

Six Prevention Priorities for EAC Countries

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Outline

- **Background**
- **Six Prevention Priorities**
 - **Prevention with Positives**
 - **Diagnosing HIV infection**
 - **PMTCT and FP**
 - **Care and Treatment as Prevention**
 - **Male Circumcision**
 - **New Surveillance**
- **Conclusions**
- ***Methods: nationally representative data***

Why has prevention lagged behind?

- Limited paradigms and limited number and efficacy of evidence-based interventions
- Infrequent translation of research to effective programs and inadequate use of national data
- Few interventions brought to full-scale with monitoring of effectiveness
- Targeting of interventions not optimal: prevention services reach <10% of people worldwide
- Insufficient funding and political will

**Priority One:
Positive Prevention/Prevention
with Positives**

HIV Prevention Paradigms

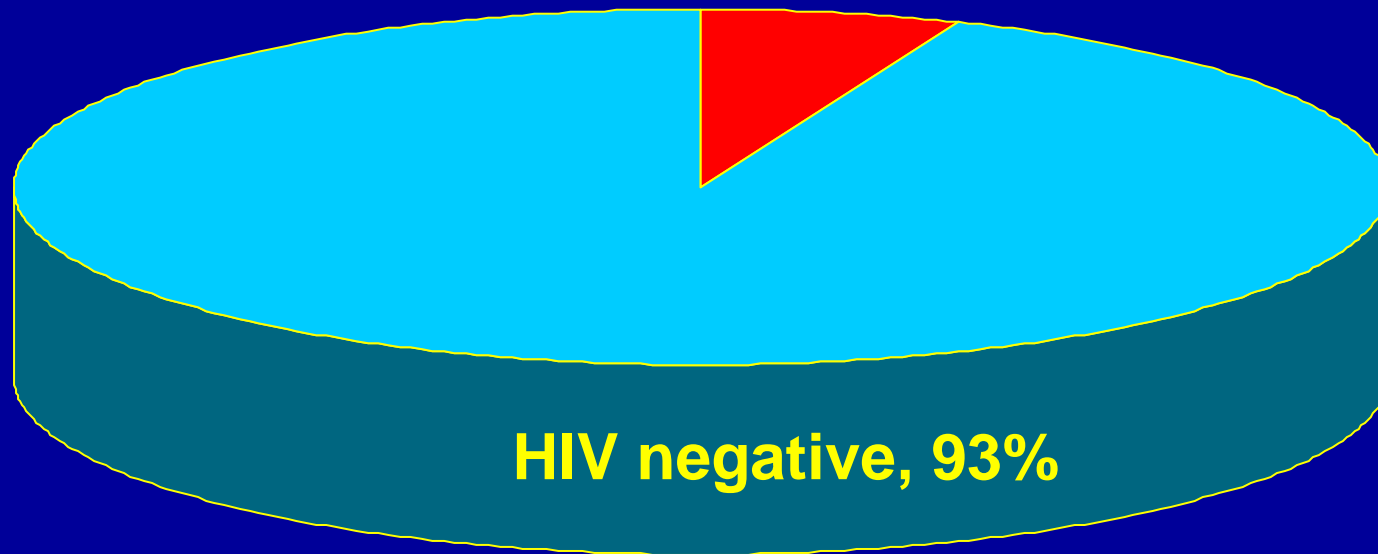
- **Most prevention efforts in EAC have focused on helping people avoid acquisition of HIV**
 - Target HIV negative persons or ignore HIV status
 - Mass media, peer education, ABC efforts, etc...
- **Positive Prevention/Prevention with Positives (PWP) refers to prevention efforts that support HIV-infected persons to reduce their risk of HIV transmission**

PWP in Kenya

**Shared responsibility:
HIV-infected people can
transmit HIV**



HIV positive, 7%



Focus efforts on 1.3 million HIV-infected adults as well as 22 million uninfected?

Evidence Base for PWP

- **Among HIV-infected adults, knowing status associated with 64% reduction in risky sexual behavior**
- **Clinician-initiated communication, group counseling, partner testing**
 - Shown to reduce frequency of unprotected sexual acts and numbers of sexual partners
- **Condom use associated with 80% reduction in transmission**



Crepaz *AIDS* 2006 ; Wolitski *AIDS Beh* 2003; Bunnell *JAMA* 2006; Weller *Cochrane* 2002

Positive Prevention/PWP

- **Positive Prevention now recommended by UNAIDS, WHO, CDC and many others**
- **Challenges in:**
 - **defining content of PWP interventions**
 - **developing implementation strategies**
 - **ensuring leadership of PLWH**
 - **ensuring positive prevention support for PLWH who choose to be sexually active**
 - **over-coming negative attitudes of providers**

Altruism and sense of responsibility among people living with HIV

Recent study of 1092 PLWH in Uganda:

“...I don't want to infect anyone else with HIV. I know how painful it is to know that you are going to die. When I told my father about my HIV status, he cried... Before I could even cry, he started crying. All friends, family get worried when I fall sick. I don't want it to happen to anybody else.”

--36 year-old HIV-infected man

Altruism and sense of responsibility among PLWHs

“If I infect him with HIV, I will be responsible for his death. I would die knowing I have sinned against God.”

--27 year-old HIV-infected woman

Study Conclusion: PLWH are highly motivated to prevent HIV transmission; PWP interventions need to provide tools, skills and support

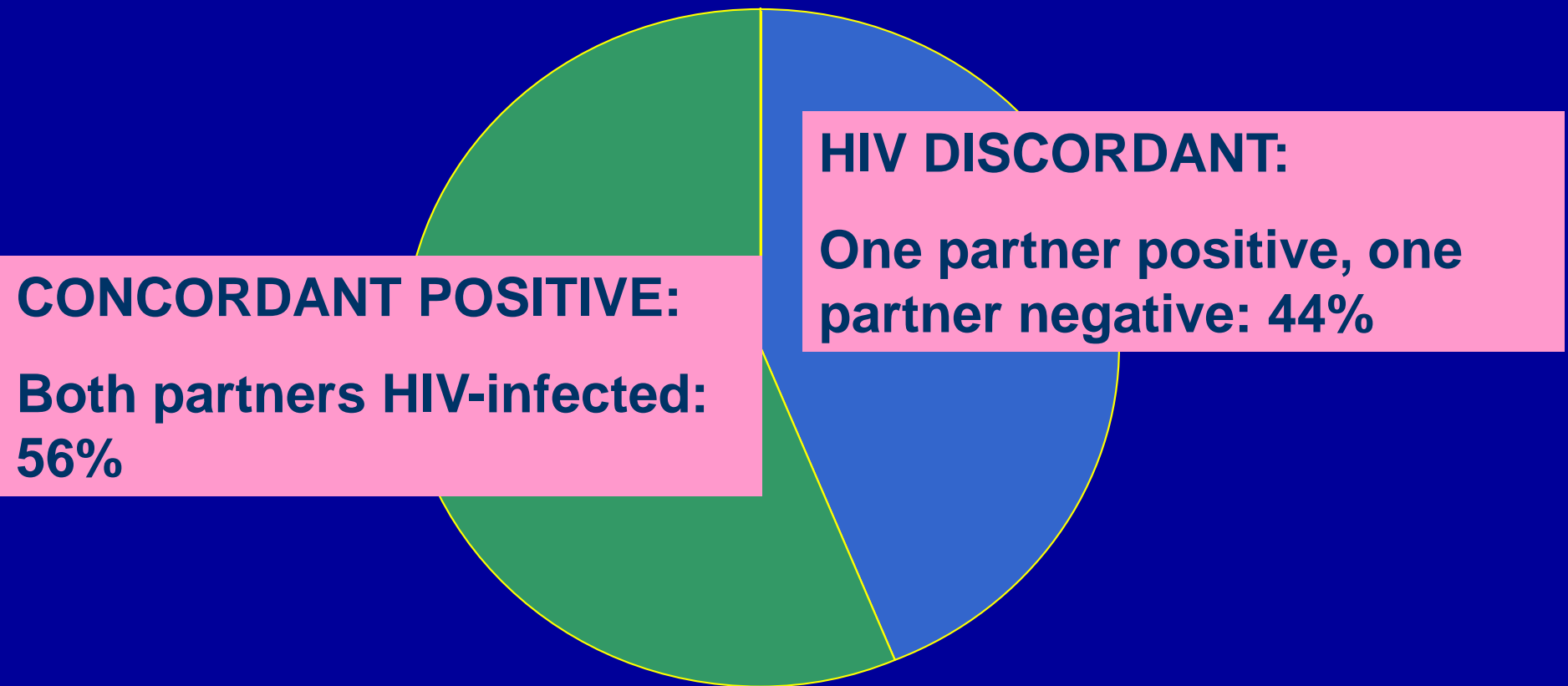


Uganda: Partners with whom HIV-infected adults are having unprotected sex



► ***67% had never used a condom in their life***

HIV status of spouses of HIV-infected persons in Kenya, KAIS, 2007



► *In Kenya, 44% of married HIV+ persons have an HIV-negative spouse*

Action steps

Prevention with Positives

- **Diagnosing HIV infection**
- **Supporting disclosure**
- **Partner testing and counseling**
- **Provision of care and ART**
- **Behavioral interventions for HIV-positive persons and partners**
- **Prevention of unintended pregnancies**
- **Universal access to PMTCT**
- **STI screening and treatment**
- **Promotion of leadership by HIV-positive individuals**

**Priority Two:
Ensuring Individuals with HIV
learn their HIV status**

Increasing HIV testing coverage

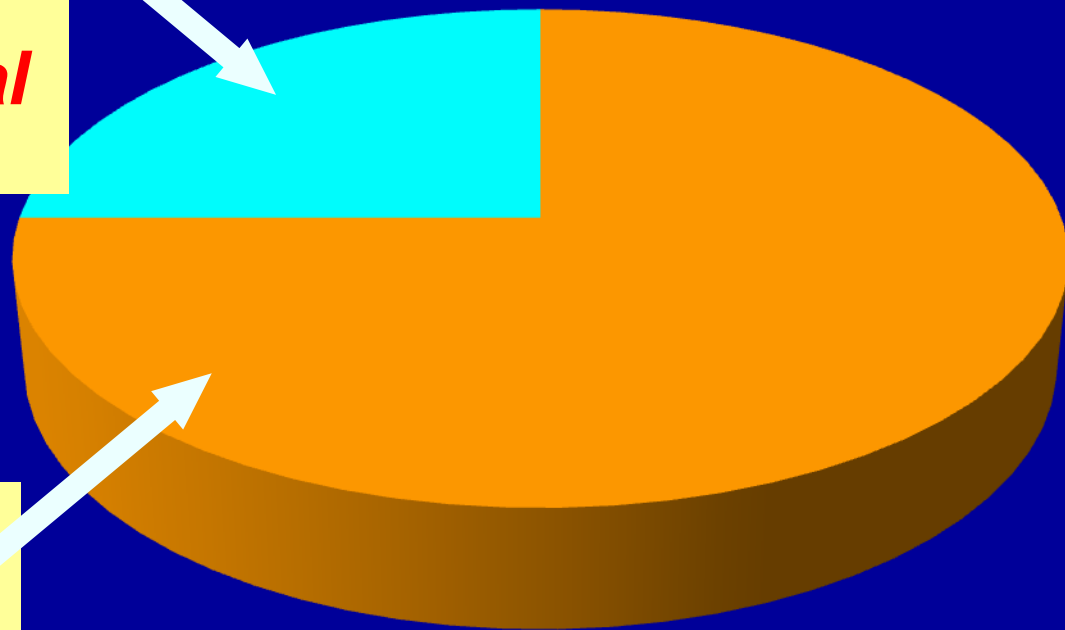
- **Knowing HIV status associated with more than a 60% reduction in risk behavior among HIV-infected persons**
 - **Meta-analyses in the U.S.**
 - **Nationally representative data in Africa**
- **Low coverage of HIV testing**
- **HIV transmission largely associated with those who do not know they have HIV**

People with HIV in United States

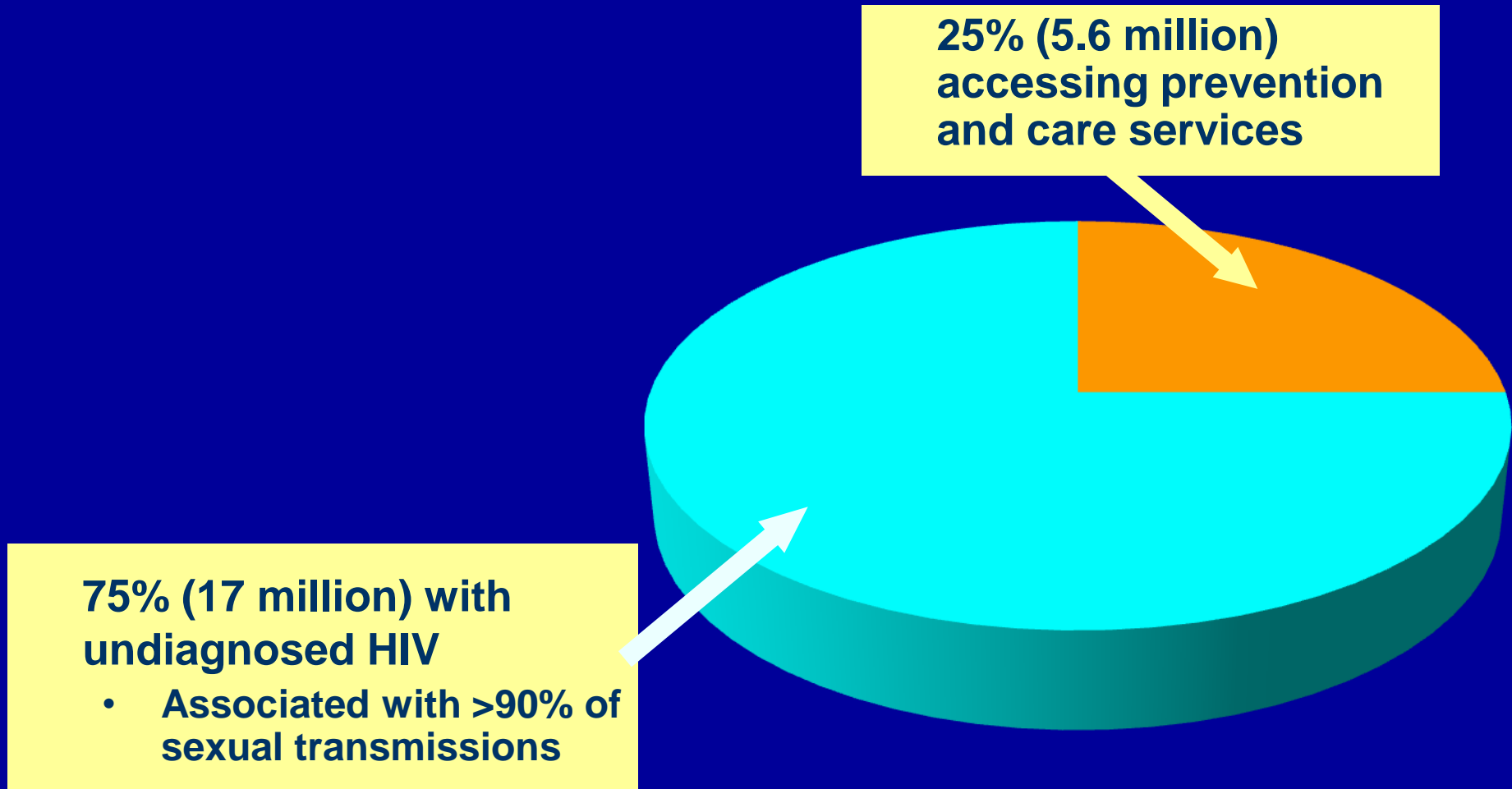
25% (275,000) with undiagnosed HIV

- *Associated with 54-70% of sexual transmissions*

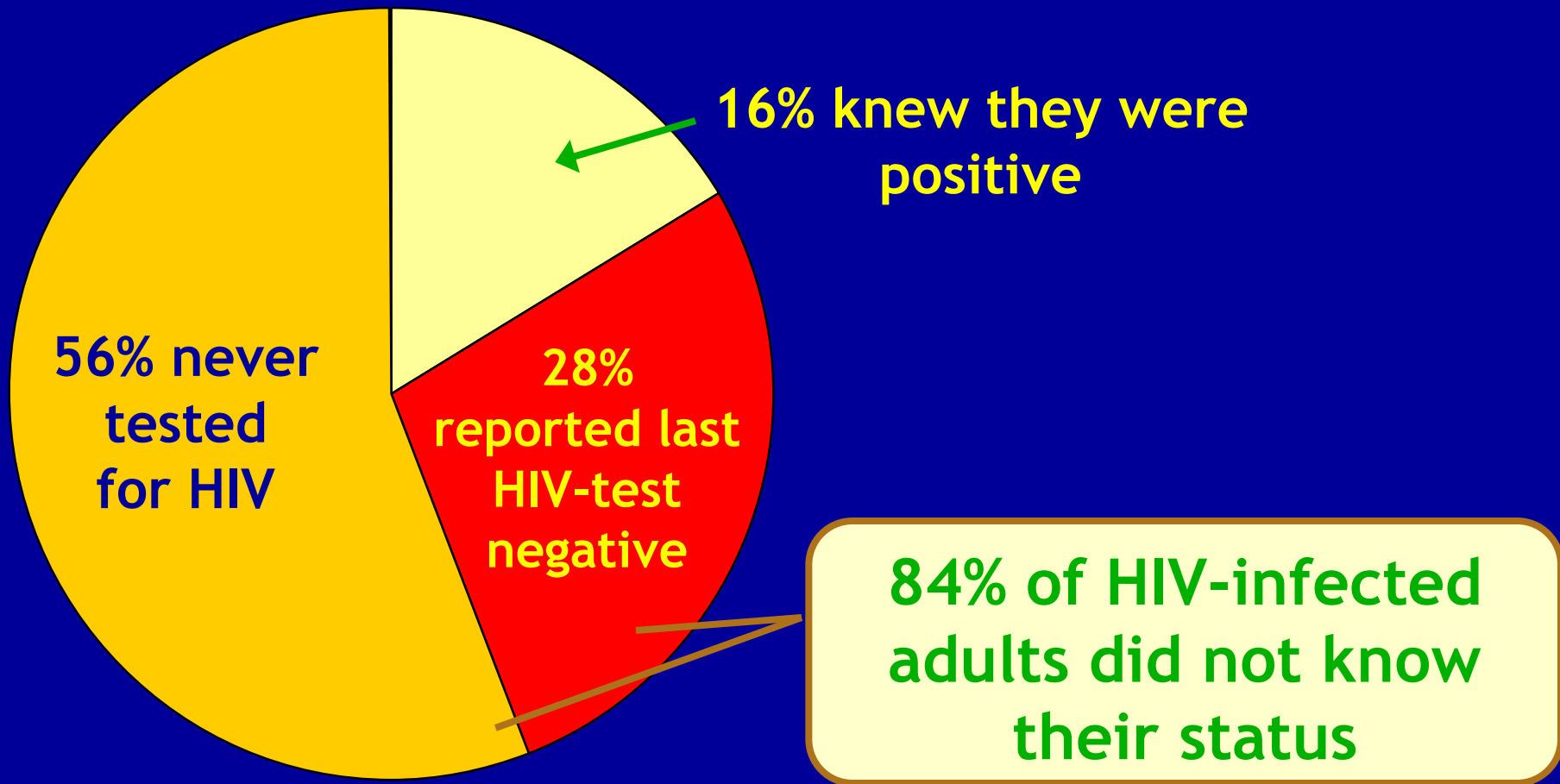
75% (825,000) accessing prevention and care services



People with HIV in Africa



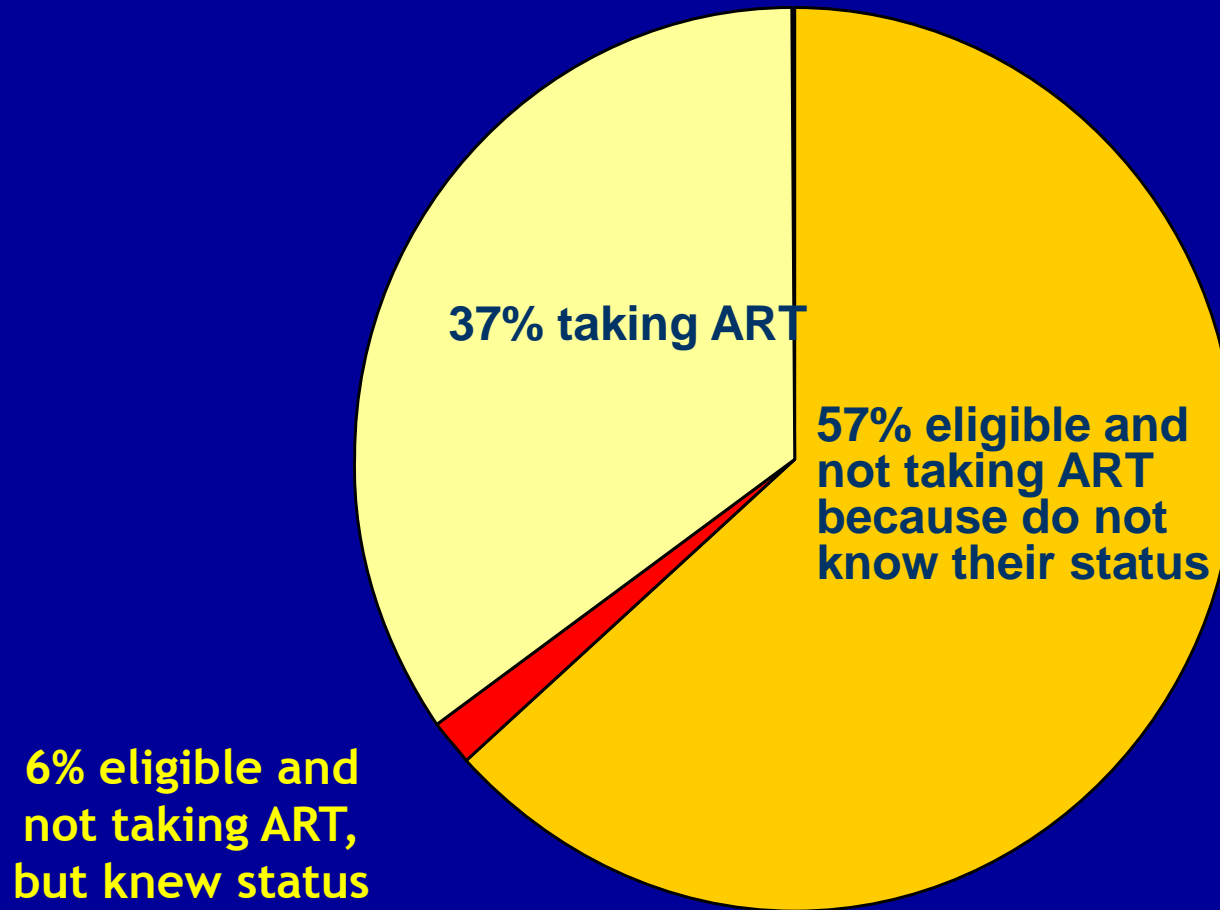
Knowledge of HIV Status among HIV-infected Kenyans (KAIS)



Denominator: Lab-confirmed HIV infected participants
(2% missing data on HIV testing history or known HIV status; 1% chose not to disclose status)

Access to ART

National survey, Kenya, 2007



1.3 million Kenyans with HIV

Expanding HIV testing

- **Provider initiated HIV testing in health care settings**
 - WHO and national policy
- **Partner and family member testing**
- **Mobile and community**
- **Door-to-door; couple testing**

Cost-effectiveness of HIV testing

- **84,323 people in Uganda received VCT through either stand-alone, hospital, household member, door-to-door approaches**

Table 3. Cost-effectiveness comparisons.

	Stand-alone HCT	Hospital-based HCT	Household-member HCT	Door-to-door HCT
Average cost-effectiveness ratios for different outcomes ^a				
Cost per HCT client ^b	\$19.26	\$11.68	\$13.85	\$8.29
Cost per new HCT client	\$29.70	\$14.73	\$14.54	\$9.21
Cost per HIV-positive individual identified	\$100.59	\$43.10	\$231.65	\$163.93

- **All were cost saving if averted infections and treatment costs were included: \$1,800 to \$51,000 saved per 1,000 clients**

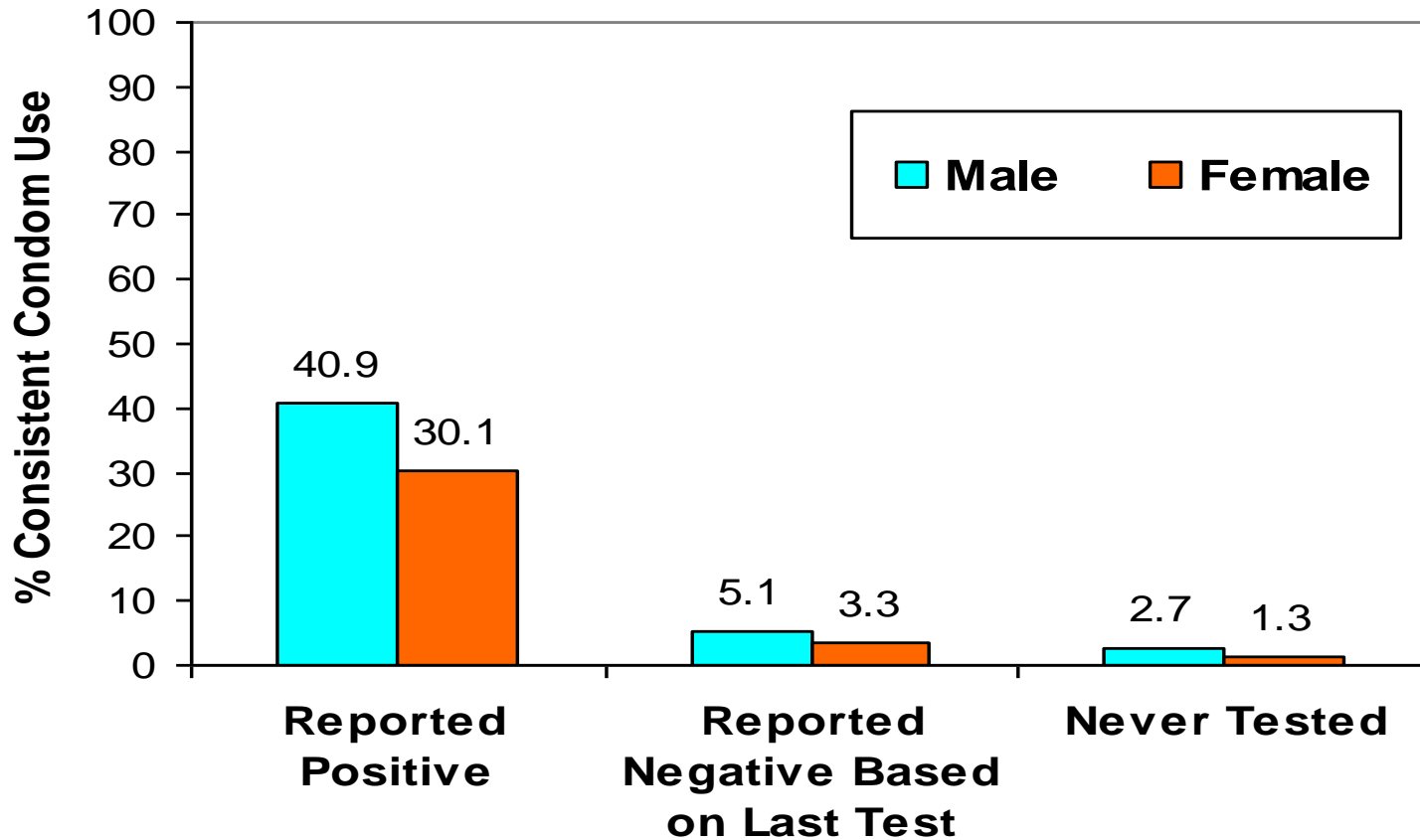
Door-to-door HTC in Kenya (Kibera and Asembo)

- **>90% uptake (15,000 people)**
- **65% of persons in couples tested together**
- **Prevalence 13%**
- **85% of HIV-infections undiagnosed**
- **Median CD4 count 450 cells/ml**



Consistent condom use in married couples by PLWH in Kenya, 2007

*Consistent condom use in the last 12 months



Married/cohabitating PLWHs who knew their status more likely to use condoms consistently

**Priority Three:
PMTCT and Prevention of
Unintended Pregnancies**

Provision of universal access to PMTCT

- **Rwanda and Kenya have made excellent progress on expanding PMTCT services in ANC settings**
- **Still more work on ensuring universal access within ANC settings and communities particularly in some countries**
- **Provision of good PMTCT counselling in care and treatment settings for those who want more children**

Kenya: unmet need for family planning among HIV-infected women

- **67% of HIV- infected women desired to limit or space births**
-
- **Of these, 60% had unmet need for modern contraception**
- **Overall, 40% of all HIV infected women have an unmet need for contraception**

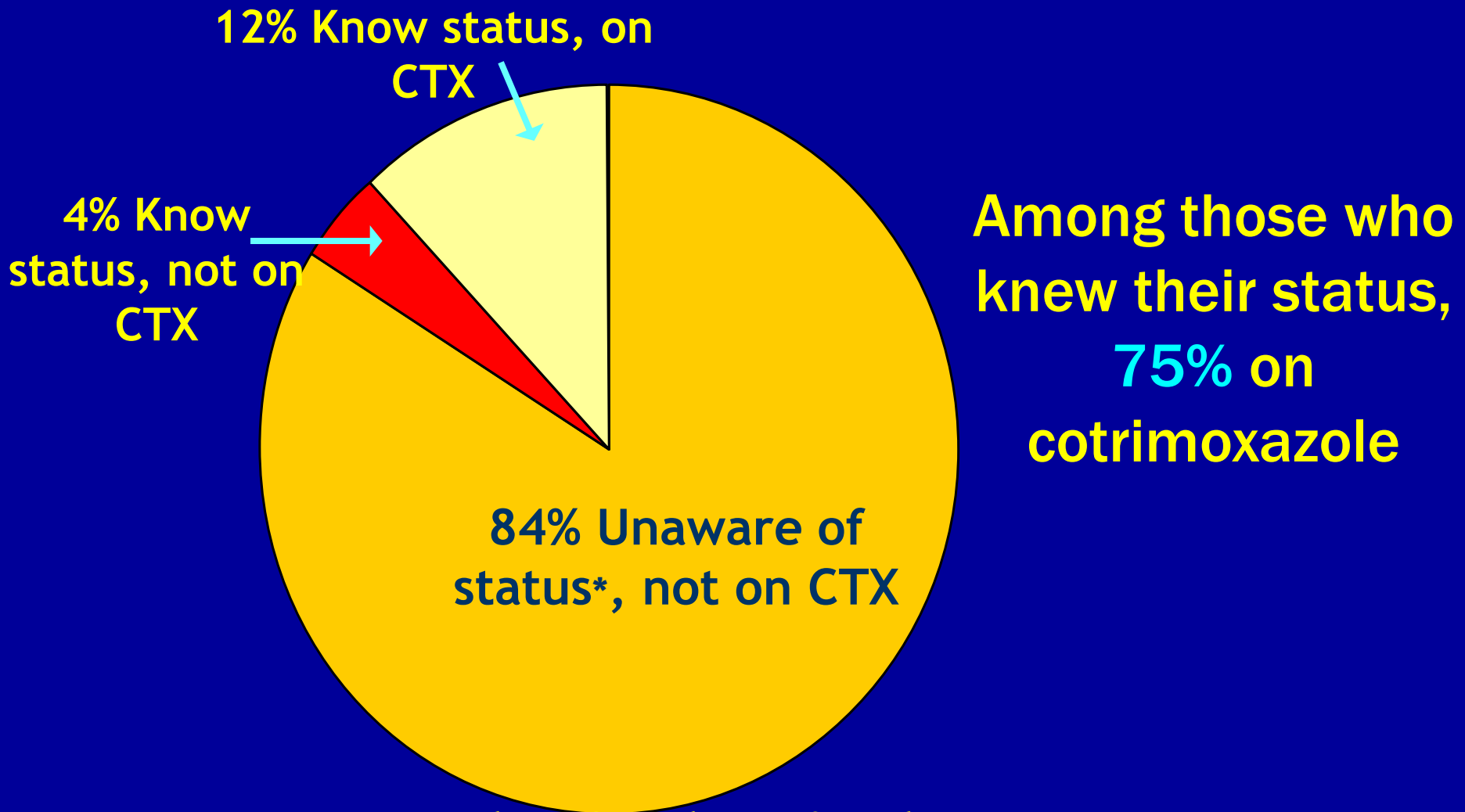
**Priority Four:
Care and Treatment as Prevention**

Care and ART:

Effects on HIV transmission risk

- **Care and ART reduces viral load**
- **Persons with low or undetectable viral loads are much less likely to transmit HIV**
- **Increasing care and ART coverage could prevent HIV transmission**
- **Importance of Care: evidence that cotrimoxazole prophylaxis, multi-vitamins and acyclovir reduces viral load in HIV-infected persons**

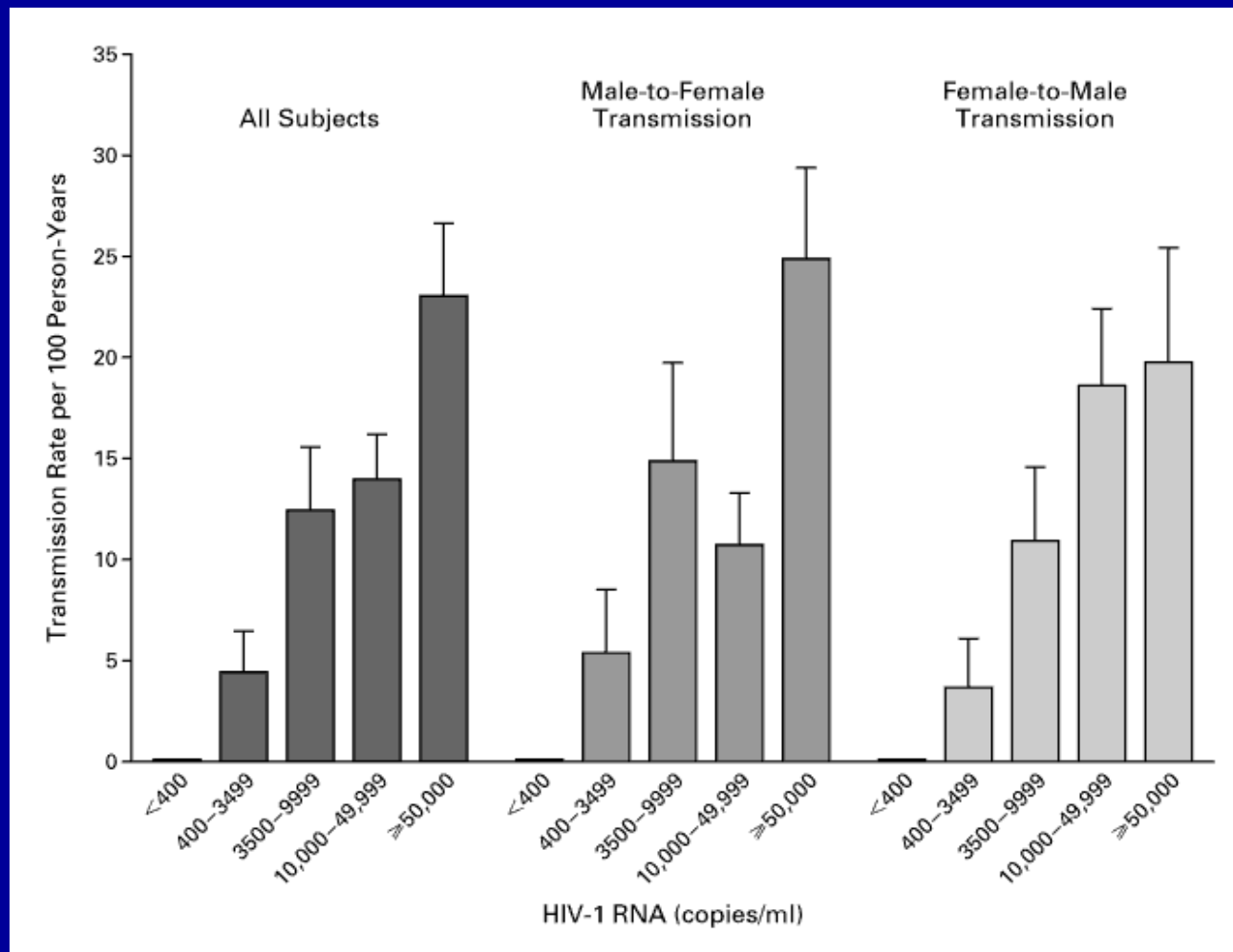
Coverage of Cotrimoxazole



Denominator: Lab-confirmed HIV infected participants

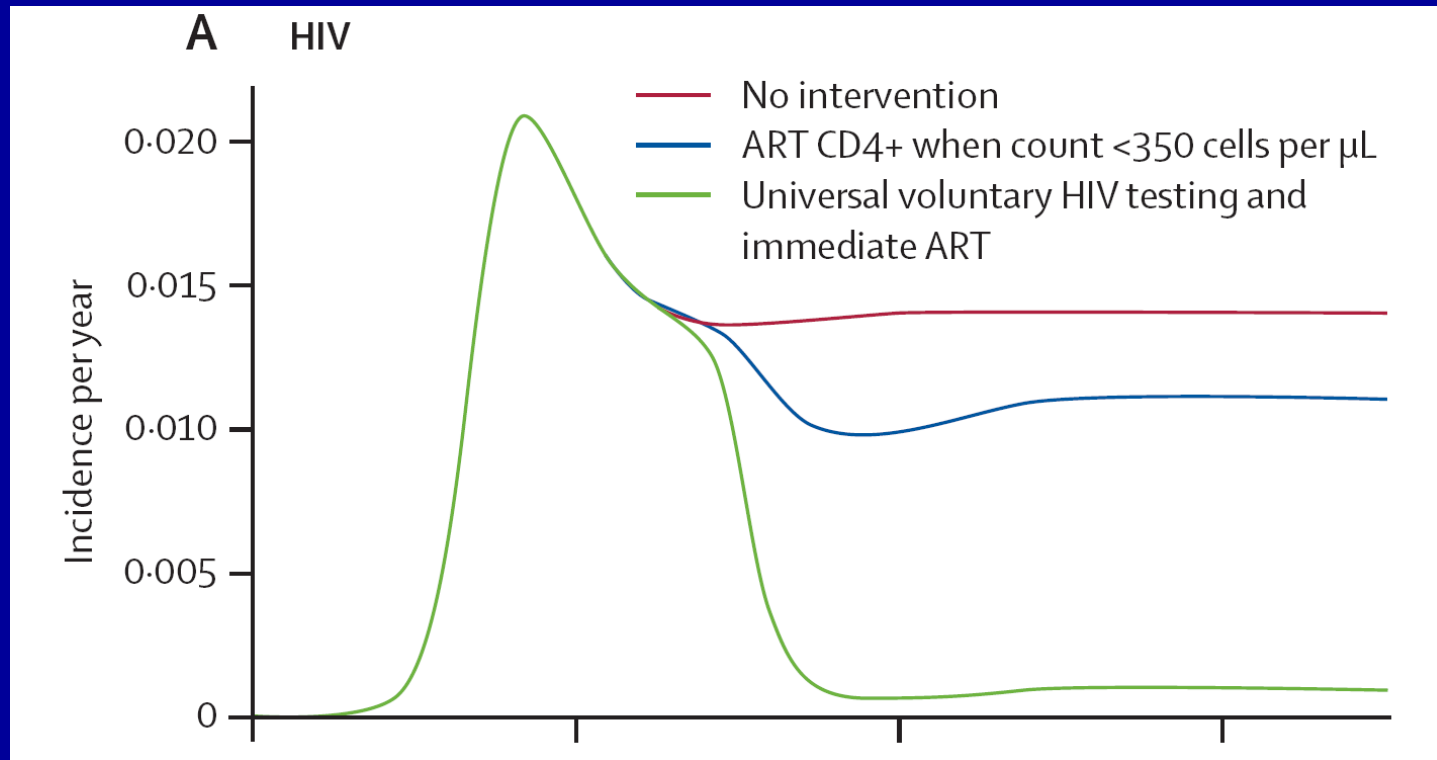
* Never tested for HIV, reported uninfected based on last HIV test

HIV transmission rate by serum viral load



Quinn TC, Wawer MJ, Sewankambo N, Serwadda D, Li C, Wabwire-Mangen F, Meehan MO, Lutalo T, Gray RH. Viral load and heterosexual transmission of human immunodeficiency virus type 1. Rakai Project Study Group. *N Engl J Med* 2000 Mar 30;342(13):921-9.

ART as prevention



Annual VCT and provision of ART could have a dramatic effect on HIV incidence and survival

CD4 Cell Count Distribution among HIV-infected Adults not on ART in Kenya, 2007

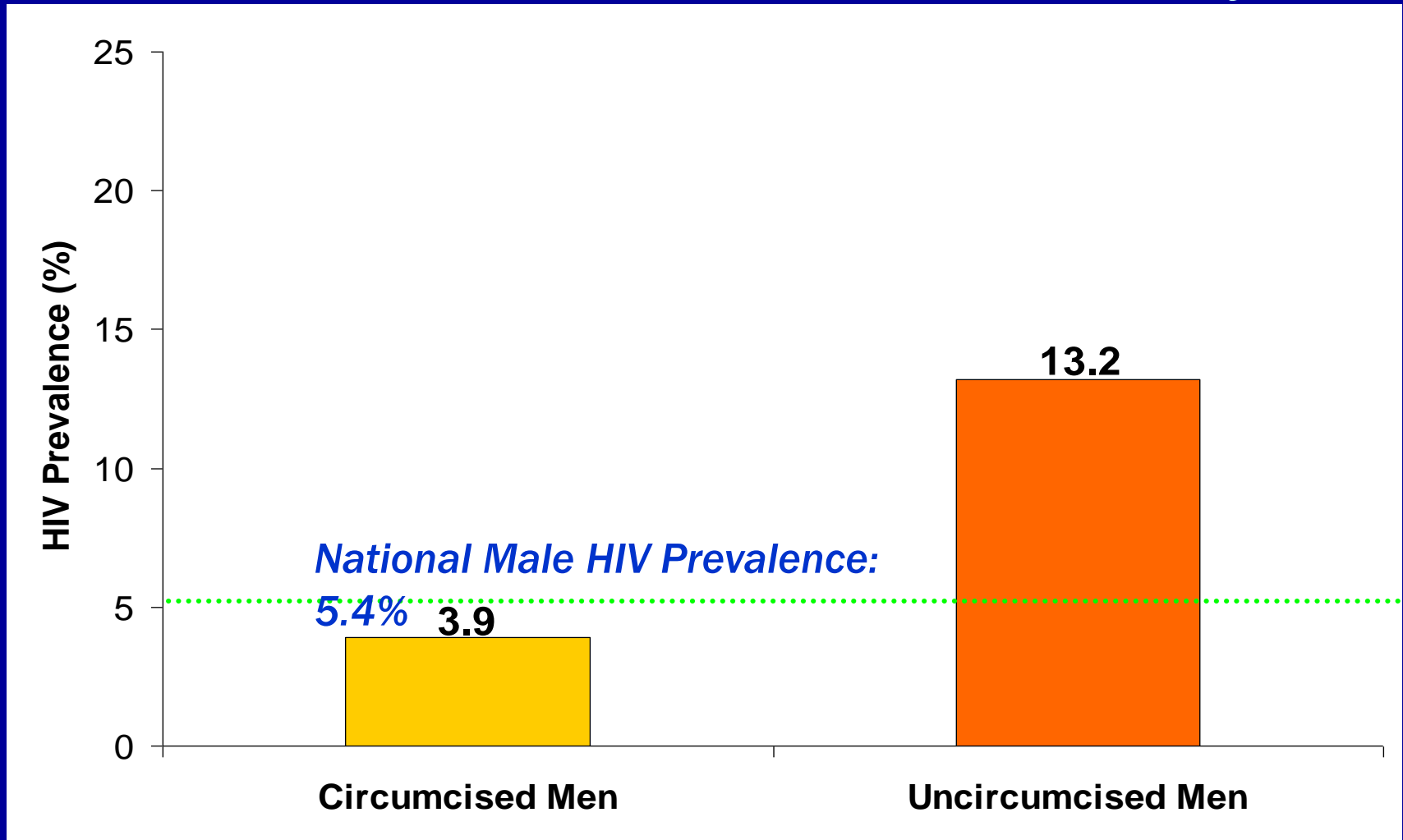
CD4 Count Category (cells/ μ l)	Percent (%)	Estimated number of HIV-infected adults <i>not</i> taking ART
<250	18.2	228,000
250-349	11.2	140,000
350-499	15.6	195,000
\geq 500	55.0	687,000
Total	100.0	1,250,000

Implications for EAC

- **Integrated care, treatment and prevention programs can reduce HIV incidence among uninfected sexual partners of persons on care and treatment**
- **Need to diagnose people early and initiate care to slow disease progression and reduce HIV transmission risk**
- **Consider revised ART eligibility guidelines; prioritize universal coverage of care; ensure integration of prevention interventions**

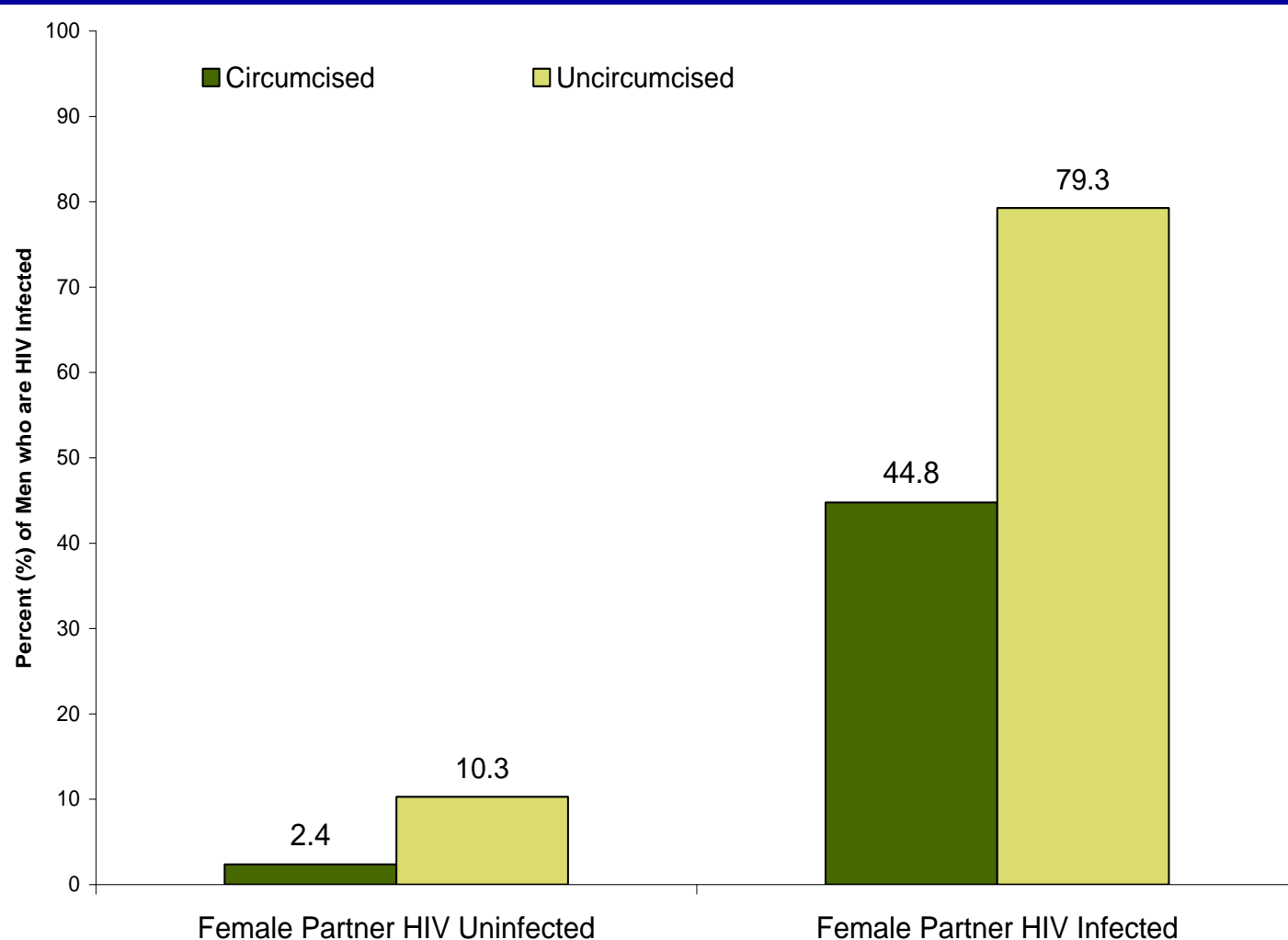
**Priority Five:
Male Circumcision Services**

HIV Prevalence by Male Circumcision Status--Kenya



HIV prevalence among uncircumcised men is 3.4 times greater than the prevalence among circumcised men.

HIV infection among male partners of HIV infected women in Kenya, 2007 (KAIS)



45% of circumcised men married to an HIV-infected woman were infected, compared to 79% of those not circumcised

**Priority Six:
Updating HIV Surveillance**

EAC Data for Planning and Prevention Advocacy

- **High quality research studies in EAC**
- **Recent DHS or AIS with HIV testing:**
 - **Rwanda: DHS 2005, interim 2007**
 - **Tanzania: AIS 2003, 2007**
 - **Uganda: AIS 2004/5; on-going**
 - **Kenya: DHS 2003; AIS 2007**
- **Long standing surveillance systems but need for new components**

New Era of HIV Surveillance

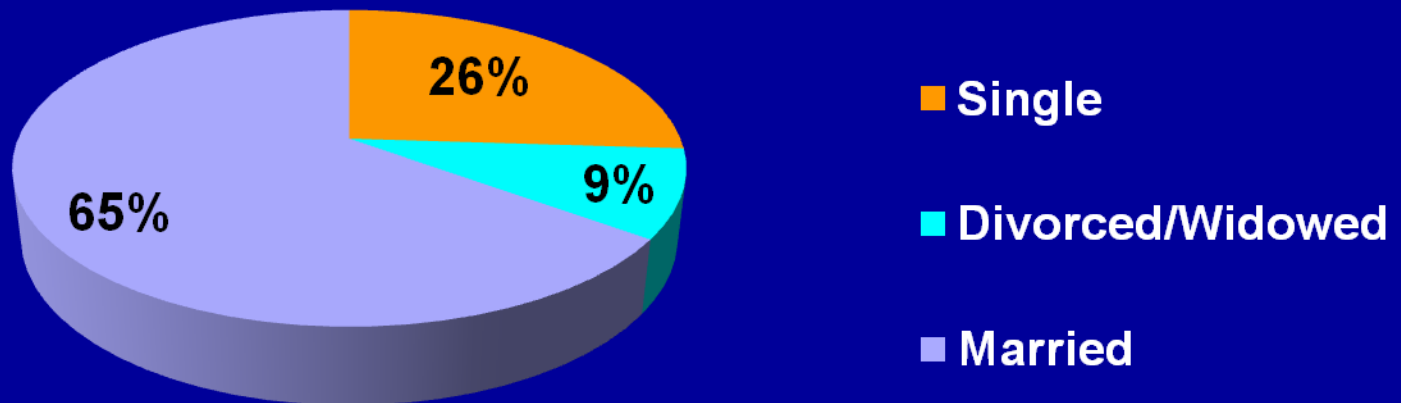
Enhanced Surveillance Need	KAIS 2007 Response (Nationally Representative Survey)
Older people at risk	Include 50-64 year olds
Expanded program for prevention, care, treatment	New questions on HIV testing history, knowledge of self and partner status, use of PMTCT, cotrimoxazole, ART
Monitor known risk factors for HIV infection	HSV-2, syphilis, male circumcision
Unmet need for ART	CD4 cell counts for all HIV-infected participants
Repository of DBS and serum specimens	Future testing for infectious and non-infectious diseases

Know your recent epidemic: Monitoring Incidence in Uganda

- **Nationally-representative survey in Uganda**
 - 18,525 (87%) interviewed and received HIV test
 - 172 (17%) of HIV-positive specimens BED-recent
- **Modifiable risk factors among participants**
 - >1 sexual partner in past year (OR 2.9; PAR 7%)
 - HSV-2 (OR 3.9; PAR 32%)
 - Reported STD (OR 1.7; PAR 9%)
 - Uncircumcised man (OR 2.5; PAR 20%)

Incident infections in Uganda

- 77% in rural areas
- 77% in people >25 years old
- 67% in persons with 1 partner in past year
- 51% of married participants with recent infection had a spouse with HIV
 - 26% of whom had recent infection



New Era HIV Surveillance and Prevention:

More accurate definition of Risk

- **“High Risk Sex”**: should no longer be defined simply as extra-marital sex
- **Any type of sexual partnership can be risky—depends upon sero-status of partners and condom use**
- **RISKY SEX: Unprotected sex with a partner of unknown or known discordant status**

What national surveys miss

- **MSM increasingly recognized as risk group for HIV in East Africa**
 - 285 MSM in Kenya interviewed for vaccine preparedness study
 - HIV prevalence 43% for exclusive MSM; 12% MSMW
 - 44% did not use condoms with casual partners
- **Systematic review showed MSM in Africa 3.8 times more likely to have HIV**
- **Limited data and programs for drug users, prisoners, sex workers other vulnerable groups**

Conclusions

- **Key Priorities include:**
 - **PWP**
 - **Universal access to HIV testing**
 - **Scale-up of FP, PMTCT, care and treatment, MC**
- **New Era Surveillance Data Critical for Monitoring the Epidemic and informing prevention priorities**
- **Optimize resource allocation**
- **East Africa has excellent potential to push HIV below reproductive rate**

Scale-up of Effective Prevention in EAC?—*Yes We Can!*

