# ABC: Expanding prevention models to generalized epidemics

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### Most epidemics sexually driven

Most of the HIV infections in the world are sexually transmitted (yes, there are some countries with IDU-driven epidemics...).

Having multiple sex partners is what drives HIV epidemics, whether they are primarily heterosexual or homosexual.

### Yet, this was not addressed

Yet, surprisingly, before the ABC policy, prevention programs funded by major donors did not explicitly promote monogamy or even partner reduction. It is difficult for outsiders to understand why this is so. Imagine if \$15 billion were made available to address lung cancer on a global scale. Surely we would have to address smoking behavior: not smoking in the first place; stopping smoking, or at least having fewer cigarettes per day.

I will make the case that ABC prevention is better than C alone, or C plus drags and testing. I will make the case that all 3 elements are needed: A,B and C.

### Parallel with nutrition & ARVs

I read an article in a South African journal last week. The author noted:

"In the developing world, nutritional interventions became <u>politicised</u> when opponents of anti-retroviral programmes and AIDS <u>denialists</u> argued that nutrition could <u>substitute</u> for ARVs, or even that the <u>cause</u> of AIDS was malnutrition rather than HIV."

This reminds one of the ABC debate: anyone should see that all 3 elements are useful and have their place in a comprehensive approach.

A,B & C are all needed, with appropriate emphasis depending on age, whether or not people targeted are sexually active, whether the make their living in commercial sex, etc. Just as my colleagues and I set forth in our Finding the Common Ground Consensus statement we published in The Lancet last Dec. 1st

#### 1982-85

How the dominant paradigm developed.

MSM and IDU. Need to reach these high-risk groups, not drive them away. Issues of stigma, discrimination, access arose at once

(imagine the early 1990s: your friends all dying and no one in the government seems to care....)

Agreement not to "interfere" with peoples' sexual behavior

No "have fewer sex partners" messages (let along "abstain"!)

Prevention was agreed to involve risk reduction only, meaning reliance on medical products (condoms, drugs for STI Rx, testing, & vaginal microbicides)

Leading to:

Condom social marketing followed a bit later by:

VCT (leading to drugs and/or condom use)

**Treatment of STIs** 

...and even later, Nerviripine for pregnant HIV+ women

How were generalizations about risk behavior transferred from high risk groups in America to Africa and the rest of the world?

The thinking has been something like:
IDUs cannot change behavior
MSM don't want to change behavior (fundamentally)
It is likewise unlikely that Africans can be induced change behavior. There were and are stereotypes to support this:

- "Africans are polygamous (promiscuous) by nature"
- "Africans start sex at age 11-12"
- "Africans have multiple partners"
- "African women are powerless in negotiating sex"
- "An African man's idea of faithfulness is to be faithful to his 10 women"

### Stereotype of African sexual behavior

Where does this stereotype of African sexual behavior come from?

Missionary, explorer, and adventurer's accounts. Western imagination.

A few studies of truck drivers with many partners—and the findings generalized to "all Africans" (Packard & Epstein, 1991).

However, current survey evidence does <u>not</u> support this view

#### Myth of the promiscuous African

Most Africans nowadays, according to our best behavioral surveys (such as DHS) are practicing A or B behaviors, and the trend is toward higher levels of both. And this has come about without promotion of A or B from the major donors organizations.

It is true that some African men (in particular) have more than one concurrent partner, whether in polygamous or monogamous union. And this pattern unfortunately facilitates HIV transmission much more than serial monogamy, even if the total number of partners is the same As in a population that practices serial monogamy

#### Lets consider DHS Indicator on Multiple partners

Indicator Information: 8.1.1) Multiple partners in the last year among sexually active respondents aged 15-49.

**Definition:** Percentage of women and men age 15-49 who have had sexual intercourse with more than one partner in the last 12 months, among respondents aged 15-49, who were sexually active in the last 12 months.

**Numerator:** Women and men age 15-49 who have had sexual intercourse with more than one partner in the last 12 months. **Denominator:** Respondents aged 15-49, who were sexually active in the last 12 months.

8.1.1) Multiple partners in the last year among sexually active respondents aged 15-49	Total		
	Male	Female	
Sub-Saharan Africa			
Benin Enquete Demographique et de Sante 2001	28	2	
Cote d'Ivoire Demographic and Health Survey 1998 <sup>(5)</sup>	42	6	
Eritrea 1995 DHS (5)	9	-	
Eritrea 2002 DHS		-	
Ethiopia Demographic and Health Survey 2000	11	2	
Ghana Demographic and Health Survey 2003	15	2	

8.1.1) Multiple partners in the last year among sexually active respondents aged 15-49	Total		
	Male	Female	
Sub-Saharan Africa			
Kenya DHS	16	2	
Mali DHS 2001	23	1	
Mozambique DHS 2003	35	6	
Namibia DHS 2000	22	3	
Nigeria DHS 2003	21	2	
Rwanda DGHS 2000	4	1	

8.1.1) Multiple partners in the last year among sexually active respondents aged 15-49	Total		
	Male	Female	
Sub-Saharan Africa			
Tanzania DHS 1996	30	7	
Uganda DHS 1995	10	1	
Uganda DHS 2000	25	2	
Zambia DHS 1996	30	5	

Medical, risk reduction model was attractive because (1):

It seemed to work in San Francisco and NYC

It was popular with high risk groups in US (who were now working in Africa and everywhere) and FP experts

It avoided awkward, thorny issues of sexual behavior

Health professionals tend to like medical, rather than behavioral, approaches & solutions (Museveni differed in this...)

### Medical, risk reduction model was attractive because (2):

The technology was familiar to FP experts

Condoms seemed logical

Condoms were easy to count; easy M&E units

It was comforting to think we had a cheap, simple technology, similar to ORS

AIDS prevention became a commodities distribution challenge, just like FP

### Medical, risk reduction model was attractive because (3):

A billion-dollar industry developed around risk reduction. Anything that questioned basic assumptions was seen as a threat to the industry

Professional reputations: people don't want to admit that they may have been wrong about something involving millions of lives and billions of dollars

The US "culture wars" about condoms vs. abstinence in school programs

### Early years of response

I myself was skeptical re. condoms as salvation for Africa

I did believe condoms might make major difference in high risk groups, or people in high risk situations

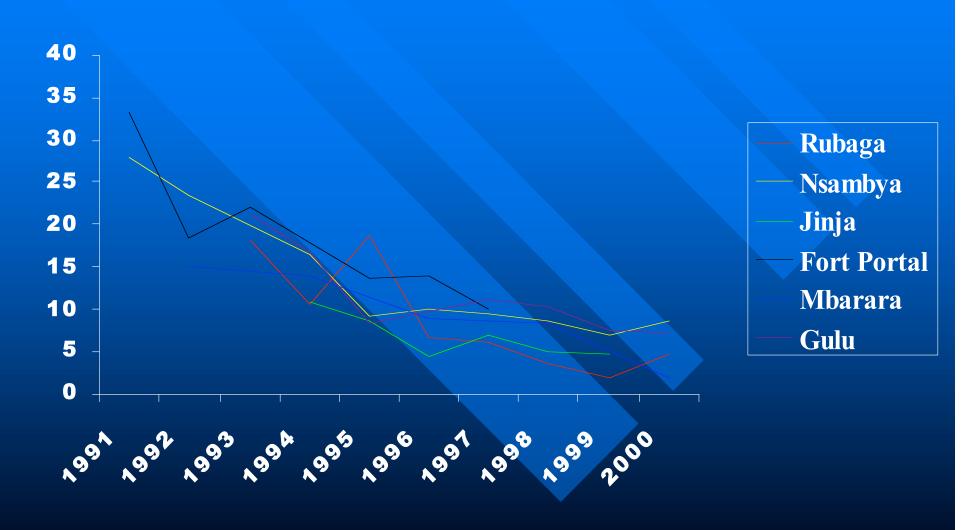
But I was not hopeful that we could get consistent condom use up to high levels in Africa (and the 2003 UNAIDS review by Hearst and Chen confirmed that this has still not been achieved)

### Uganda in 1993

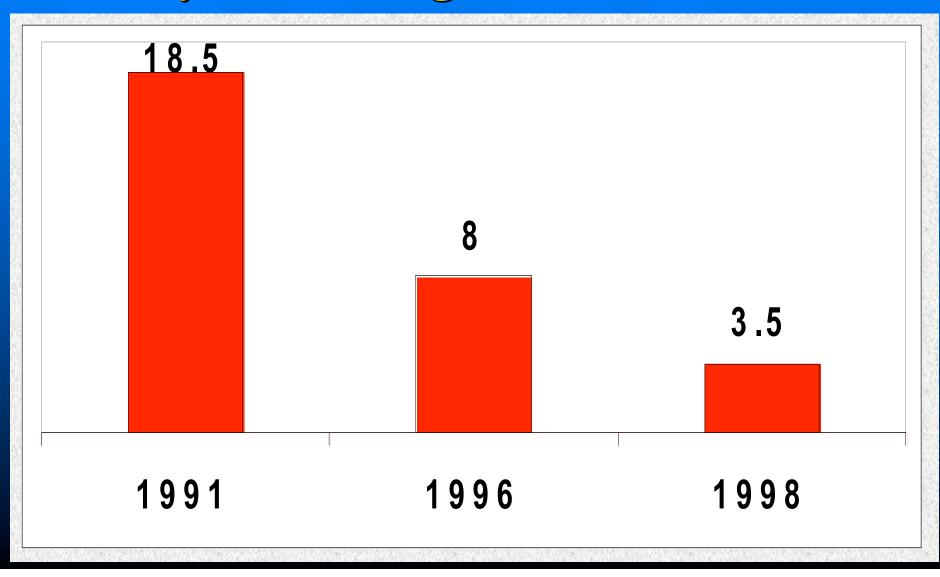
Something different was happening, something that the experts had not predicted

HIV infection rates had started to decline, yet condom rates were probably too low nationally to have had any significant impact, by 1993

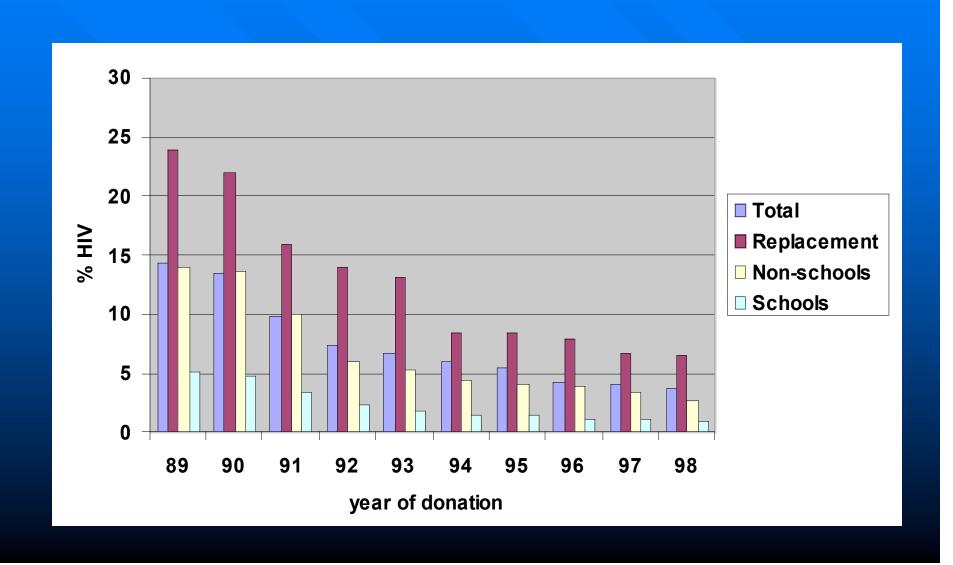
## HIV prevalence among 15-19 year old Ugandan antenatal women, 1991-2000



## HIV prevalence among Ugandan military recruits aged 19-22, 1991-1998



### Trends in HIV prevalence among volunteer blood donors by donor type, Uganda, 1989-98



### The prevention approach that was developed in Africa

#### The "ABC" approach

Abstain, Be faithful, or use Condoms

Uganda put strong emphasis on, and resources into, fidelity, abstinence, delay of debut among youth, who were the primary targets in AIDS prevention.

In spite of all we hear about raging hormones, behavior changed first, and to the greatest degree among age group 15-19. This group also had the greatest decline in HIV prevalence.

### Uganda's Early Response:

National response began in 1986, with bold leadership by President Museveni.

The period 1986-91 is important, since HIV incidence & eventually prevalence peaked then.

Condom social marketing didn't take off until mid-1990s. There was some condom promotion from the beginning, but this approach was not favored by the President.

#### President Museveni on condoms

"Just as we were offered the "magic bullet" in the early 1940s, we are now being offered the condom for "safe sex." We are being told that only a thin piece of rubber stands between us and the death of our continent. I feel that condoms have a role to play as a means of protection, especially in couples who are HIV-positive, but they cannot become the main means of stemming the tide of AIDS."

President Museveni, 1991

### Pres. Museveni's approach

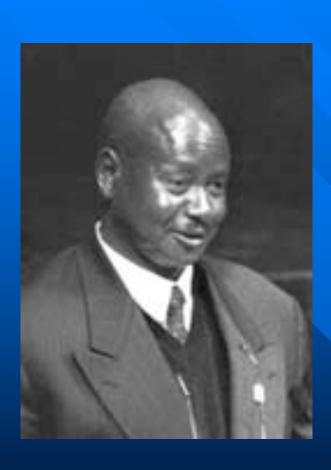
He put emphasis on persuading youth to delay sex until they were married, and those already sexually active were urged to be faithful to one partner only ("zero-grazing"). A 1991 external evaluation of the ACP in fact found that "Love Faithfully" was remembered more often than Love Carefully, zero grazing, or any other slogan (Moodie et al., 1991).

"When I had a chance, I would shout at them," he said.
"[I used to say] 'you are going to die if you don't stop
this. You are going to die!"

### Distinguishing features of the broader prevention approach (beginning 1986-91)

- Bold leadership at the highest level, open discussion re. AIDS & sexual behavior, "sounded the alarm"
- **AIDS** preventive education in primary schools, reaching children before they are sexually active
- Involvement of religious leaders
- Involvement of PLWHAs in AIDS prevention
- Fear arousal, meant to engender risk perception and behavioral change
- Face-to-face, open discussion about AIDS, community involvement
- Fight against AIDS-associated Stigma
- Major involvement and "advancement" of women and youth

### **Enabling Community Factor: President and first lady's leadership.**



Asked recently on BBC what was his original message on AIDS in late 80's Mr. Museveni said,

"I told them if they did not change behavior they were going to die."

Museveni and his wife have fulfilled their duty as protective elders of a traditional African village.

## AIDS prevention among youth in Uganda

- The government has made youth a priority in AIDS prevention
- Schools are required to teach AIDS prevention
- Having sex with a minor (<18)</li>
   is a criminal offense
   (defilement)
- NGOs like Straight Talk have targeted youth
- The main message for youth has been to abstain/delay sex

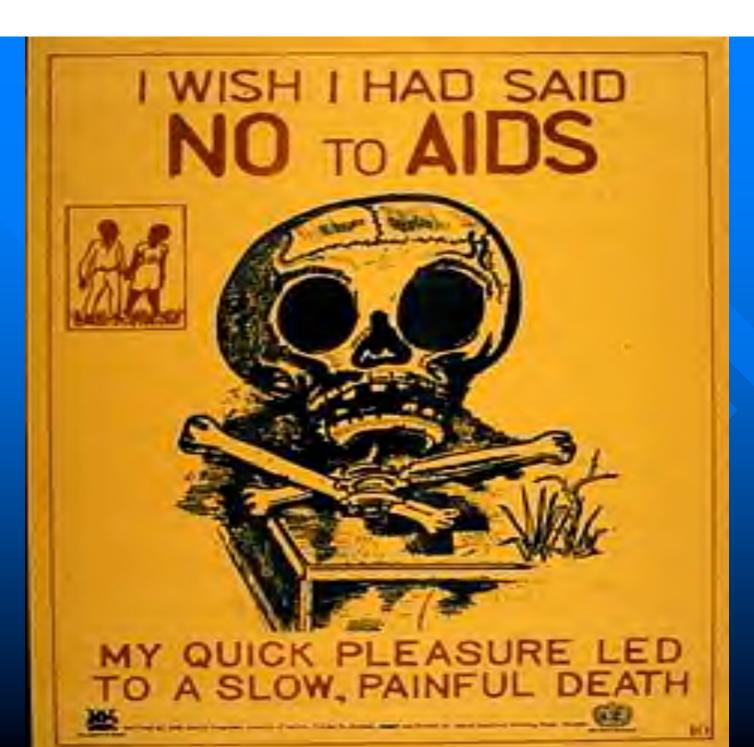


#### Percentage of women who believe that a wife is justified in refusing to h sex

with her husband for specific reasons, by country (from DHS data)

Wife is j	justified	in refu	asing
sex witl	h her hu	sband	if she:

se	ex with her husband if she:				
Country	Knows husband has a sexually transmitted disease	has sex	Has recently given birth	Is tired or not in the mood	
Malawi 2000	73.3	68.2	77.7	60.5	
Rwanda 2000	87	68.6	72.1	55	
<b>Zambia 2001-02</b>	85.6	72.9	87.9	67.0	
<b>Uganda 2000-01</b>	91.2	76.4	89.1	79.5	
Zimbabwe 1999	71.2	63.5	81	52.6	

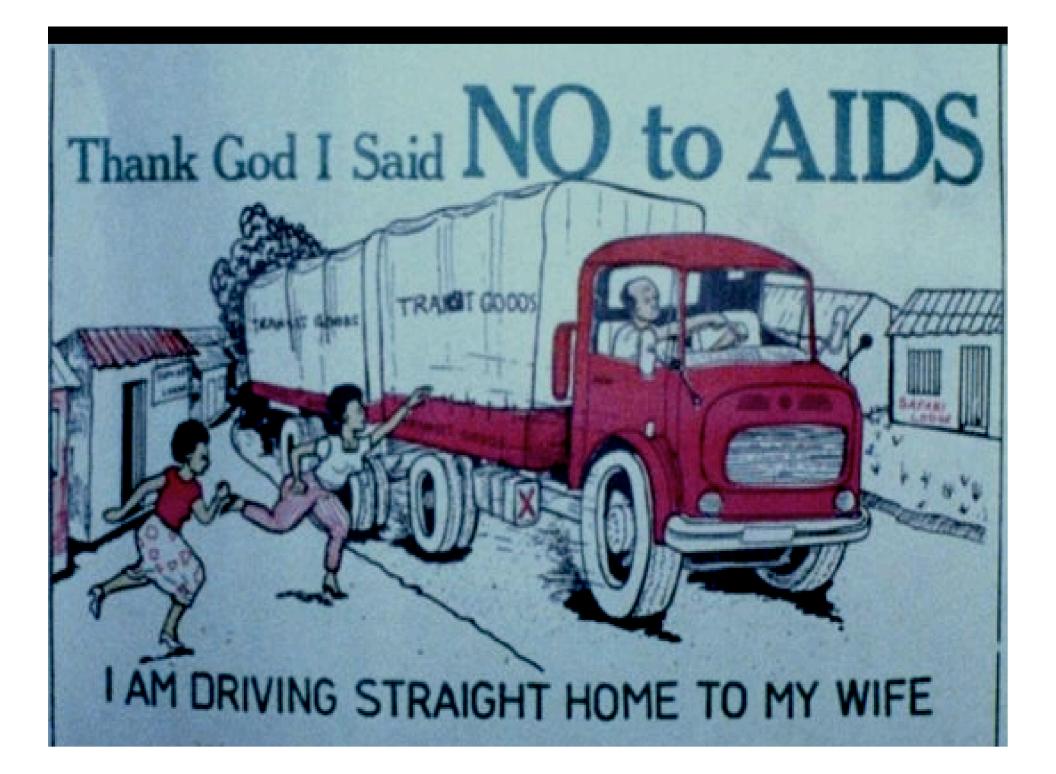


## SUPPORT YOUR



HELP THEM TO REMAIN AIDS FREE

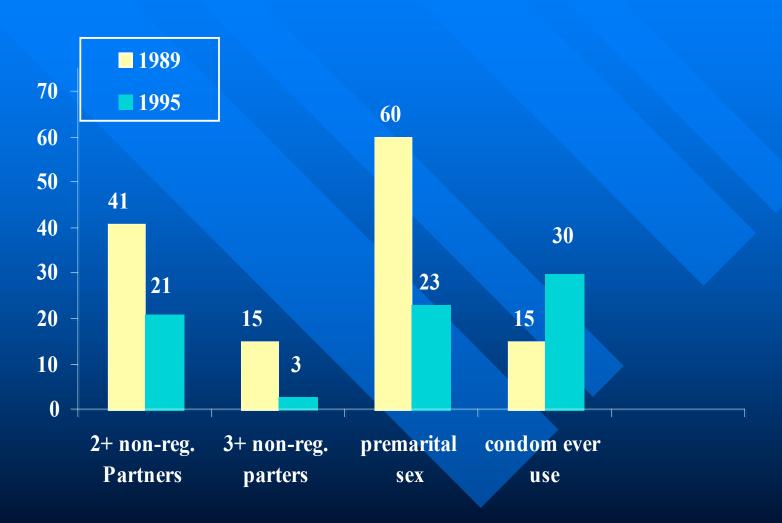




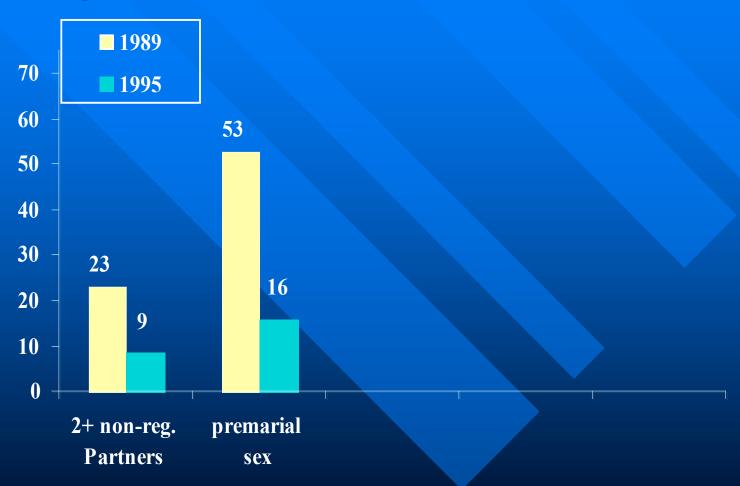
## Did behaviors change in Uganda?

What impact on sexual behavior did Uganda's unique approach to AIDS prevention actually have?

### Changes in sexual behavior among men in Uganda, WHO/GPA surveys, 1989 &1995

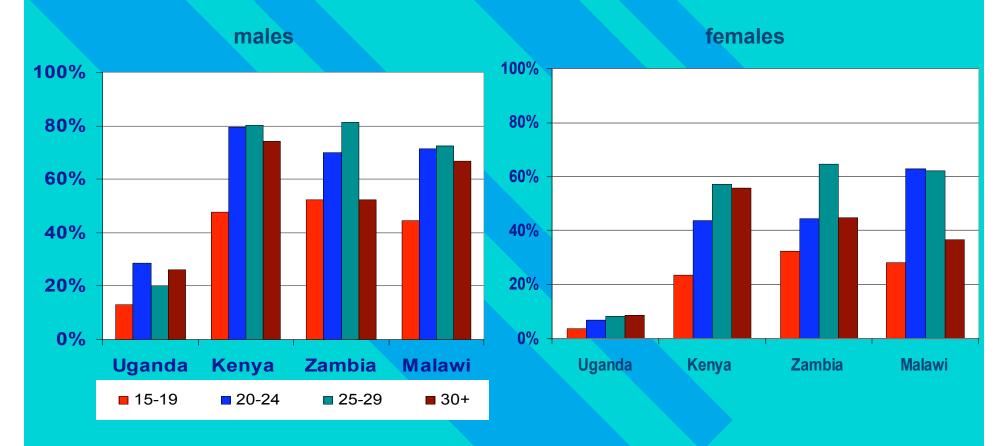


## Changes in sexual behavior among women in Uganda, WHO/GPA surveys, 1989 &1995



#### Sexual partnerships in unmarried by age:

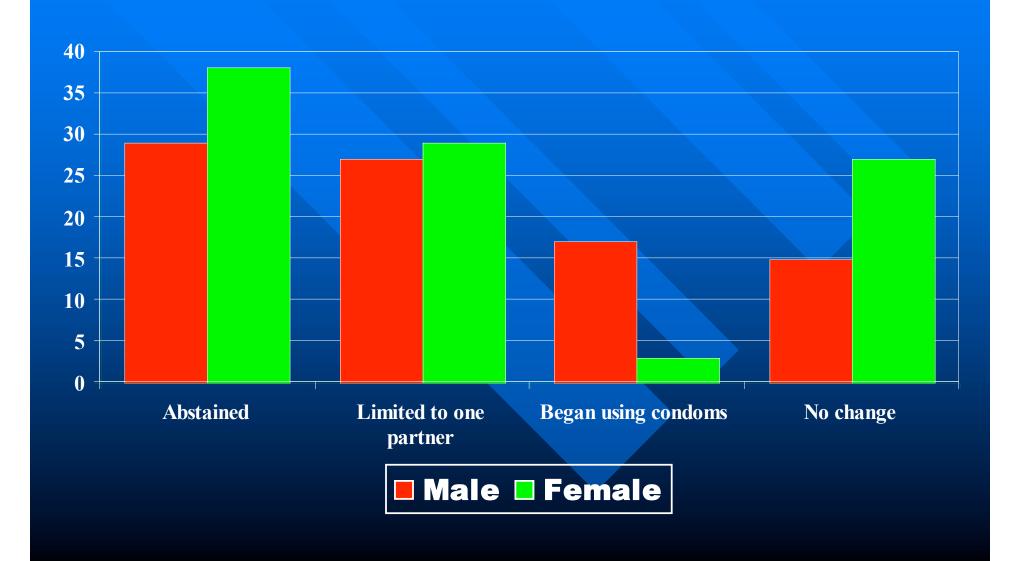
% with non-regular partners in last 12 months



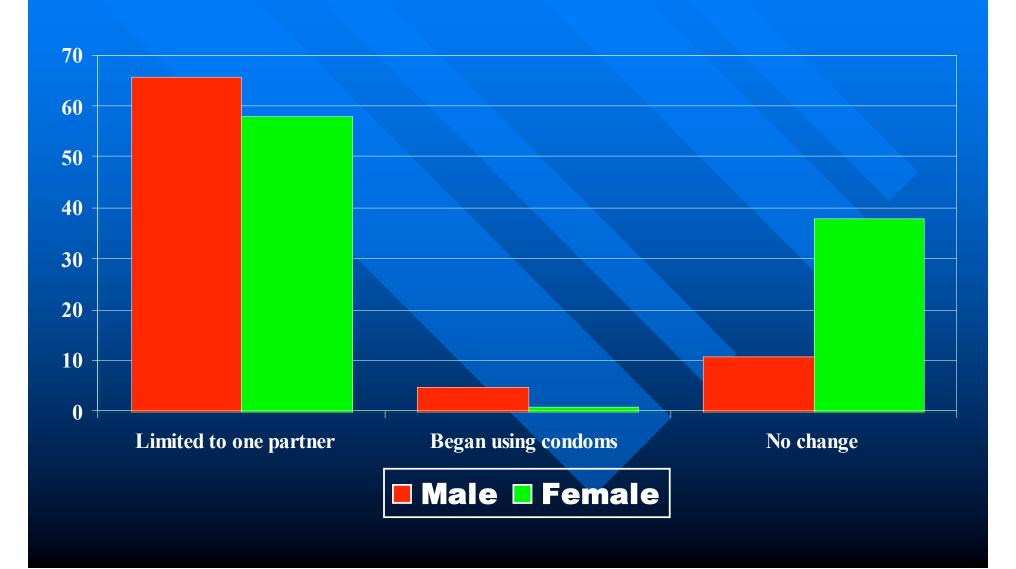
### Uganda has much fewer non-regular partnerships across all ages

DHS data compiled by Stoneburner and Low Beer (2000), contained in "Non-Condom Behaviors and the Reduction of Incidence and Prevalence in Zambia and Uganda: Background Materials for a Discussion on the Future of Social Marketing" (AIDSMARK briefing book sent to all PSI global field offices May 2002)

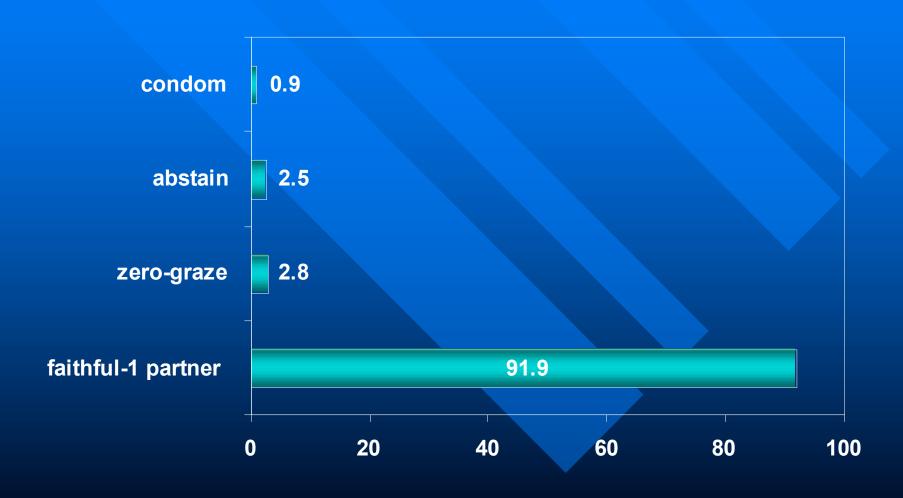
## Behavior changes reported by unmarried Ugandans



# Behavior changes reported by married Ugandans



### Karamoja: "Have you changed your sexual behavior due to AIDS? If so, How?" (1997)



## Yet Condoms usually given Credit for Uganda's success

A cover story about AIDS in Africa in Newsweek (1/17/00) points out that its not all doom and gloom: there is at least one success story to learn from, Uganda.

"In Uganda...health workers turned Protector condoms into must-have fashion accessories, simply by introducing a flashy new package and a marketing slogan ("So strong, so smooth").

No other method of prevention was even mentioned.

## Actual Condom use in the *general* population of Uganda

In 1995, about 6% of sexually active Ugandans, used a condom with some regularity, according to the Demographic and Health Survey.

By 2000, this rose to 11% of sexually active Ugandans, or 8% of all Ugandans. However condom use has become quite high among those who need them most, namely those relatively few who are still having multiple partners (e.g. among CSW & clients, >95%)

### Condom use, last sex, any partner, of those sexually active: (source: most recent DHS)

	Male	Female	HIV Prev.
Ethiopia	5%	1%	4.4%
Rwanda	6%	1%	5.1%
Malawi:	15%	5%	15%
Uganda	15%	7%	4.1%
Zambia	21%	12%	16.5%
Zimbabwe	29%	9%	24.4%
Namibia	48%	28%	21.3%

## Factors contributing to behavior change "Everyone's responsibility"-D. Wilson (2005)

□ Didn't "professionalize" AIDS - emphasized AIDS is everyone's responsibility, empowered church and community leaders and members to speak out

Uganda - good epidemiology, not good ideology

#### Growing consensus on "B"

Papers published in Science, BMJ, Lancet, J or Development Studies, etc. concur that "B" (partner fidelity, partner reduction" was the single most important behavioral change in Uganda. Which is what Ugandan told us in response to "How have you changed your behavior?"

(If only we had listened!)

#### Growing consensus on "B"

**Helen Epstein** (NY Rev of Books 5/26/05): "...it would be great if the international public health community—the WHO, the UN AIDS Program, the large private charities like the Gates Foundation—began supporting programs like Uganda's 1980s Zero Grazing campaign. However, these very institutions bear some responsibility for the fact that "partner reduction" programs—like Zero Grazing—are so thin on the ground in Africa today. Their policies and programs have overwhelmingly emphasized technical approaches to HIV prevention, including condoms, HIV testing, and research into as-yet-nonexistent vaccines and vaginal microbicides. All these approaches are important, but even those that are currently feasible, such as condoms and HIV tests, have so far failed to stem the tide of the epidemic, even where painstakingly implemented."

#### Epstein, con't.

"Partner reduction is virtually free, involves no equipment or commodities, and is easier to practice than wearing a condom during every single sex act—something very few people on the planet do."

### What about the new study from Rakai (Wawer & Gray)?

There was an instant reaction by the US and Western press to an unpublished conference paper about Rakai, Uganda, presented in Boston on 4/25/05. Headlines flew around the world within hours proclaiming that condoms and not "abstinence" prevented AIDS, therefore the ABC policy has been invalidated. All this from an unpublished paper!

#### Actual headlines:

Uganda's HIV success has more to do with condoms than abstinence

Study: Condoms keep AIDS in check in Uganda

Uganda: Condoms Outshine Abstinence in Aids Battle - Researchers

Death, not abstinence, causes AIDS to decline in Uganda, report ...

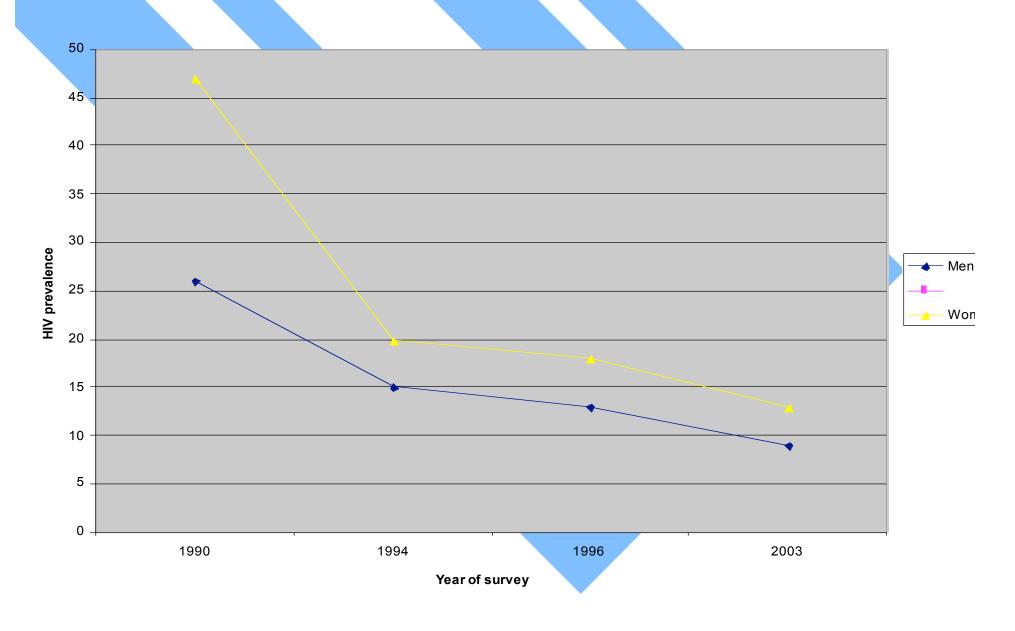
Uganda's Decline in HIV/AIDS Prevalence Attributed to Increased Condom...

Abstinence Programs Failing Uganda...

#### But consider the time period...

a more careful reading of the evidence from Rakai shows there were profound changes in sexual behavior before 1994, as Jim Shelton, Henry Mosley and others point out in published BMJ letters, during the period when fidelity and abstinence were emphasized, when Love Faithfully" an Zero Grazing" were the dominant messages--and when we see less casual sex, more monogamy, & fewer youths ages 15 to 19 sexually active.

This is the period 1986 to the mid-1990s when prevalence fell dramatically in Rakai, as the next slide shows



#### Rakai

After 1994, there was more condom use, but lower levels of monogamy/fidelity. In this recent period, incidence ceased to decline, and actually increased, raising question about the effectiveness of newer modes of prevention.

H Mosley (JHU) in BMJ letter: "No one should be surprised; the population is moving from 100% protective behaviors (abstinence and fidelity - when practiced consistently) to a behavior that is only 67% protective (condoms - when practiced consistently)."

As for death being the cause of declines in HIV infection rates, why did this not occur anywhere else in Africa? The same can be said of increased condom use in Rakai: why did even higher levels of condom use not lead to the decline of HIV prevalence anywhere else in Africa?

# But what about concentrated epidemics?

In concentrated epidemics, there is a need to target high risk groups. This is where the prevailing paradigm is suitable: condoms and other risk reduction interventions.

I had planned to show slides on Thailand's national response to AIDS, but it became apparent that there would not be enough time, especially if the Rakai study was included. Suffice it to say that we have in Thailand a pretty clear example of achieving high levels of consistent condom use, in brothel-based CSW.

#### **Thailand**

Between 1989-1993, a little before national HIV prevalence fell:

- •condom use rose to 97% in brothels, and to 89% among "indirect" sex workers (e.g. massage parlors) in Bangkok
- % of men reporting contact with a CSW fell significantly
- % of men reporting premarital or extramarital sex in past year fell from 28% to 15%

#### Parallels: Thailand & Uganda

An early and vigorous response, an <u>indigenous</u> strategy developed by both <u>governments</u>, before there was much foreign TA.

#### 3-4 years after national response began:

- there was significant change in sexual behavior
- HIV prevalence had peaked.
- Perceived risk of HIV infection, and knowledge of what to do, was widespread
- Open discussion
- Community mobilization,
- Strong political leadership,
- Explicit messages (no soft-pedaling of messages),
- Involvement of religious leaders

## Meanwhile, evidence about condoms and generalized epidemics....

#### -Hearst and Chen's 2003 UNAIDS study:

"Inconsistent condom use does not protect against HIV"

"There are no definite examples yet of generalized epidemics that have been turned back by prevention programs based primarily on condom promotion."

"No African country has achieved a consistent condom user rate of >5%

# Lancet "consensus statement," last World AIDS Day

A statement published recently in the Lancet (Halperin et al, 2004), and endorsed by over 150 global AIDS professionals as well as Archbishop Desmond Tutu, President Museveni of Uganda, representatives of five UN Agencies, WHO, World Bank, etc. proposed that reduction in casual sex should be the primary behavioral message for sexually active adults in generalized epidemics. This represents a significant departure from the previously dominant prevention paradigm, which has promoted condom use as the first line of defense for sexually active adults in <u>all</u> types of epidemics.

Even in concentrated epidemics, we need one approach for the general population (primarily A&B) and another one for those at high risk (primarily C, fighting stigma, etc).

Note that USAID's ABC Policy (Dec 2002) and PEPFAR'S adoption of the Uganda ABC model (2003) is for generalized epidemics

#### ABC Elsewhere

ABC has been implemented to varying degrees in Senegal, Jamaica, Zambia, and even among Thailand's general population, all with positive results (in Zambia, we see significant declines in HIV among youth in the 1990s, but this was not sustained after about 1998.)

In Kenya, major response to AIDS before 1999 was condom supply and promotion.

There was little impact

#### ABC Elsewhere

Finally, the Kenyan government adopted an ABC program that resembled Uganda's in some key aspects:

- Faith-based groups were mobilized;
- •AIDS education in schools; educators and officials emphasized the seriousness of the epidemic,
- •government officials were told that they <u>must</u> mention AIDS every time they had a public meeting

Comparing Kenya DHS surveys data, 1998--2003, there was little change in condom use; yet a significant increase in proportion of unmarrieds reporting no sex in past year, and a roughly 50% decline in the proportion reporting 2+ partners in past year, among men and women both

#### Prevalence in Kenya

A population-based DHS sero-survey in 2003 found that 6.7 percent of Kenyans are HIV positive compared to a health ministry 1998 estimate of 9.4 percent.

Those reporting 2 or more partners in the past year were twice as likely to be HIV-infected as those reporting 1 partner.

(National prevalence is now slightly lower than that of Uganda, found to be 7% using the same population-based method. Note that some 80% of Kenyan men are circumcised, which helps keep infections rates lower)

#### Positive trends in Kenya: B, A, C

The main behavioral changes in Kenya during the past 5 years seem to be the same ones that account for Uganda's decline in HIV prevalence:

B (fidelity), followed by A (abstinence), followed by C (condoms)

The changes in Kenya took place a decade later than those in Uganda.

Here are Kenya's ABC changes in a single table

