

Sex with Stitches: The Resumption of Sexual Activity during the Post-Circumcision Healing Period in Zambia

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**International Society for
Sexually Transmitted Disease Research
Quebec City, July 10-13 2011**

Background

- **Since 2009, Zambia has implemented a national program of adult male circumcision (MC) as an HIV prevention intervention.**
- **Approximately, 61,000 MCs were conducted in 2010, with 120,000 MCs conducted to-date since 2009. Target : 80% HIV neg. men 13–39 → 1.9 million MCs.**
- **WHO recommends that circumcised males abstain from sex for at least 6- weeks post-surgery.**
- **As part of a 2-year prospective study of risk compensation post-MC in Zambia, a sub-study investigated the prevalence of sexual behavior in the 6-weeks post-surgery**

Study Design

- MC clients were sampled at the sites proportional to the number of circumcisions conducted by June 2010.
- Interviews conducted at baseline and 6-weeks; asked about sex post-MC and sexual relationships in the healing period.

	Baseline (N=)	6 Weeks (N=)	Follow-Up %
Total	248	223	90%

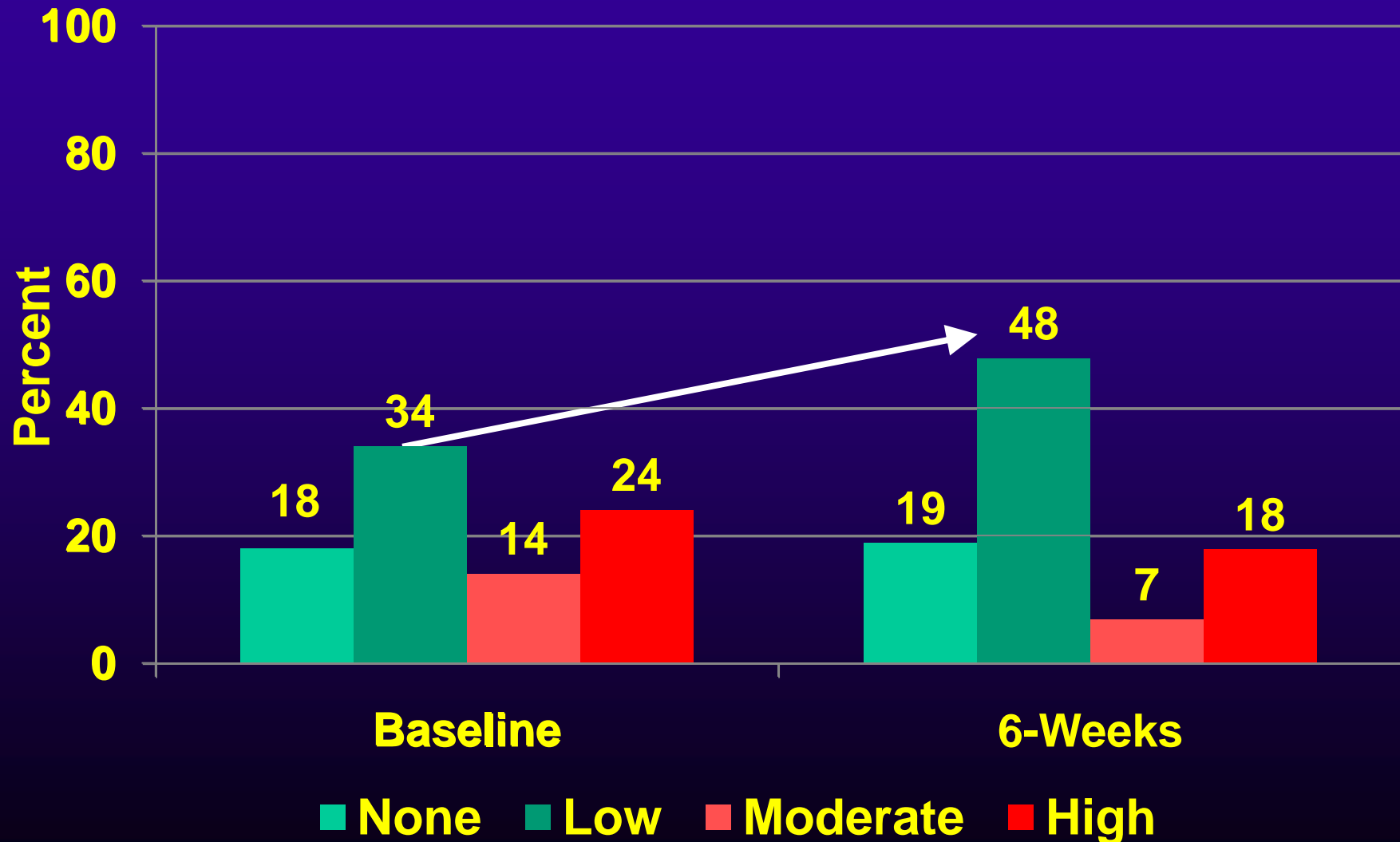
- All men were interviewed using audio-computer assisted self-interview (ACASI) for sensitive questions
- Modeling used to estimate for 2010: 1) new infections due to sex in healing period; and 2) infections averted by MC
- Fieldwork conducted between August and November 2010

Key participant baseline characteristics

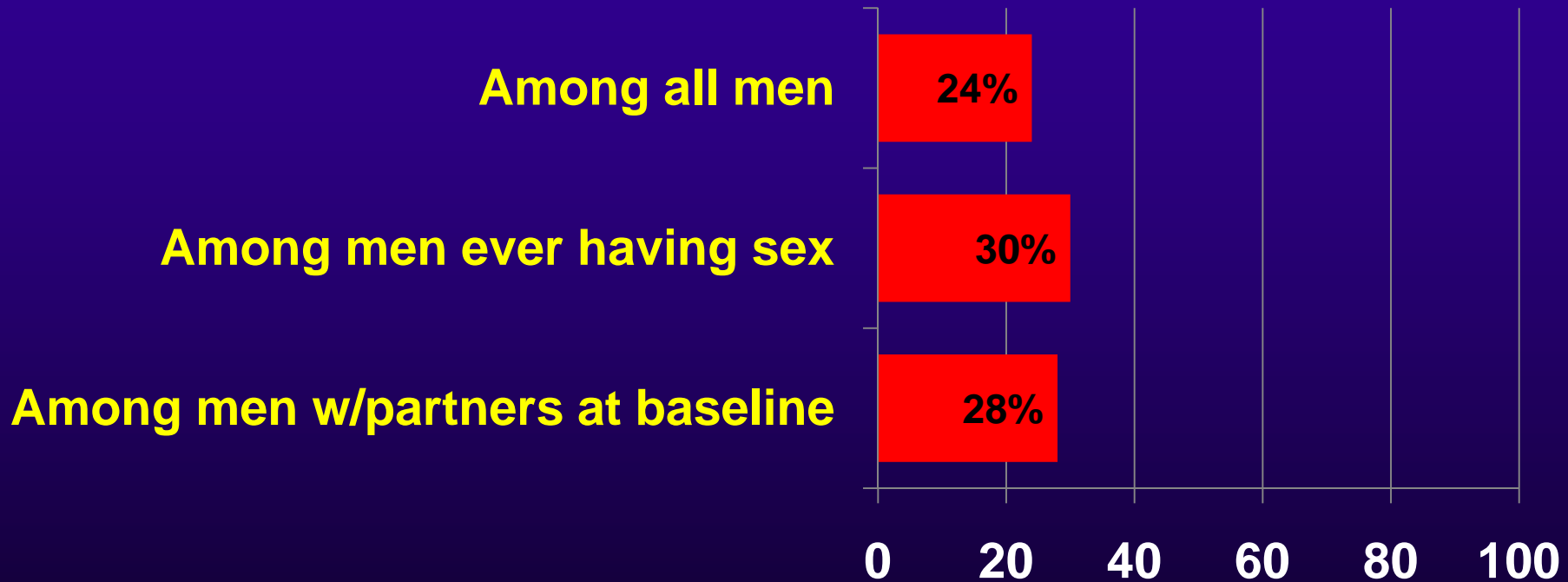
	N=248
Demographic	
Age (mean yrs)	20.9 (20.4-21.3)
Currently married	7.7 (4.4-11.0)
Had a regular sexual partner	42.5 (36.3-48.7)
Sexual risk behaviors	
Lifetime partners (mean N)	2.7 (2.3-3.0)
2+ partners in previous 4 weeks	11.9 (7.9-16.0)
Unprotected sex in previous 4 weeks	21.4 (16.2-26.6)
Casual partner ¹ in previous 4 weeks	12.3 (8.2-16.5)
Diagnosed with STI in past 12 months	9.6 (5.8-13.3)

¹ Defined as having sex with a friend, acquaintance, someone met once, sex worker.

Perceived HIV Risk



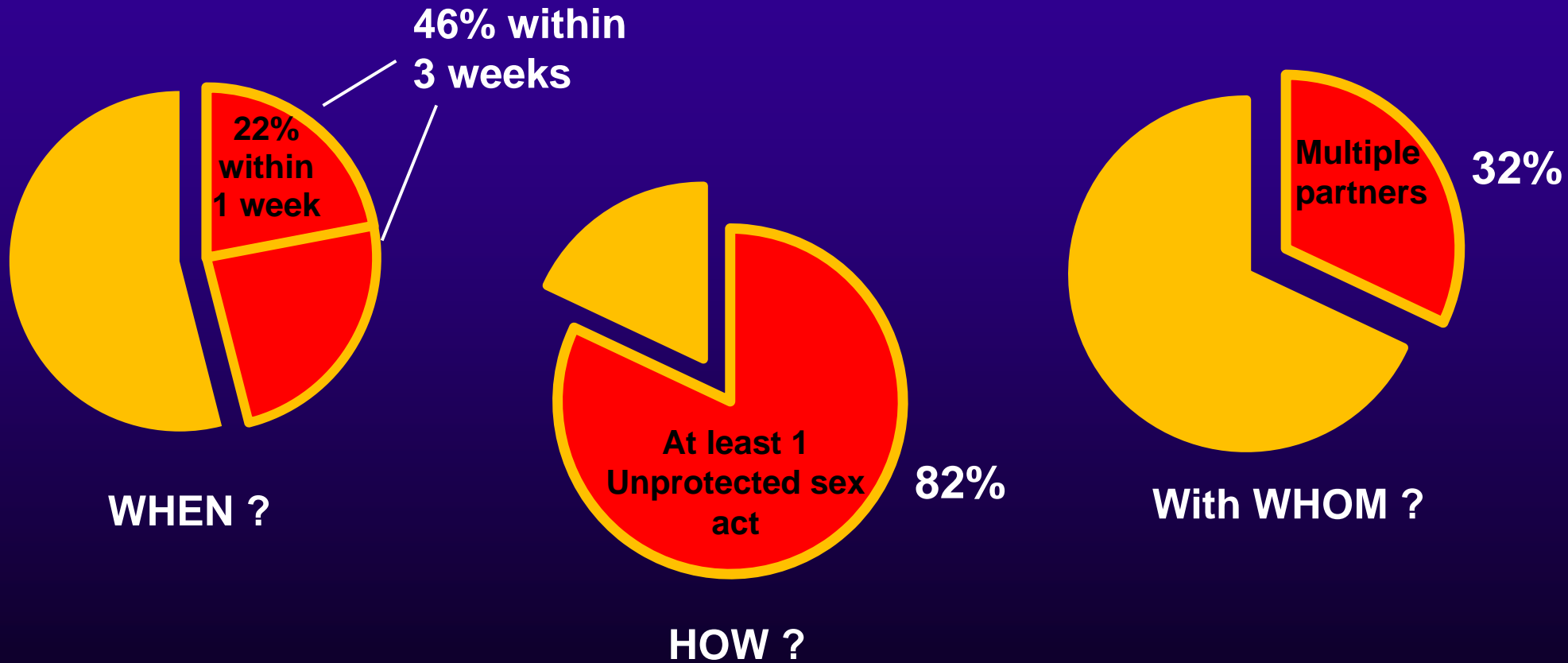
Resumption of Sex Within 6 Weeks



MC RCTS: **4%** in Kisumu, Kenya, **5%** in Rakai, Uganda and **23%** in Orange Farm, South Africa (Mehta et al., 2009).

Sexual Risk Behaviors in Healing Period

Of Men having sex within 6 weeks....



Baseline predictors of resumption of sex

	Sex w/in 6-weeks
	Adjusted ORs
Demographic	
Age (mean yrs)	1.2* (1.1-1.4)
Currently married	1.6 (.70-3.6)
Has a regular sexual partner	.91 (.38-2.2)
Sexual risk behaviors	
Lifetime partners (mean N)	1.1† (.99-1.3)
2+ partners in past 4 weeks	1.1 (.40-3.2)
Unprotected sex in past 4 weeks	2.4* (1.0-5.4)
Casual partner ² in past 4 weeks	2.3 (.84-6.5)
STI in past 12 months	.91 (.25-3.3)

** p < .01, * p < .05, † p < .10

Modeling Impact

- A mathematical model was constructed to represent a cohort of MC men in one year (2010: 61,000 MCs in Zambia).
- Modeling used to estimate 1) new infections from sex in healing period; and 2) infections averted by MC

Select Model Parameters	Value	Source
Prob. of HIV transmission per sex act, not circumcised)	0.001	Obs. data from Uganda Wawer <i>et al.</i> (2005)
Rel. Risk F→M HIV transmission (compared to men not circumcised): during wound healing	3	Obs. data from Uganda: Mehta <i>et al.</i> (2009).
Rel. Risk M→F HIV transmission (compared to men not circumcised): during wound healing	3.5	Clinical trial data in Uganda: Wawer <i>et al.</i> (2009)
Prop. MC men HIV positive.	0.06	SFH program client data (2010).
Prop. MC men having sex during wound healing	0.24	PC MC Client 6-week data (2010).

Modeling Impact for 2010

	New infections attributable to sex during healing period	Infections Averted due to MC
	Baseline: No sex	Baseline: No MC
At current rate (24%)	69	230
Men	32	220
Women	37	10

Modeling Impact for 2010

	New infections attributable to sex during healing period	Infections Averted due to MC
	Baseline: No sex	Baseline: No MC
At current rate (24%)	69	230
Men	32	220
Women	37	10
At higher rate (30%)	85	216
Men	40	281
Women	46	-2

Modeling Impact for 2010

	New infections attributable to sex during healing period	Infections Averted due to MC
	Baseline: No sex	Baseline: No MC
At current rate (24%)	69	230
Men	32	220
Women	37	10
At higher rate (30%)	85	216
Men	40	281
Women	46	-2
At Lower rates (12%)	34	268
Men	16	242
Women	18	26

Modeling Impact for 2010

Caveats

- **The impact of MC beyond 2010 more than compensates for impact of sex in healing period for 2010. Underestimates long-term impact of MC.**
- **Pessimistic assumption. If men resumed sex before the wound had healed, then they had sex THROUGHOUT , with as many partners and with the same coital frequency. Over-estimates the impact of sex during wound healing.**
- **Prevalence of sex in the healing period based on self-reports, which may not be accurate. Underestimates impact of sex during wound healing.**

Summary of Findings

- **41% of men who reported “high” or “moderate” HIV risk at baseline shift their assessment to “low” risk post-MC.**
 - Do men understand the difference between “lower” and “low” HIV risk?
- **About 1 out of 4 men have sex prior to 6-weeks; those that resume sex early report higher risk behavior at baseline after adjusting for marital and relationship status**
- **Of the men who had sex before 6-weeks post-MC:**
 - About 1 in 5 had sex in the first week
 - About 1 in 3 have sex with multiple partners
 - Few used condoms consistently
- **Despite extra HIV infections due to sex during wound healing, net impact of MC in first year is a large net reduction in HIV infections.**
 - For women, the net impact of the intervention in the first year is sensitive to the prevalence of sex during wound healing.