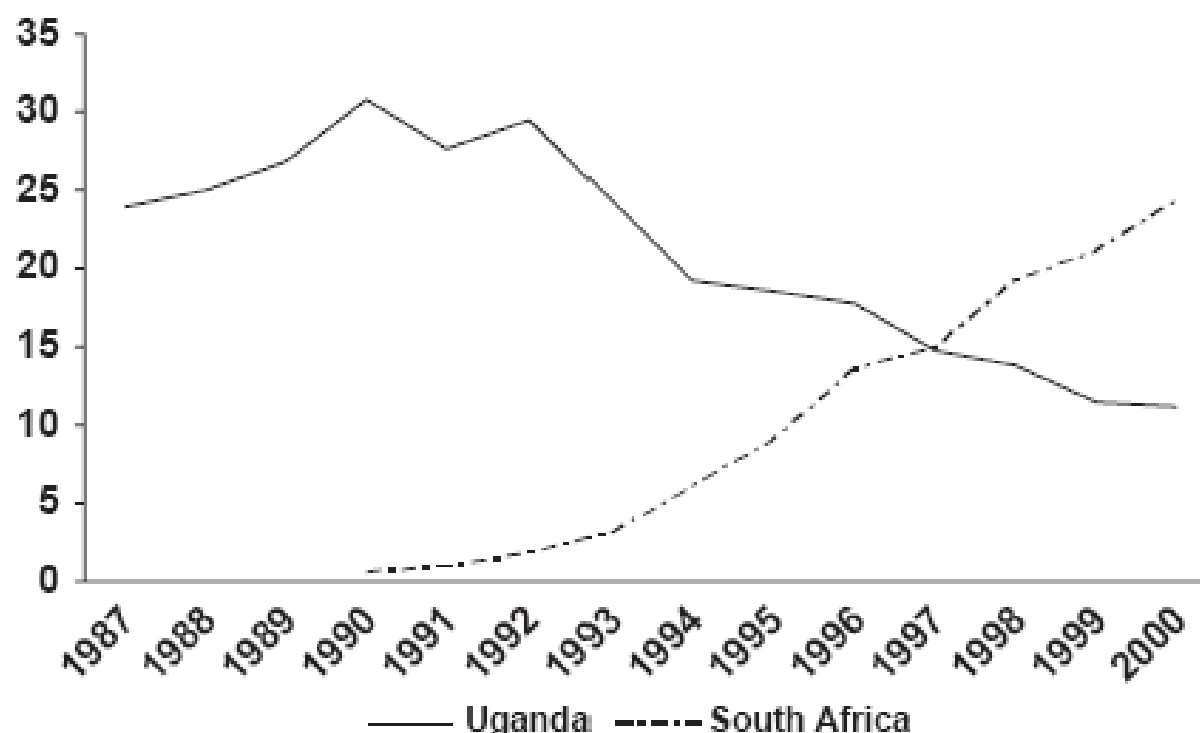
# Kenya: proportion of males reporting multiple sexual partners, stratified by age



## **DECLINING HIV PREVALENCE IN CONCENTRATED EPIDEMICS (1-2)**

- ❑ Declining HIV prevalence reported in Thailand, Cambodia and South India**
- ❑ In all 3 countries, national leadership focused attention on the epidemic**
- ❑ HIV testing was routinized**
- ❑ Treatment was introduced**

# *Comparison of Uganda and South Africa, 1987-2000*



**Source: UNAIDS Epidemiological Fact Sheets  
(UNAIDS 2002a, UNAIDS 2002c)**

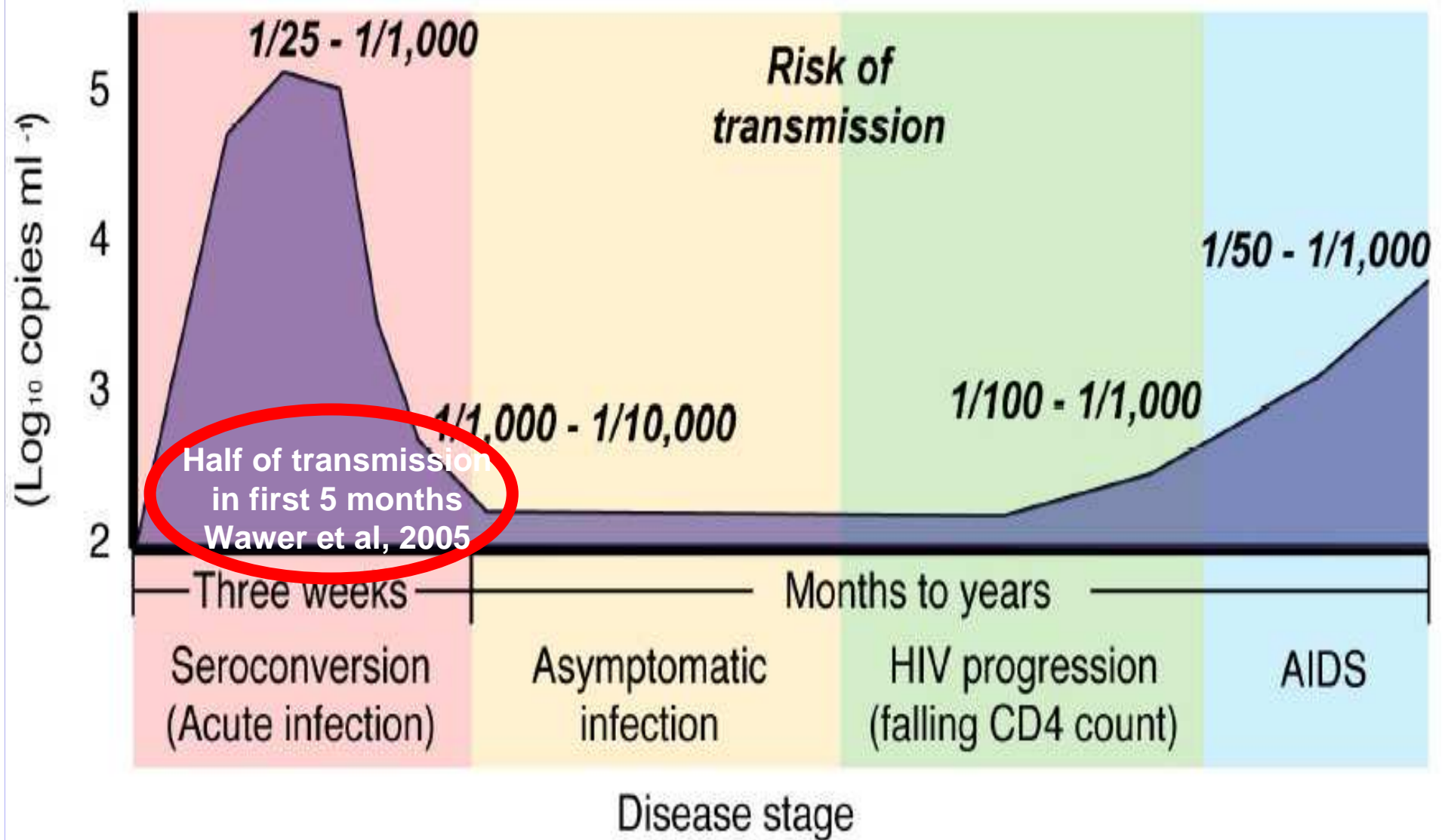
Fig. 1. Urban antenatal HIV prevalence in South Africa and Uganda. *Source:* UNAIDS Epidemiological Fact Sheets (UNAIDS, 2002a,c).



# **HETEROGENEITY OF HIV: CONCURRENT SEXUAL PARTNERSHIPS<sup>(1-1)</sup>**

- ❑ Acute infection and concurrent sexual partnerships are critical determinates**
- ❑ Circumcision rates**
- ❑ STI prevalence**
- ❑ Community mobilization→churches, government leaders,business, youth...**

# Concurrency, acute HIV, and transmission



Source: Galvin, S.R. & Cohen, M.S. (2004) The role of sexually transmitted diseases in HIV infection. *Nature Reviews Microbiology*, 2(1).

# **HETEROGENEITY OF HIV: THE LETHAL COCKTAIL<sup>(1-1)</sup>**

- ❑ **Concurrent sexual partnerships, poor leadership in the midst of rising infections and deaths, and limited male circumcision fuel the match that lit Southern Africa's unique hyper-epidemics – together, these factors may increase HIV transmission 30-fold – explaining much heterogeneity in HIV epidemic potential**

# HIV testing and treatment are cornerstones of prevention

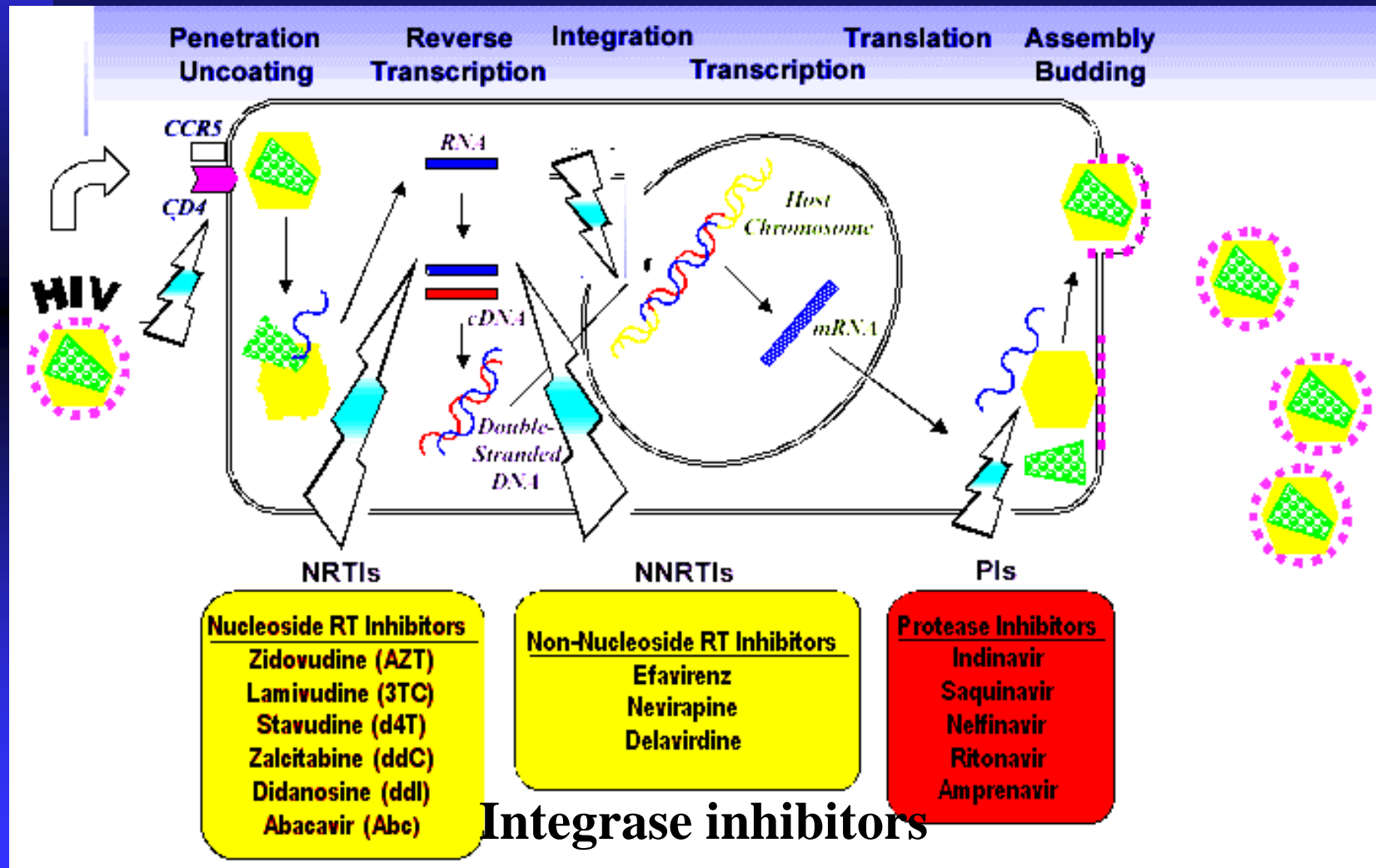
Without HIV testing,  
prevention is almost impossible  
Without treatment and support,  
HIV testing is almost impossible

## It Is Time to Implement Routine, Not Risk-Based, HIV Testing

Curt G. Beckwith,<sup>1</sup> Timothy P. Flanigan,<sup>1</sup> Carlos del Rio,<sup>2</sup> Emma Simmons,<sup>1</sup> Edward J. Wing,<sup>1</sup> Charles C. J. Carpenter,<sup>1</sup>  
and John G. Bartlett<sup>3</sup>

<sup>1</sup>Brown Medical School and the Lifespan/Tufts/Brown Center for AIDS Research (CFAR), Providence, Rhode Island; <sup>2</sup>Emory University School of Medicine and Emory University CFAR, Atlanta, Georgia; and <sup>3</sup>Johns Hopkins School of Medicine and Johns Hopkins University CFAR, Baltimore, Maryland

# The Incredible Success of Combination Antiretroviral Treatment (HAART or cART) for HIV infection

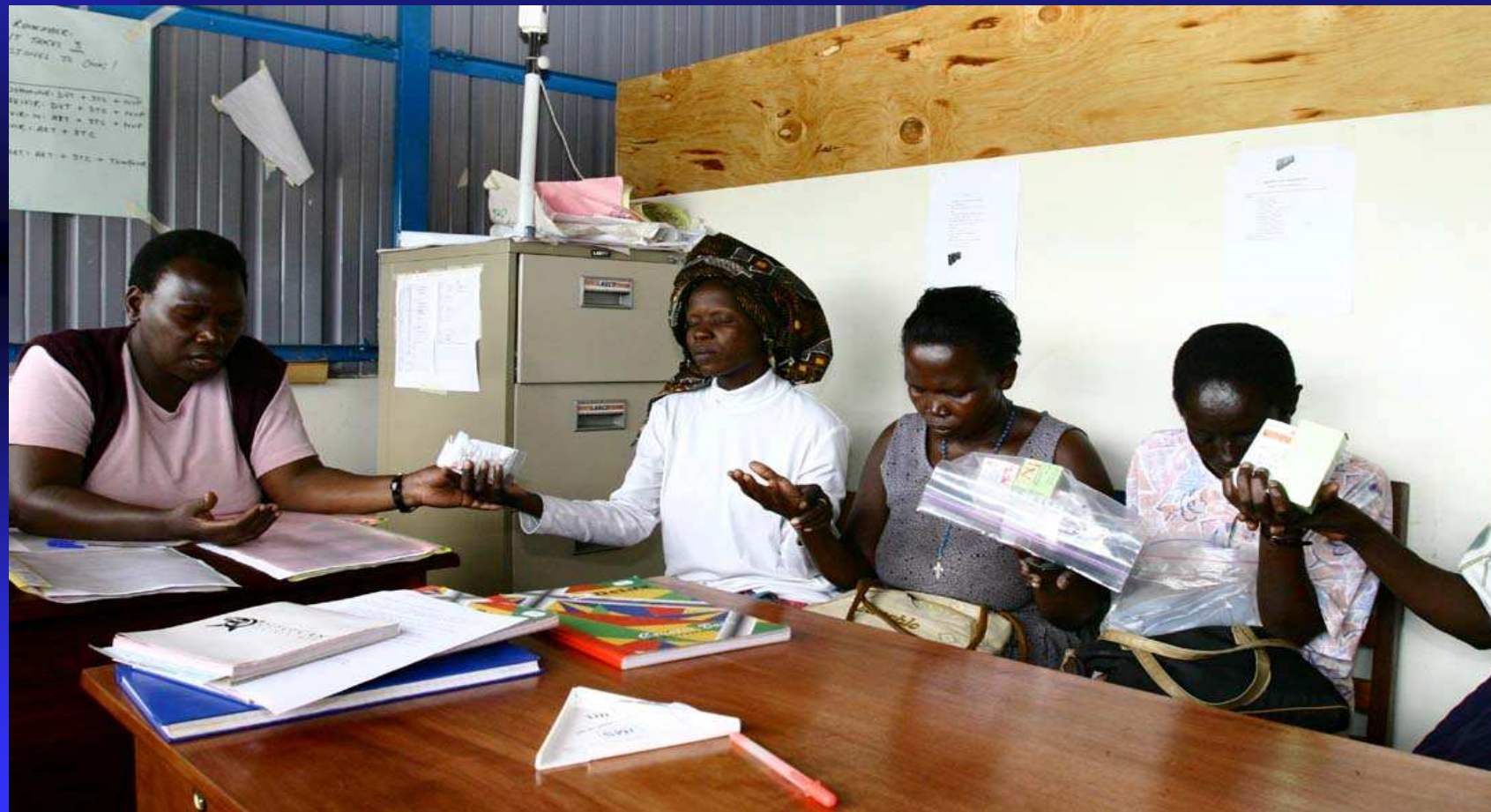


# Success of HIV treatment: ART (AntiRetroviral Therapy)

- Three medicines taken once or twice a day
- Sometimes the medications are combined in a few pills
- Produced at low cost and high quality by Indian generic manufacturers
- These medications can totally suppress HIV (not cure the virus but total suppression)
- Cost of ART per person/year < 100\$
- Treatment can be effective for a lifetime with total restoration of health



Treatment requires ART and support:  
both medical and social.  
Family support very important



# HIV and AIDS care: Antiretroviral therapy works!

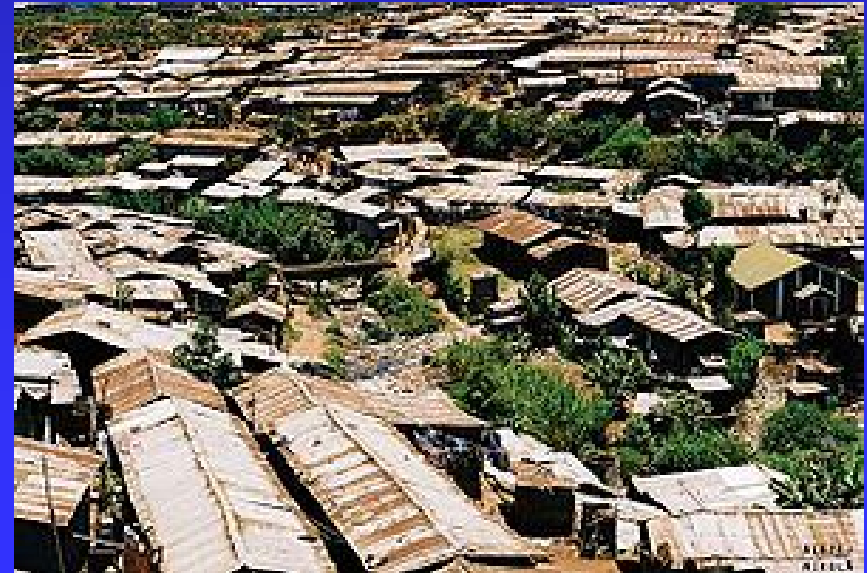




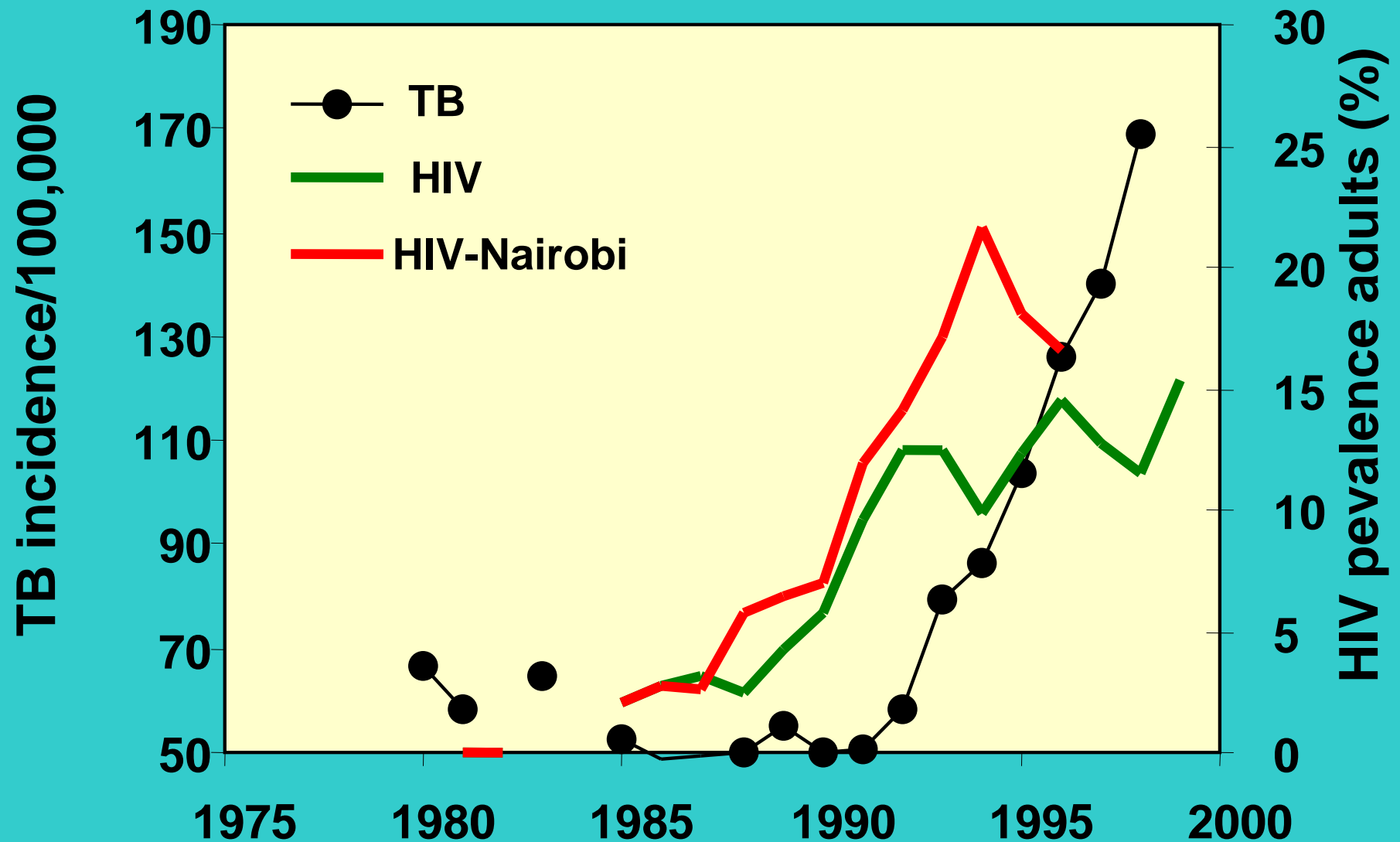


St Mary Mission Hospital  
In Nairobi, Kenya  
6,500 deliveries → 80% agree to  
HIV testing with excellent  
PMTCT

Kibera slum in  
Nairobi, Kenya



# Dynamics of TB and HIV in Kenya



# HIV treatment is prevention!

- Among HIV + men in treatment on ART:
- → Marked decrease in unprotected sex
- → ART decreases HIV in the blood, semen, and other body fluids with decreased transmission
- Estimated → 90% reduction in transmission risk among Ugandan men on treatment

# HPTN 052: Prevention of HIV through treatment

- Randomized controlled study of discordant couples with the HIV+ person  $CD4 > 350$ --- this is a threshold above which we don't recommend ART
- 1/2 received ART ...1/2 were observed until the CD4 hit treatment threshold...all couples were counseled re safer sex
- 96% reduction in HIV transmission to HIV-partner
- NB...over 50% reduction in TB among HIV+ person

# Stigma:

## HIV is the leprosy of our age

### Stigma is an impediment to testing and treatment



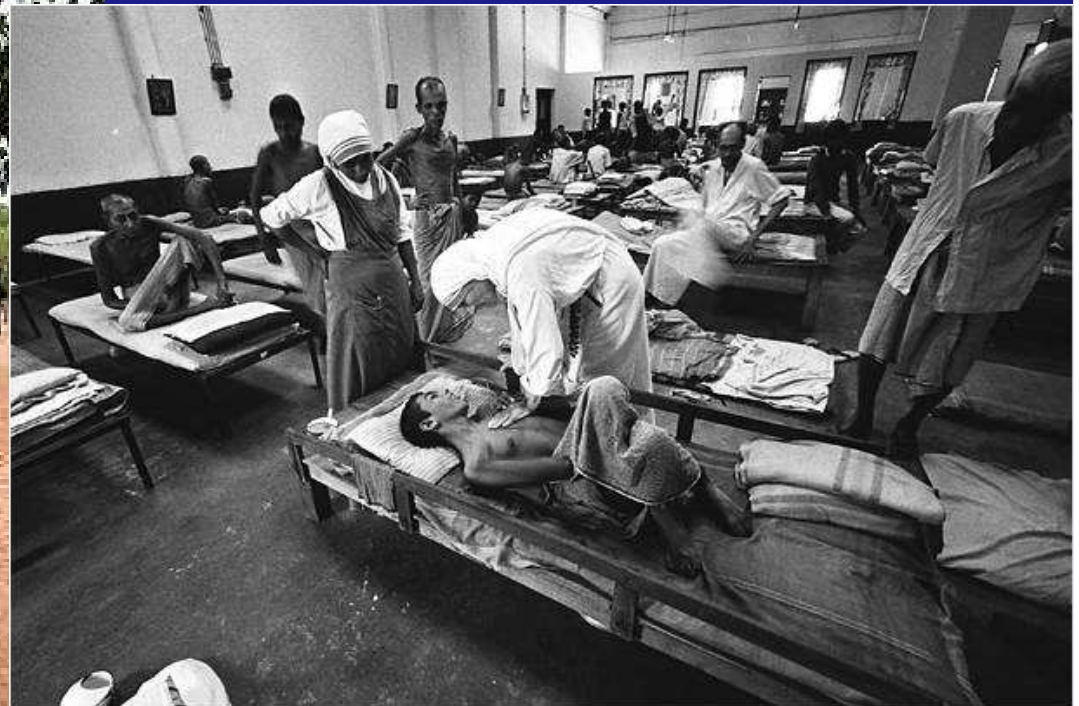
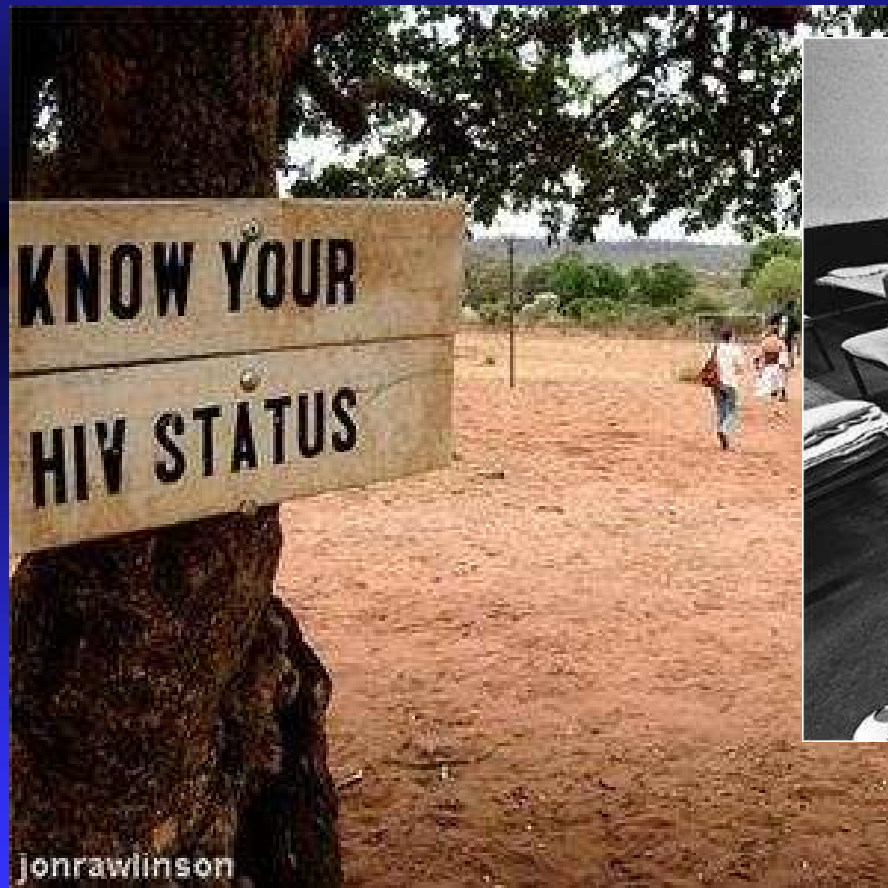


Love and acceptance are the antidotes  
to stigma “We can not do great things on this  
earth...only small things with great love”

Mother Teresa of Calcutta



# Stigma linked to abandonment, lack of testing and treatment, and continued spread of the HIV epidemic



# Embraced: a heartfelt gesture changed perception of AIDS: 1987



Chronicle / Eric Luse



Everyone agrees (pretty much) with what has been just presented...but there is significant conflict with the approach...and hence funding...of prevention both on the individual and the community level

*Person centered response versus risk centered response*

# Person centered response versus a risk centered response to HIV/AIDS

- *Person centered*
- What do you need? How are you vulnerable? Abused? Exploited?
- Cup of coffee? Talk? Substance abuse treatment? Safe place for the night?
- Have you been HIV tested? Are you worried about getting infected?
- Sex work as inherently exploitative
- Drug addiction (ie substance abuse) causes severe pain and harm
- *Risk centered*
- Focus on unprotected sexual acts
- Condom promotion to avoid HIV exposure
- The person seen as a vehicle for viral transmission
- Sex work viewed as value neutral
- Goal: HIV negative test not addressing harm to the person
- CNN Focus: Condoms, needles, negotiation

## *Two approaches: Person vs risk behavior*

- A 15 yo boy...young man is working the streets...sniffing glue.. sex work...grim...depressing
- Recognize exploitation, abuse, pain, damage, despair, hopelessness.
- Drop in center that's safe with hot shower, washing machine, coffee and a sandwich...listen
- HIV testing, treatment, condom availability, other medical care
- Offer to help escape slavery of sexual exploitation, trafficking, and drug use
- Be there for him
- A 15 yo sex worker having unprotected sex with men and women...sometimes transactional for food, money, or drugs ...or a roof ...or just because high.
- Motivational intervention to desensitize condom reluctance...encourage and incentivize condom use.
- Serial HIV testing and condom promotion
- Decriminalization of sex work and intent to change social norms regarding sexuality

# The Condom Solution



Direct application of what worked to stem the HIV epidemic among gay men in San Francisco in 1985... to the rest of the world

# *Person centered response*



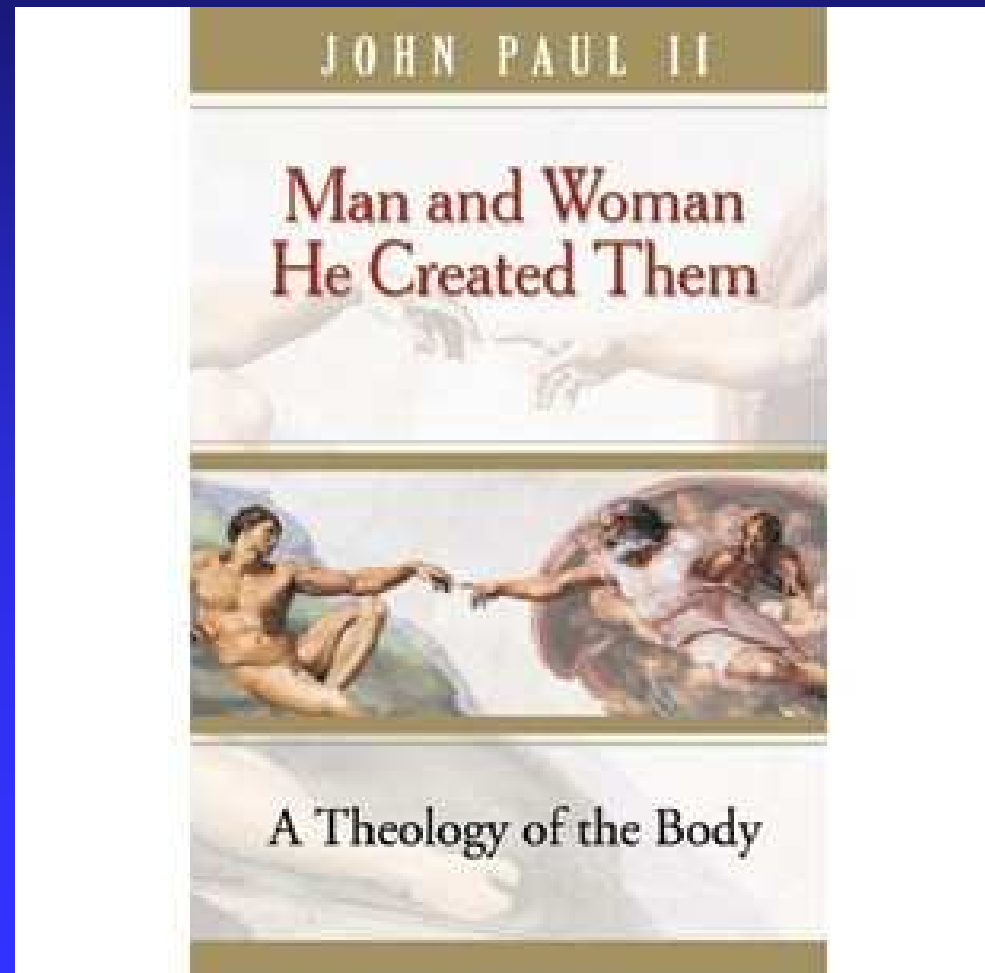
The Catholic Church and other faith based communities have been at the forefront of providing a person centered response to HIV and AIDS

- Caritas, Catholic Relief Services, Countless religious orders, and volunteer groups deserve a chorus of thanks
- Yet hostility and opposition are common

# The Catholic Church's teachings on human sexuality are counter cultural: “A sign of contradiction”

Our sexuality is a God given glorious and mysterious gift to be shared between a man and a woman in a life-long relationship

*This is like waving a red flag in front of a bull...expect anger and hostility.*



# Principles moving forward...

- Prevention, Testing, and Treatment are all intimately linked, can be successful, and provides hope.
- Abstinence (delay in sexual debut), fewer partners (Be faithful) (strategies to decrease concurrency), and condom use with risky sex (ABC) works.
- Testing is key, must be routine, and must be widely implemented with access to treatment.
- The dignity of the person is the most important aspect of care and prevention.....This includes respect for the family and the culture of the community (and is the only way to develop partnerships and be successful)
- A person centered response is a true response to the HIV and AIDS epidemic







## ■ Questions and Discussion:







*Thank you for listening*

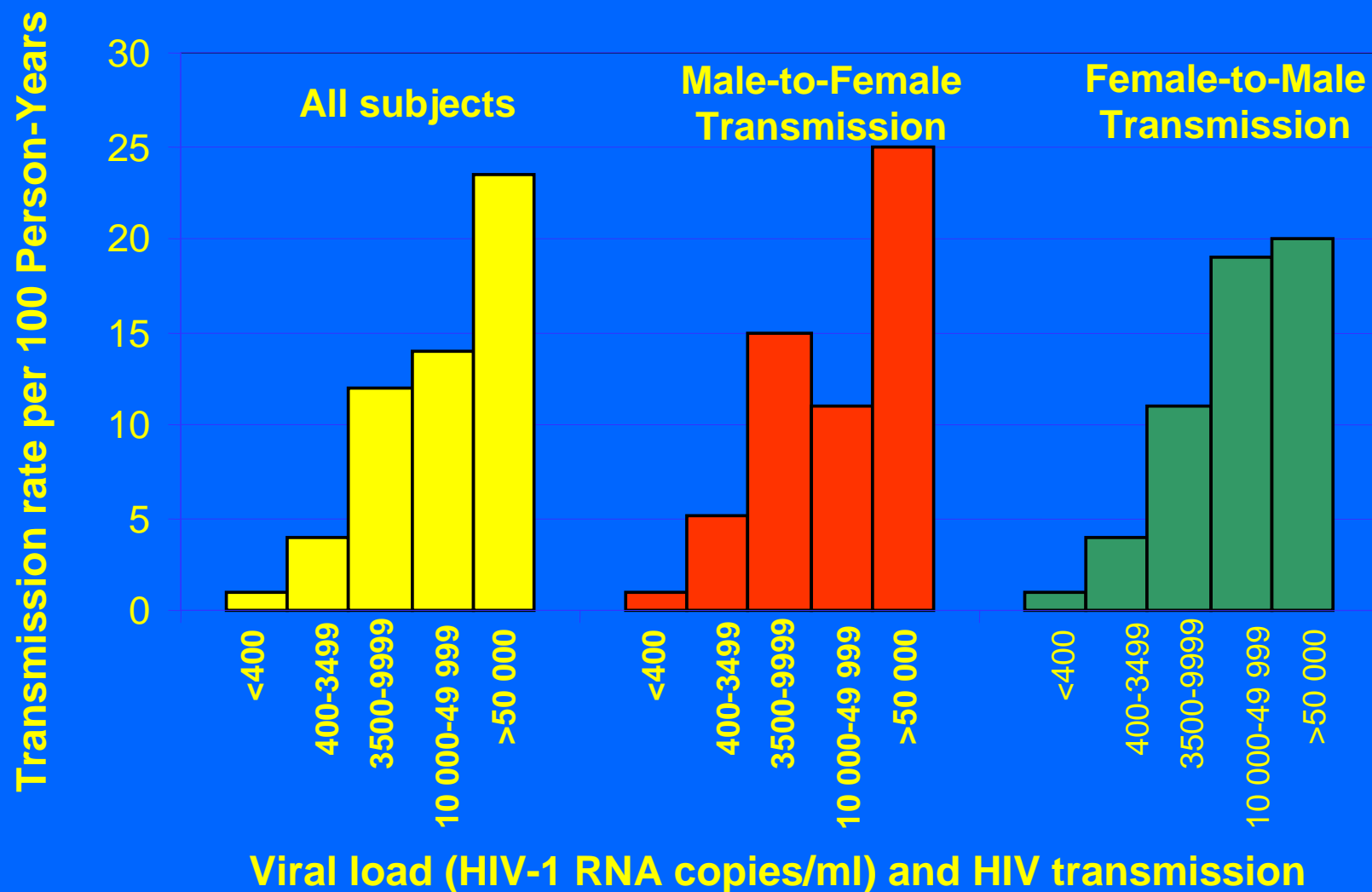
*Thanks to care givers, PLWAs, family members, and so many others who have responded to the HIV and AIDS epidemic with tender loving care.*



# Treatment and Prevention are Inseparable!

- Synergistic
- Supportive
- Not in conflict
- Not in competition

# PLASMA HIV RNA PREDICTS LIKELIHOOD OF TRANSMISSION



Source: Quinn N, et al, N Eng J Med 2000



log10 Count

5

4

3

2

5

4

3

2

0

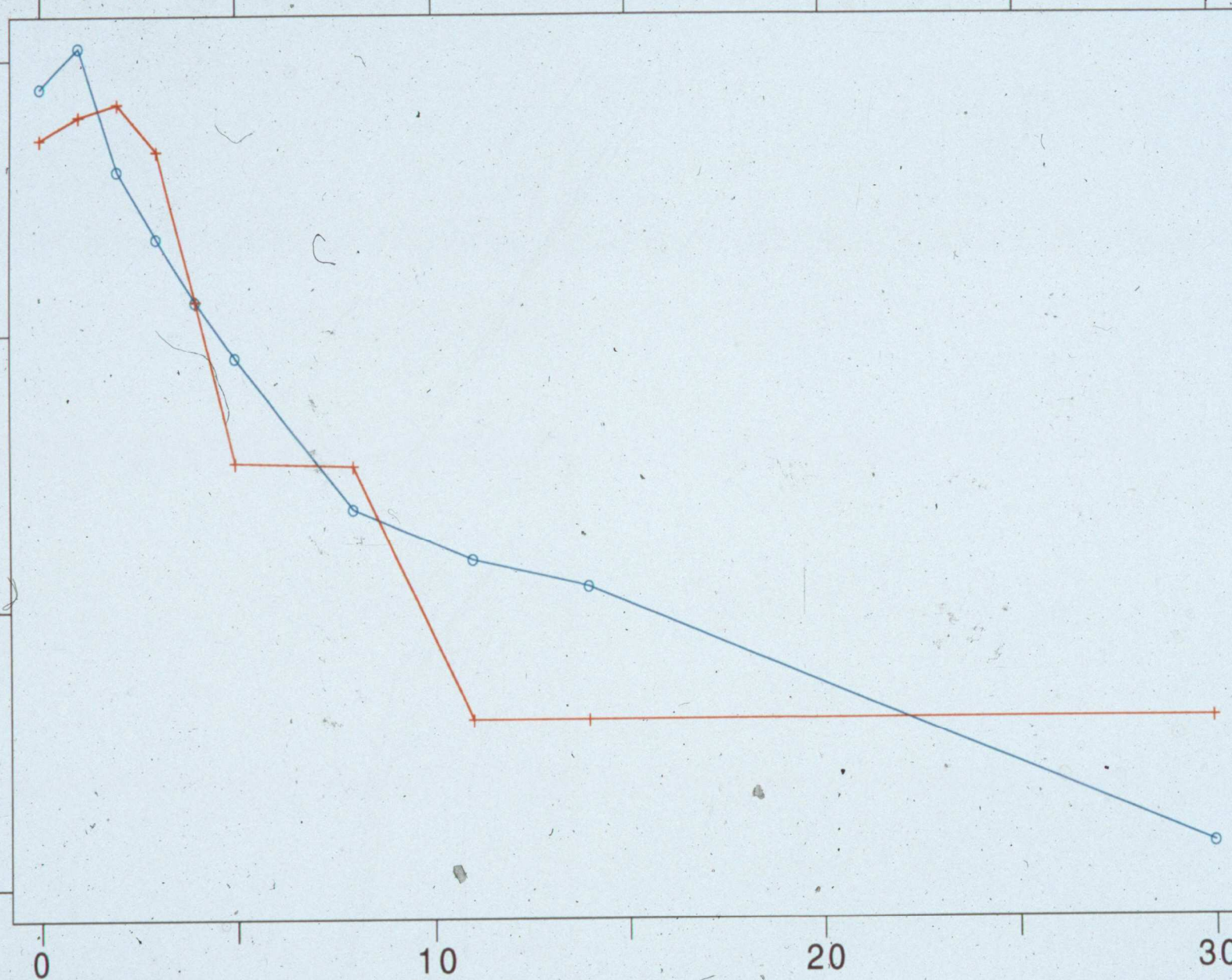
10

20

30

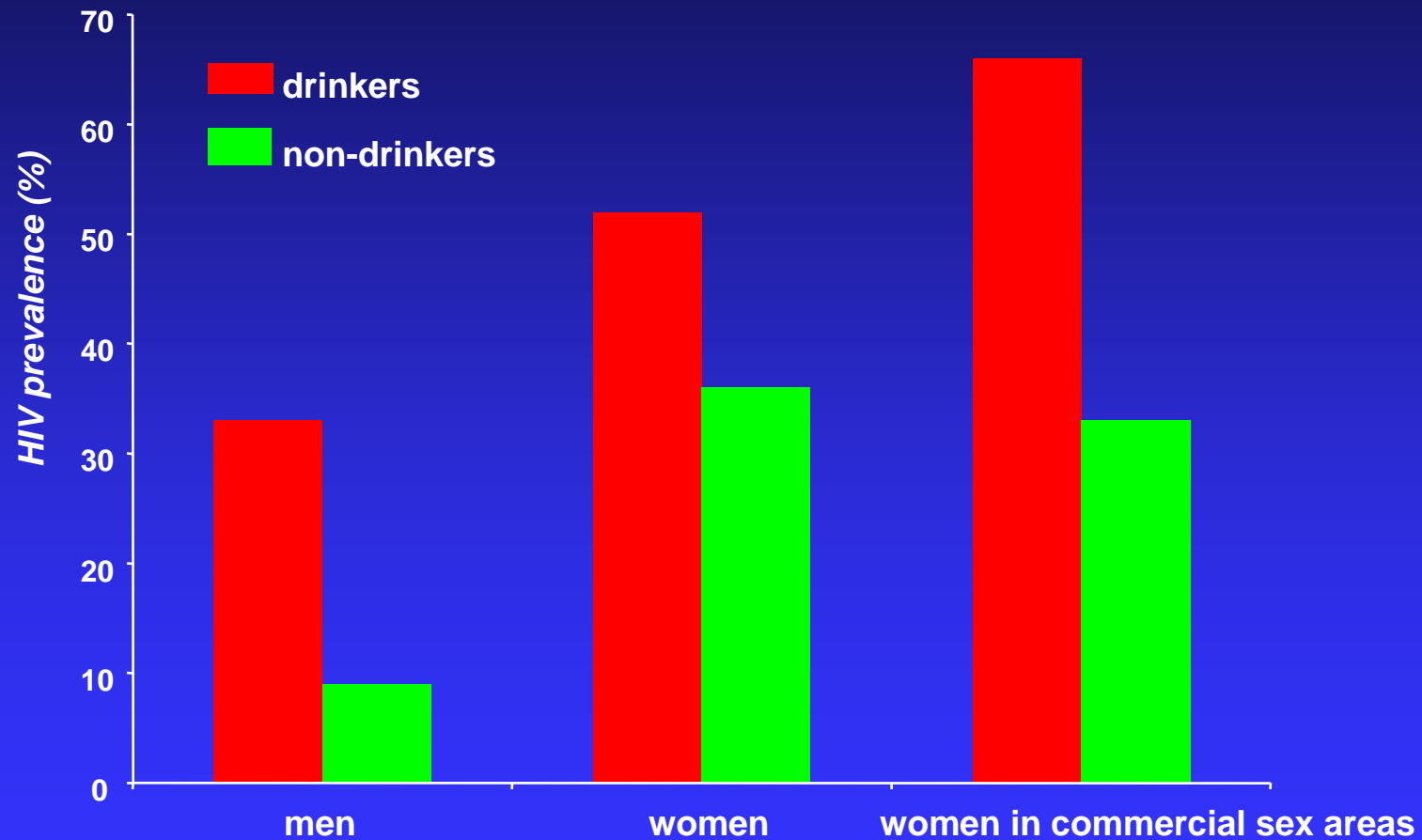
Days Post Treatment Initiation

CVL and Plasma HIV-1 RNA Response to HAART: Pt B



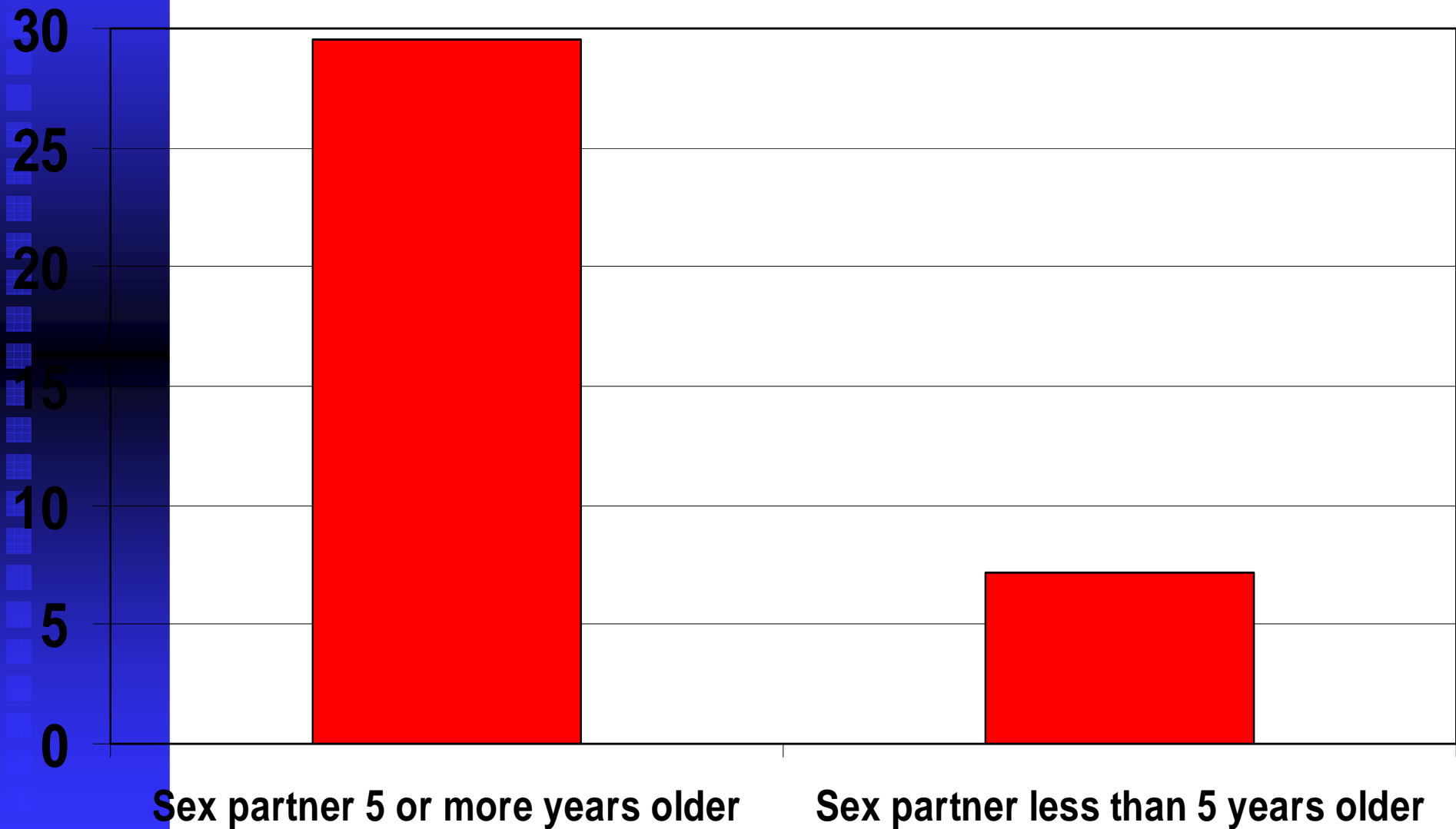


# HIV PREVALENCE AMONG DRINKERS AND NON-DRINKERS, CARLETONVILLE, SOUTH AFRICA



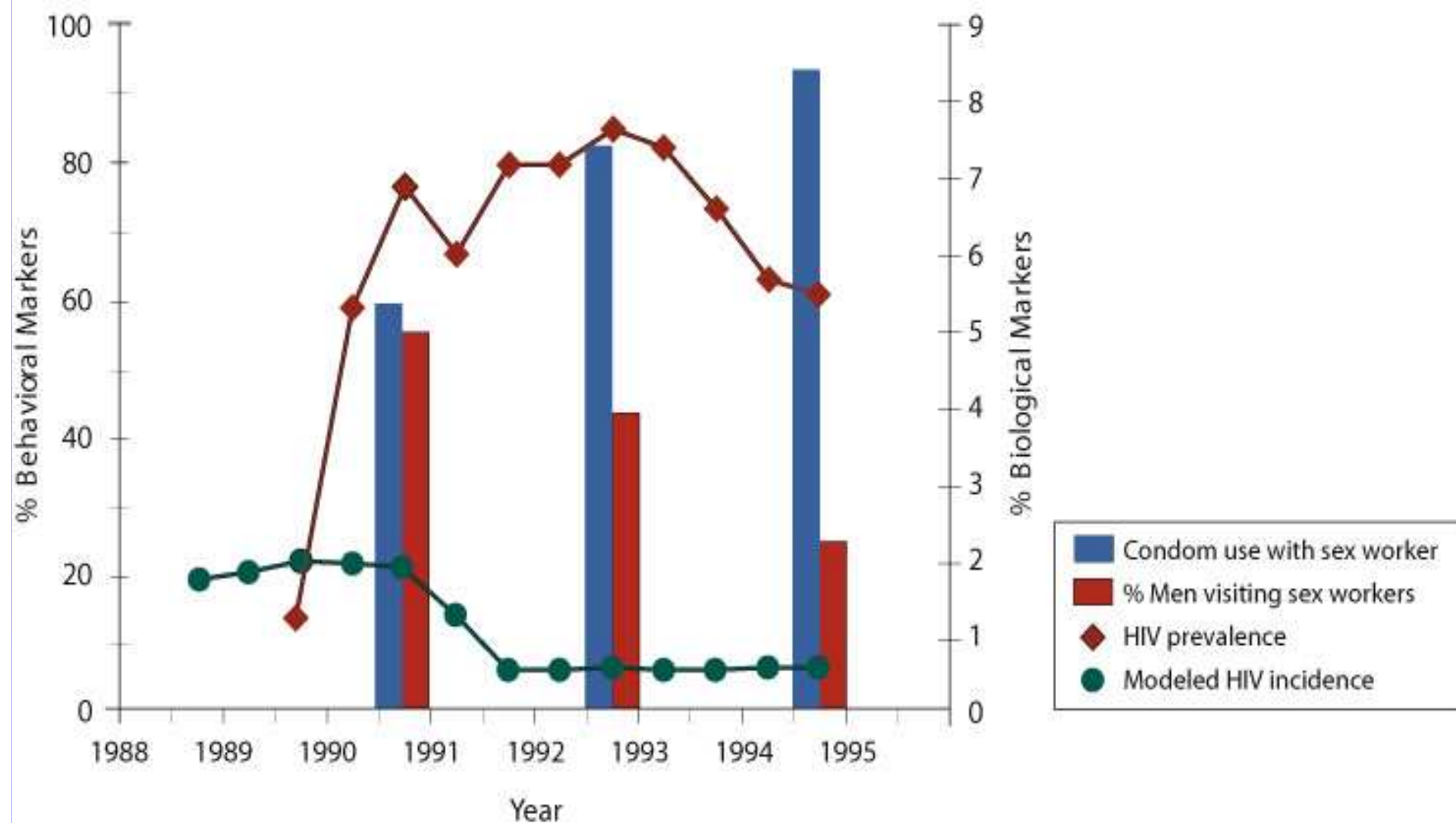
Source: Campbell et al. (2004)

# **HIV PREVALENCE AMONG 15 - 19 YEAR OLDS IN SOUTH AFRICA WITH SEX PARTNERS 5 OR MORE YEARS OLDER**



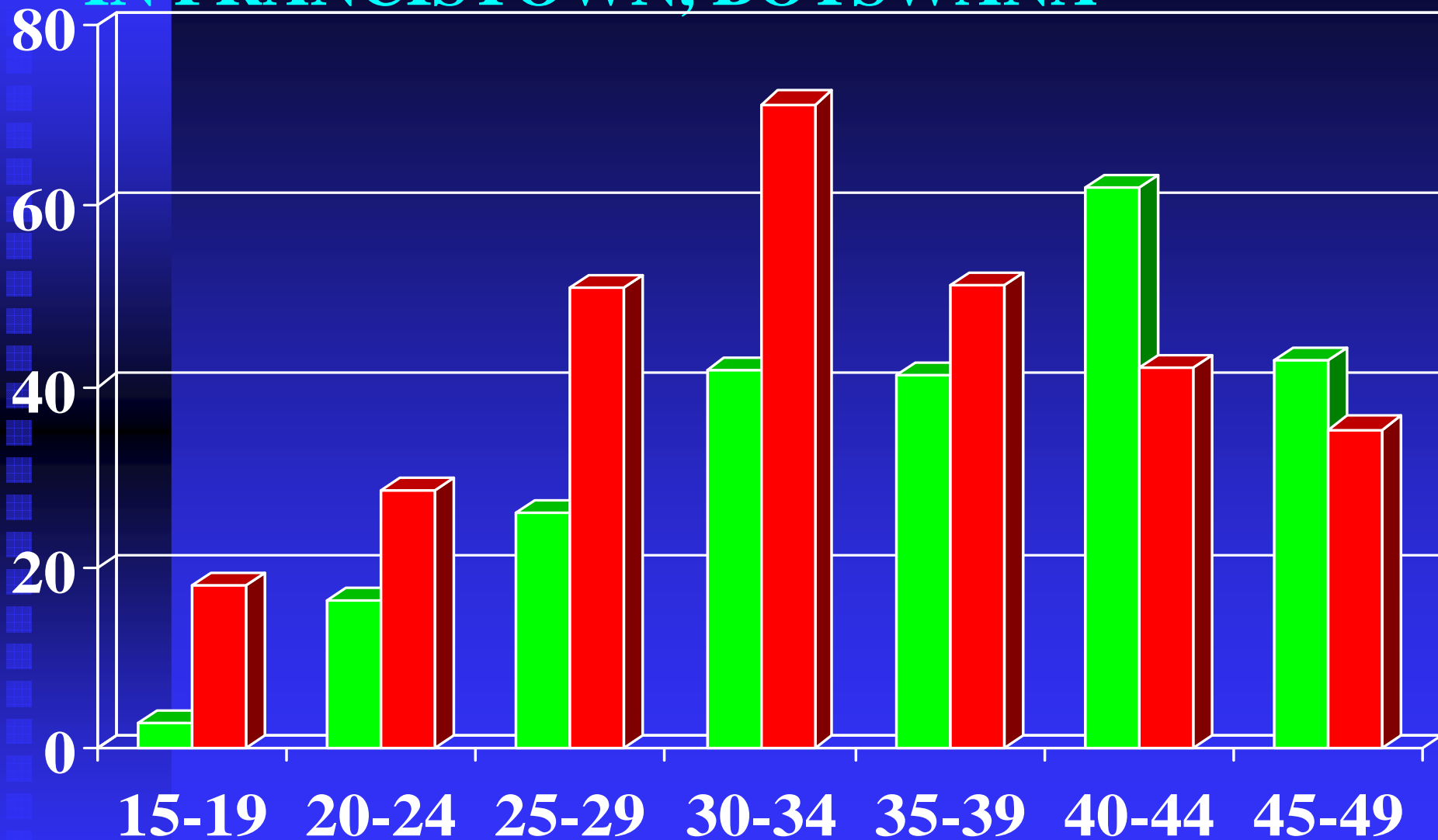
Source: South African National HIV Prevalence, HIV Incidence, Behaviour and Communication Survey, 2005

## Behavioral Changes and HIV Infection, Thailand 1990–1995



Adapted from Stoneburner and Low-Beer: "Epidemiological elements associated with HIV declines and behavior change in Uganda: Yet another look at the evidence"

# POPULATION-BASED HIV PREVALENCE IN FRANCISTOWN, BOTSWANA



■ Male ■ Female

Sources: BAIS, 2005

# Innovative HIV testing programs are needed

- Routine testing “**opt-out**” in the medical setting (now recommended by the CDC and WHO)... clinics, medical floors, ED
- Community based testing, pharmacy based testing, universities, jails, .....
- Does couples testing make sense?
- Is stigma a reason not to test...or will testing decrease stigma?
- Improved partner notification

# Think Global\_Act Local

## A Novel HIV Testing Campaign in Philadelphia

Engaging African American Religious Leaders

**We Have Been Tested for HIV. Have You?**



# Get Tested for HIV

*To Find A Testing Center Near You Call:*

**1-800-985-AIDS**

Billboard to be displayed throughout the city



Does this work even among those that are marginalized and at risk?





Partnership is key...both with professionals  
and with those in the community that are  
sympathetic...and with those at risk



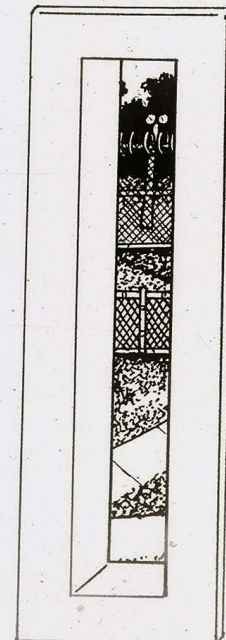
Did you know the window period  
for H.I.V. (the virus that causes  
AIDS) is 6 months to 1 year? This  
means you should be tested 6 MO.  
to 1 yr. after the last time you  
put yourself at risk. (Sharing needles/unprotected sex)

Any questions  
concerning H.I.V.  
can be answered by the  
following people who've  
been educated in  
this field:

Henry Godin  
George O'Tool

John Williams  
Bob Cline

Alton Lassiter  
Richard Page  
Michael Aballo



The only shame is not  
knowing!!!

## New HIV Diagnoses at the Rhode Island Department of Corrections (RIDOC), 2000-2009

	<b>Total # of detainees newly diagnosed with HIV infection upon entry to RIDOC</b>
2000	33
2001	26
2002	23
2003	27
2004	23
2005	14
2006	10
2007	13
2008	6
2009	5

- ALL treatment programs must incorporate prevention interventions for HIV+ patients, spouses, partners, and families
- ALL prevention programs must incorporate HIV testing programs and ALL testing programs must be able to link with care and provide HAART

- While lecturing to students at Harvard in the fall of 1925, Francis Peabody noted, "...the secret of the care of the patient is in caring for the patient."
- This maxim is not taught in a lecture, but it is lived and taught by example...
- When grappling with HIV, the care of the patient is the cornerstone of effective treatment and prevention and most importantly provides hope!



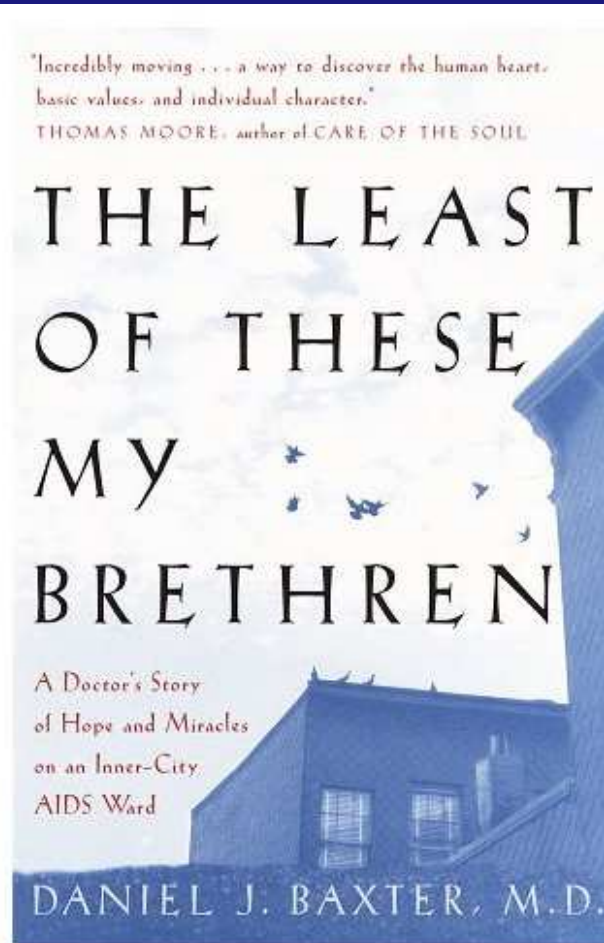


# Largest HIV medical care provider world wide are the Catholic Church affiliated hospitals and medical care programs

Early days in US:

St Clare's Hospital  
In NYC →

Hospice care programs  
by the Missionaries of  
Charity in NY, San  
Francisco, and Atlanta



# Mother Teresa's philosophy:

We are all broken and we are all in need of healing and love...and God asks us to step forward and with our hands show His love to others



# To simplify...

The Catholic Church opposes the condom solution to the global HIV and AIDS epidemic and instead promotes human sexuality within the context of a lifelong committed relationship.

As a physician, when a person goes to a brothel, has multiple sexual relationships, or is unfaithful to their spouse then they should use a condom.

The Catholic Church does not comment on how to be “safer” when having sex outside of marriage...rather it is always encouraging us to strive to live out our sexuality within a loving lifelong relationship.



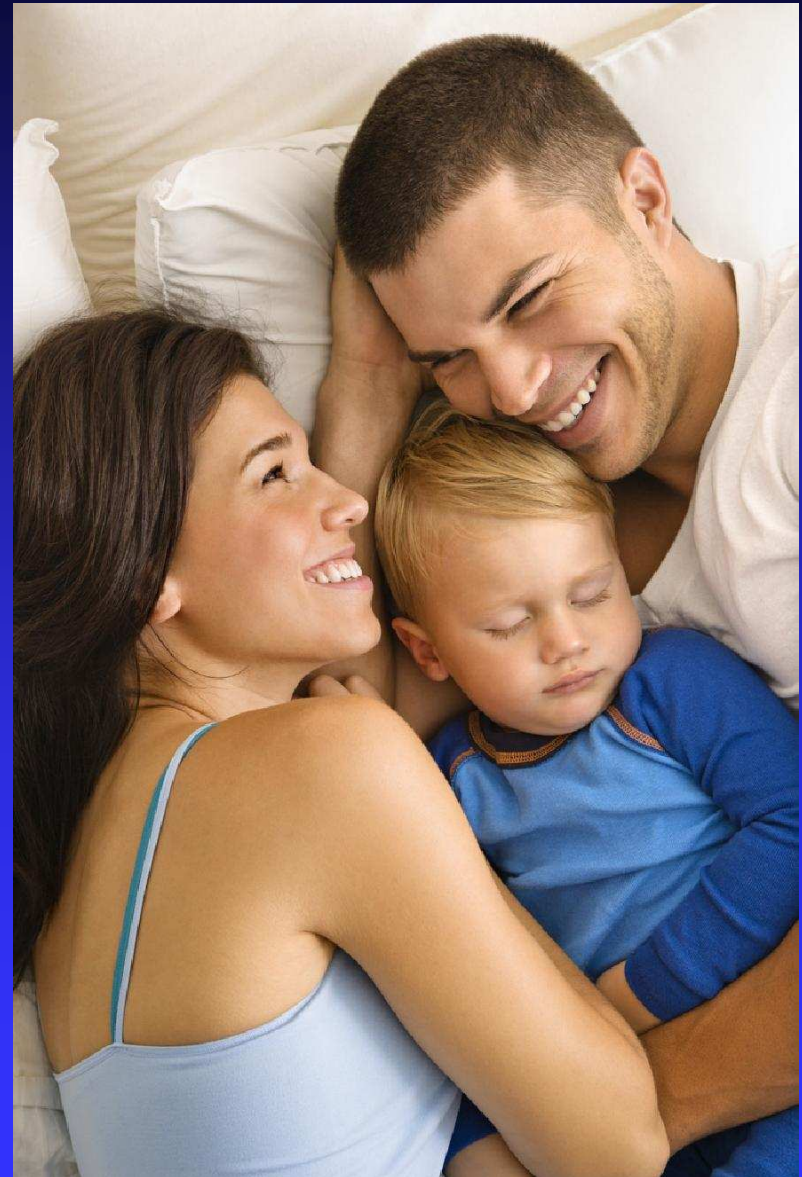
# So...The Catholic Church

Has played a key role in HIV and AIDS care globally and should always do more

Has at times been at the forefront of reducing stigma, and at other times it has fallen short and has contributed to stigma

Upholds a view of human sexuality that is counter cultural because it proposes that our sexuality is God-given and integral to a life long loving and committed relationship between a man and a woman-and so is in opposition to the “condom solution”

A sign of contradiction...



# The Catholic Church teaches

What is best and healthiest for the human person...  
is sex within life-long loving marriage with the recognition  
that this will often not be the case.

Humans stumble, fall, and fail...more often than not...  
and that's ok...God's love and forgiveness and grace  
is ever present and is no less!

The Catholic Church's teaching on sexuality is akin to  
its teaching on divorce...The Church holds up what is  
best for the human person even though it recognizes  
human frailty and weakness and that it's teachings are  
outside of the norms of society.