Impact of Learning HIV Status on Contraceptive Use in the MIRA Trial

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Background

- Increased attention to the contraceptive needs of HIV+ women as well as the value of contraception for prevention of HIV among children
- Few previous studies on contraceptive practices of women who have recently learned they are HIV+

MIRA trial overview

- Phase III, multi-site, randomized, controlled trial of the diaphragm for HIV prevention (2003-2006)
- Eligible women were
  - HIV-
  - Non-pregnant
  - Sexually-active
  - Willing to be randomized to use a diaphragm with lubricant gel, in addition to condoms

- Quarterly follow-up visits for up to 24 months
- Prevention counseling, free condoms and hormonal contraceptives, HIV and STI testing, and curable STI treatment

MIRA study sites and enrollment (n=5045)

UZ-UCSF: Harare, Zimbabwe
n=2502 trial participants

PHRU: Johannesburg, South Africa
n=1028 trial participants

MRC: Durban, South Africa
n=1515 trial participants

Objective

To examine the effect of learning one's HIV+ status on contraceptive practices

Methods

- Data on contraceptive use collected at baseline and quarterly visits
- Contraceptive use coded into seven categories based on the most effective method reported:
  1. No method
  2. "Other" method (i.e., withdrawal, traditional methods, diaphragm)
  3. Male or female condoms
  4. Progestin-only oral contraceptives (POP)
  5. Combined estrogen and progestin oral contraceptives (COC)
  6. Injectables
  7. Long-acting methods (i.e., IUDs, implants, male and female sterilization)

Analysis

- Comparison of effectiveness of method used at baseline and last visit between women who did and did not become HIV+ during the trial
- Comparison of changes in most effective method used from baseline to last visit and calculation of the percentage of women that moved to a more or less effective method or stayed the same
- Examination of immediate changes in contraceptive use after learning HIV+ status

Results

Analysis included 4645 women who remained HIV- and 309 women who were infected with HIV during the trial

Demographic characteristics

	HIV-	HIV+	*p*
Age, years *mean* (range)	28.63(18-49)	26.03(18-47)	<0.0001*
Years of education *mean* (range)	9.60(0-19)	9.92(0-18)	0.073
Number of male partners *mean* (range)	2.26(1-30)	2.70(1-16)	<0.0001*
Age at first sexual encounter *mean* (range)	18.07(10-31)	17.64(12-27)	0.0012*
Marital status *n* (%)			<0.0001*
Married	2819(60.7)	122(39.5)	
Unmarried	1824(39.3)	187(60.5)	
Currently living with partner/husband *n* (%)			<0.0001*
Yes	3260(70.2)	145(46.9)	
No	1383(29.8)	164(53.1)	
Country *n* (%)			<0.0001*
Zimbabwe	2342(50.4)	114(36.9)	
South Africa	2303(49.6)	195(63.1)	

Contraceptive use at baseline

	HIV-	HIV+	*p*
Contraceptive method at baseline *n* (%)			0.33
None	249(5.4)	16(5.2)	
Other	109(2.3)	4(1.3)	
Condoms	1190(25.6)	96(31.1)	
Progestin-only pills	679(14.6)	30(9.7)	
Combined oral contraceptive pills	1022(22.0)	40(12.9)	
Injectables	1149(24.7)	109(35.3)	
Long term methods	247(5.3)	14(4.5)	
Total	4645(100)	309(100)	

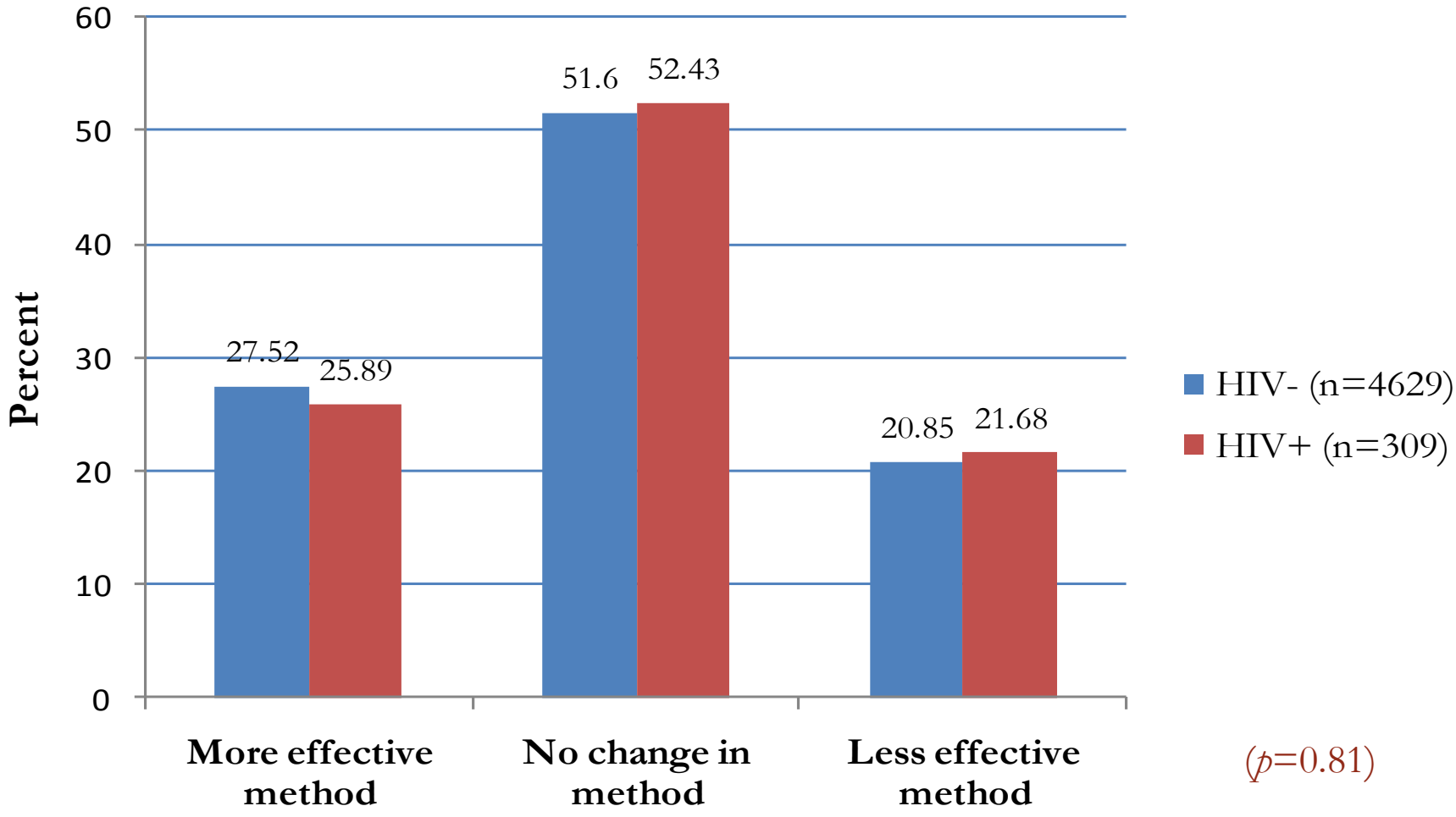
Contraceptive use at last visit

	HIV-	HIV+	*p*
Contraceptive method at last visit *n* (%)			0.50
None	410(8.9)	27(8.7)	
Other	29(0.6)	4(1.3)	
Condoms	1147(24.8)	88(28.5)	
Progestin-only pills	304(6.6)	13(4.2)	
Combined oral contraceptive pills	1236(26.7)	51(16.5)	
Injectables	1220(26.4)	108(35.0)	
Long term methods	283(6.1)	18(5.8)	
Total	4629(100)	309(100)	

Pregnancy

	HIV-	HIV+	*p*
Became pregnant during study *n* (%)			0.15
Yes	979(21.1)	76(24.6)	
No	3666(78.9)	233(75.4)	

Patterns of contraceptive use change



(p=0.81)

Contraceptive use among HIV+ women

- Analysis included 243 women for whom we had pre- and post-seroconversion data
- 17.3% of women moved to a more effective method
- 18.1% moved to a less effective method
- 64.6% reported using the same method

Contraceptive use among HIV+ women

	Pre-seroconversion	Post-seroconversion
Reported most effective method *n* (%)		
No method	14(5.76%)	16(6.58%)
"Other" method	0	2(0.82%)
Condoms	74(30.45%)	79(32.51%)
POP	14(5.76%)	8(3.29%)
COC	40(16.46%)	37(15.23%)
Injectables	87 (35.80%)	86(35.39%)
Long term methods	14(5.76%)	15(6.17%)

Discussion

- Learning about HIV+ status did not appear to significantly change effectiveness of contraceptive use or the probability of switching to a more or less effective method of contraception
- Even in trial context (where women were offered free hormonal contraception), 1/5 overall switched to a less effective method
- At both time periods, use of long-acting contraceptive methods was low

Limitations

- Data on contraceptive use only collected quarterly
- Did not collect data on pregnancy intention
- Study products (diaphragm and condoms) were contraceptives

Conclusion

Significant need for increased information about and access to effective, particularly long-acting, contraceptive methods for both positive and negative women

Thank You!

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