

Motivational interviewing-based interventions for reducing HIV and partner violence risk among women with HIV risk and recent criminal justice system involvement

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Women, corrections, and HIV

- **Women involved in the corrections system are at elevated risk for HIV:**
 - **30% of women in local jails or state prisons incarcerated for drug-related offenses**
 - (Greenfeld and Snell, 2000; Harrison and Beck, 2006)
 - **The prevalence of HIV is higher among female inmates (3%) than among male inmates (2.5%)**
 - (Hammett et al., 2002)
 - **In 1999, an estimated 16% of all women living with HIV in the United States had been released from a correctional facility**
 - (Hammett and Drachman-Jones, 2006)

Interventions in community corrections

- **Interventions with prisoners can be problematic**
 - Limited access to inmates
 - Period of incarceration in city and county jails often brief
- **Can partner with parole and probation**
- **Female releasees have multiple concerns:**
 - Loss of housing and employment
 - Mental health issues
 - Substance use
 - Physical health concerns
 - Economic impoverishment
 - Violence

HIV sex risk and violence

- **Women with HIV-related sexual risk behavior have >40% prevalence of lifetime sexual assault**
 - (He, et al., 1998; Zierler et al., 1997)
- **Women who trade sex are at high risk:**
 - 73% report lifetime IPV
 - 50% report violence from sex customer
 - (Romero-Daza, et al., 2005; El Bassel et al., 2001)
- **Drug use associated with HIV risk and violence**
 - (He et al., 1998; Rhodes et al., 2005)

Community justice involvement and violence

- **Women in community corrections:**
 - 65% lifetime physical or sexual assault
 - (Harris et al., 2003)
- **Women in U.S. community corrections with HIV risk:**
 - 70% lifetime physical abuse
 - 40-65% lifetime sexual abuse
 - (Harris et al., 2003; Wilson-Cohn et al., 2002)

Rationale for study

- **Partner with community corrections to reach women at risk for HIV**
- **One-on-one multi-session intervention to address HIV risk and life stability issues**
- **See if addressing intimate partner violence risk helps to reduce HIV risk**

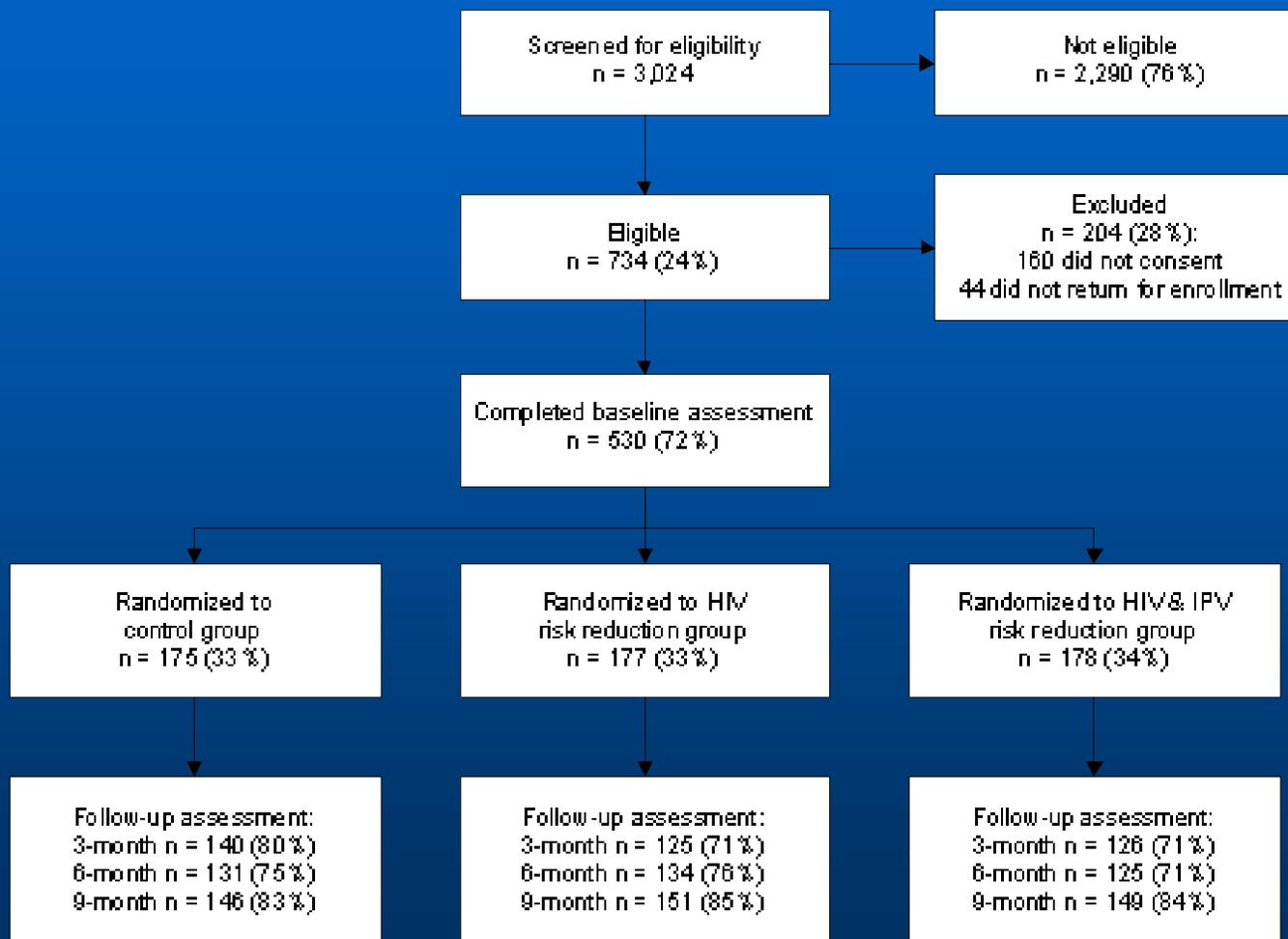
Eligibility

- **Incarcerated in past year or on parole or probation**
- **HIV risk behavior in last year**
 - **Injection drug use (IDU)**
 - **Crack use**
 - **>= 10 sex partners**
 - **Trade sex**
 - **Sex partner of an IDU**
- **>= 18 years of age**
- **HIV negative**

Recruitment

- **Contact/flyers in jail**
- **Flyers at parole offices**
- **Referrals from parole officers**
- **Mailings to parolees and probationers**
- **Flyers in community**
- **Word-of-mouth**

Participant flowchart



Intervention

- **Motivational Interviewing-based intervention**
 - Offered 12 one-on-one sessions over 3 months
 - Conducted by community health specialists trained in Motivational Interviewing
 - Audio-taped and reviewed for intervention fidelity

Intervention

- **Client centered**
 - client's experiences, views, and reluctance or readiness to change are central topics of discussion
- **Communication strategy:**
 - Identify strengths and build upon successes
 - Guide discussion to specific topics
 - highlight discrepancy between current behavior participant's goals
 - assist in resolving ambivalence

Intervention

- **HIV group**
 - Identify recent substance use and sexual activity
 - Discuss participant-assessed risk of HIV, STIs, and HCV
 - Assess readiness to address risk
 - Stage-based discussions
- **HIV&IPV group**
 - Same components as HIV group
 - Plus address IPV risk reduction through same framework

Assessments

- **Baseline and at 3, 6, and 9 months after baseline**
 - 55% face-to-face
 - 45% audio computer-assisted self-interviews (ACASI)
- **Incentives (store gift cards)**
 - Assessments
 - Eligibility screening
 - Intervention sessions
 - Monthly contacts

Primary outcomes

- **Unprotected intercourse in last 30 days**
 - Any (yes/no)
 - Episodes (counts)
- **Needle sharing in last 30 days**
 - Any (yes/no)
 - Episodes (counts)
- **Intimate partner violence in last 30 days**
 - Any (yes/no) physical assault, sexual coercion, or injury (Revised Conflicts Tactics Scale—CTS2)

Analysis: Group comparisons

- **Both intervention groups vs. control group**
 - Unprotected intercourse
 - Needle sharing
- **HIV & IPV group vs. control group**
 - Intimate partner violence

Analytic models

- **Generalized estimating equations (GEE)**
 - **Dichotomous outcomes**
 - **Binomial distribution**
 - **Count outcomes**
 - **Negative binomial distribution**
 - **Autoregressive correlation matrices (AR1)**
 - **Standard errors based on empirical estimators**

Results: Demographics (n=529)

- **54% White; 18% African American; 6% Hispanic; and 6% American Indian/Alaska Native**
- **Mean age 35.7 years (SD = 8.8; range = 18-62)**
- **10% currently married**
- **27% < high school education**
- **58% < \$500 monthly income**

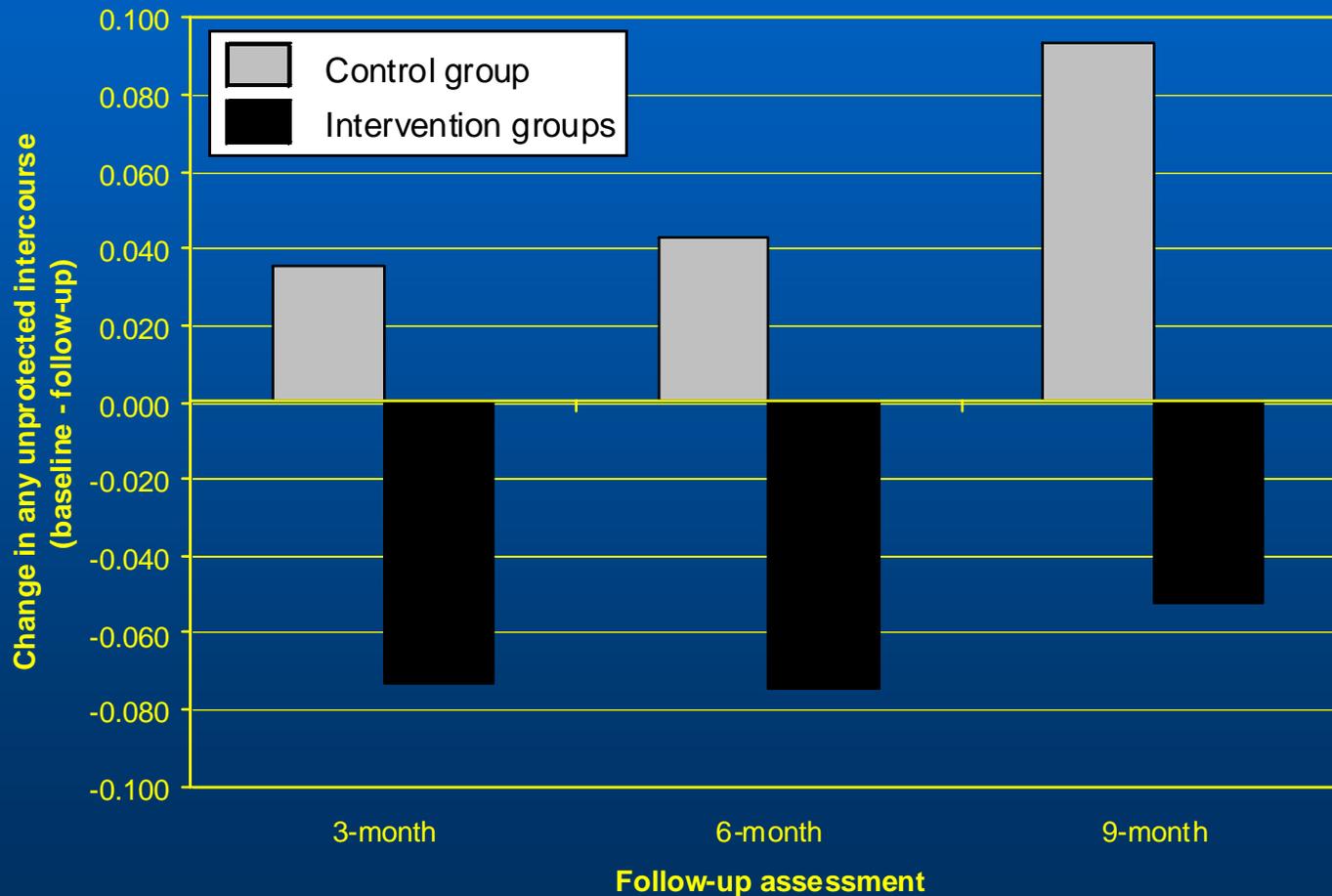
Criminal justice system involvement and life stability at baseline

	Total sample (n=529) %	Control (n=175) %	HIV intervention (n=177) %	HIV & IPV intervention (n=177) %	p-value
Criminal justice system involvement					
Arrested or incarcerated in last 3 months	39	38	37	40	0.86
Incarcerated in last 12 months	82	83	80	84	0.58
Life stability					
Income less than \$300 per month	58	62	57	54	0.30
Unstable housing	34	29	33	41	0.97
Neither in school nor employed	72	73	68	74	0.37

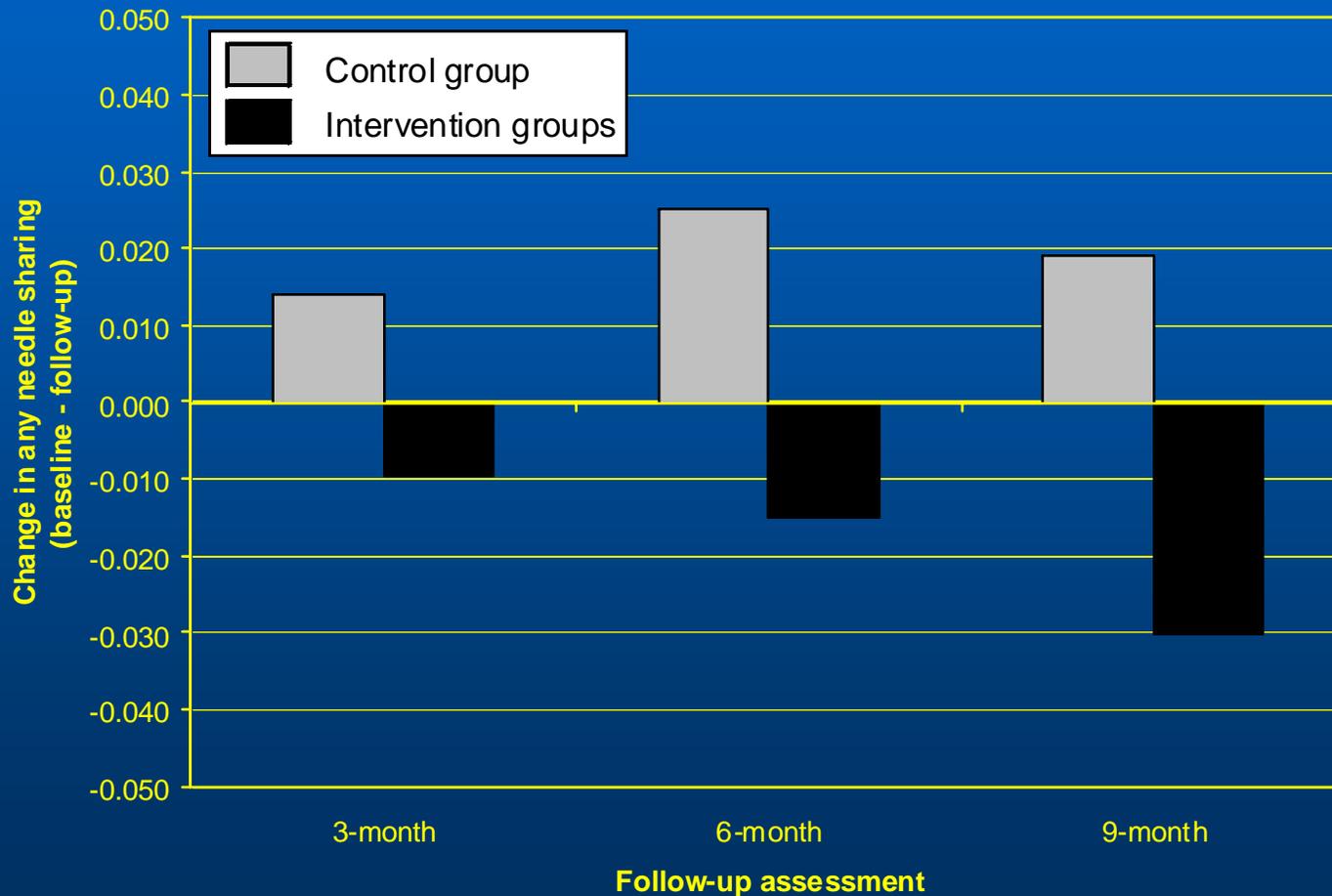
Drug use, sex risk, and violence at baseline

	Total sample (n=529) %	Control (n=175) %	HIV intervention (n=177) %	HIV & IPV intervention (n=177) %	p-value
Drug use in last 30 days					
Hard drugs	33	33	31	37	0.45
Injected with used needle	5	3	6	5	0.42
Episodes of needle sharing: mean (SD)	0.05 (0.21)	0.03 (0.17)	0.06 (0.23)	0.05 (0.22)	0.56
Sexual behavior in last 30 days					
Exchanged sex	13	11	14	12	0.74
Unprotected intercourse	47	40	51	48	0.09
Episodes unprotected sex: mean (SD)	5.25 (11.23)	5.01 (12.66)	5.56 (10.03)	5.18 (10.91)	0.91
Violence in last 3 months					
Intimate partner violence	34	27	32	31	0.33

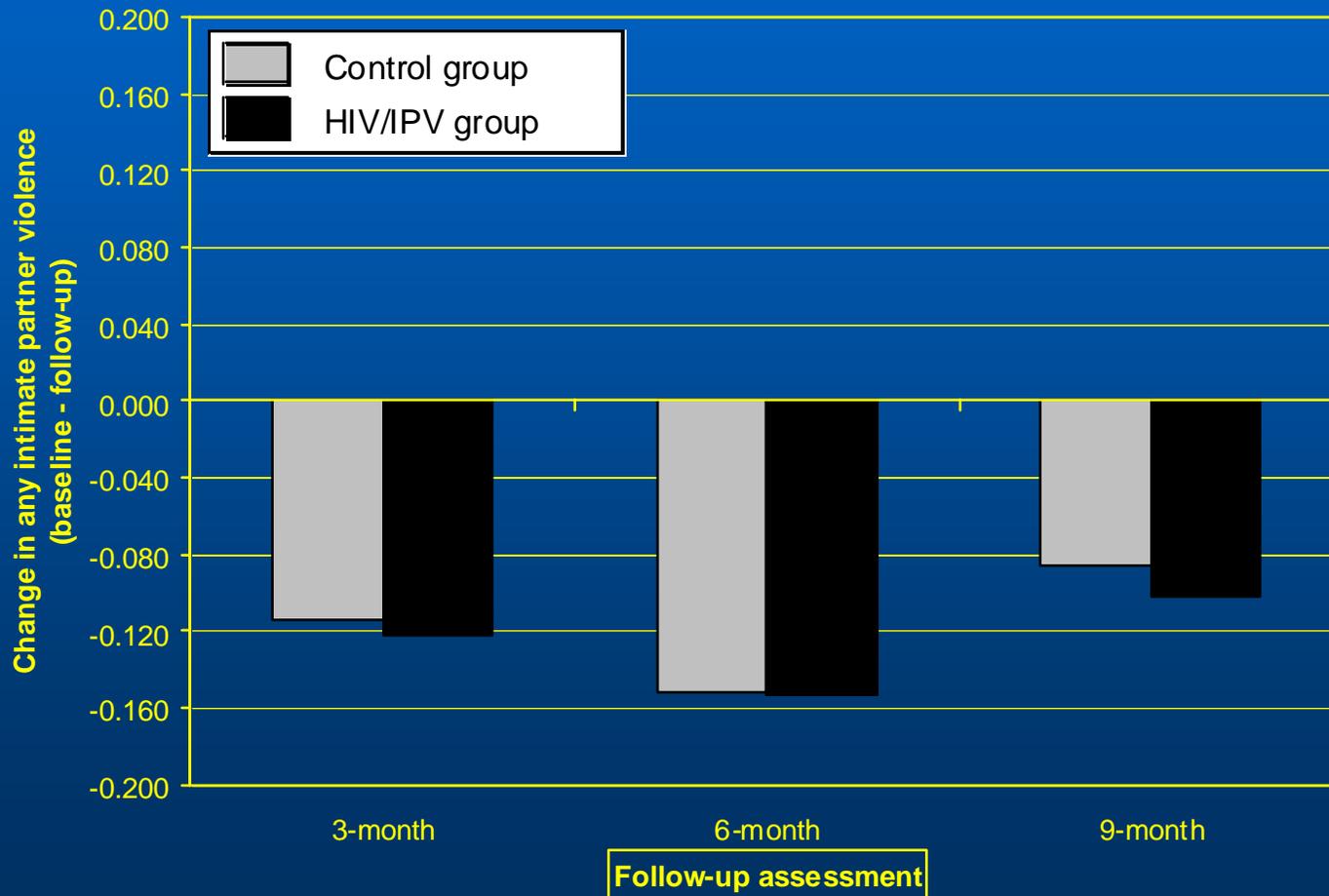
Change from baseline in the proportion of participants reporting any unprotected intercourse in the last 30 days



Change from baseline in the proportion of participants reporting any needle sharing in the last 30 days



Change from baseline in the proportion of participants reporting any IPV in the last 3 months



Unprotected intercourse

	Control group		Intervention groups		Intervention vs. control	
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
Any unprotected intercourse in last 30 days						
Assessment						
Baseline	1.00		1.00		1.70	(1.12, 2.58)
3-month follow-up	1.28	(0.82, 2.02)	0.71	(0.52, 0.97)	0.55	(0.32, 0.96)
6-month follow-up	1.32	(0.81, 2.15)	0.70	(0.50, 0.99)	0.54	(0.29, 0.97)
9-month follow-up	1.69	(1.09, 2.63)	0.78	(0.55, 1.11)	0.46	(0.26, 0.81)
		<u>IRR (95% CI)</u>		<u>IRR (95% CI)</u>		<u>IRR (95% CI)</u>
Episodes of unprotected intercourse in last 30 days						
Assessment						
Baseline	1.00		1.00		1.29	(0.89, 1.85)
3-month follow-up	1.26	(0.88, 1.81)	0.82	(0.63, 1.05)	0.65	(0.42, 1.01)
6-month follow-up	1.25	(0.84, 1.85)	0.72	(0.56, 0.93)	0.58	(0.36, 0.92)
9-month follow-up	1.52	(1.02, 2.26)	0.95	(0.74, 1.21)	0.62	(0.39, 1.00)

Needle sharing

	Control group		Intervention groups		Intervention vs. control	
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
Any injections with a shared needle in last 30 days						
Assessment						
Baseline	1.00		1.00		3.12	(0.44, 21.95)
3-month follow-up	2.23	(0.27, 18.32)	0.90	(0.26, 3.16)	0.40	(0.03, 4.69)
6-month follow-up	3.98	(0.31, 51.13)	0.61	(0.14, 2.62)	0.15	(0.01, 2.89)
9-month follow-up	2.78	(0.28, 27.28)	0.21	(0.04, 0.95)	0.07	(0.00, 1.16)
		IRR (95% CI)		IRR (95% CI)		IRR (95% CI)
Episodes of injecting with a shared needle in last 30 days						
Assessment						
Baseline	1.00		1.00		1.94	(0.58, 6.48)
3-month follow-up	0.87	(0.21, 3.63)	0.93	(0.38, 2.24)	1.06	(0.20, 5.71)
6-month follow-up	1.70	(0.39, 7.40)	0.34	(0.12, 0.95)	0.20	(0.03, 1.21)
9-month follow-up	1.40	(0.32, 6.16)	0.25	(0.09, 0.70)	0.18	(0.03, 1.09)

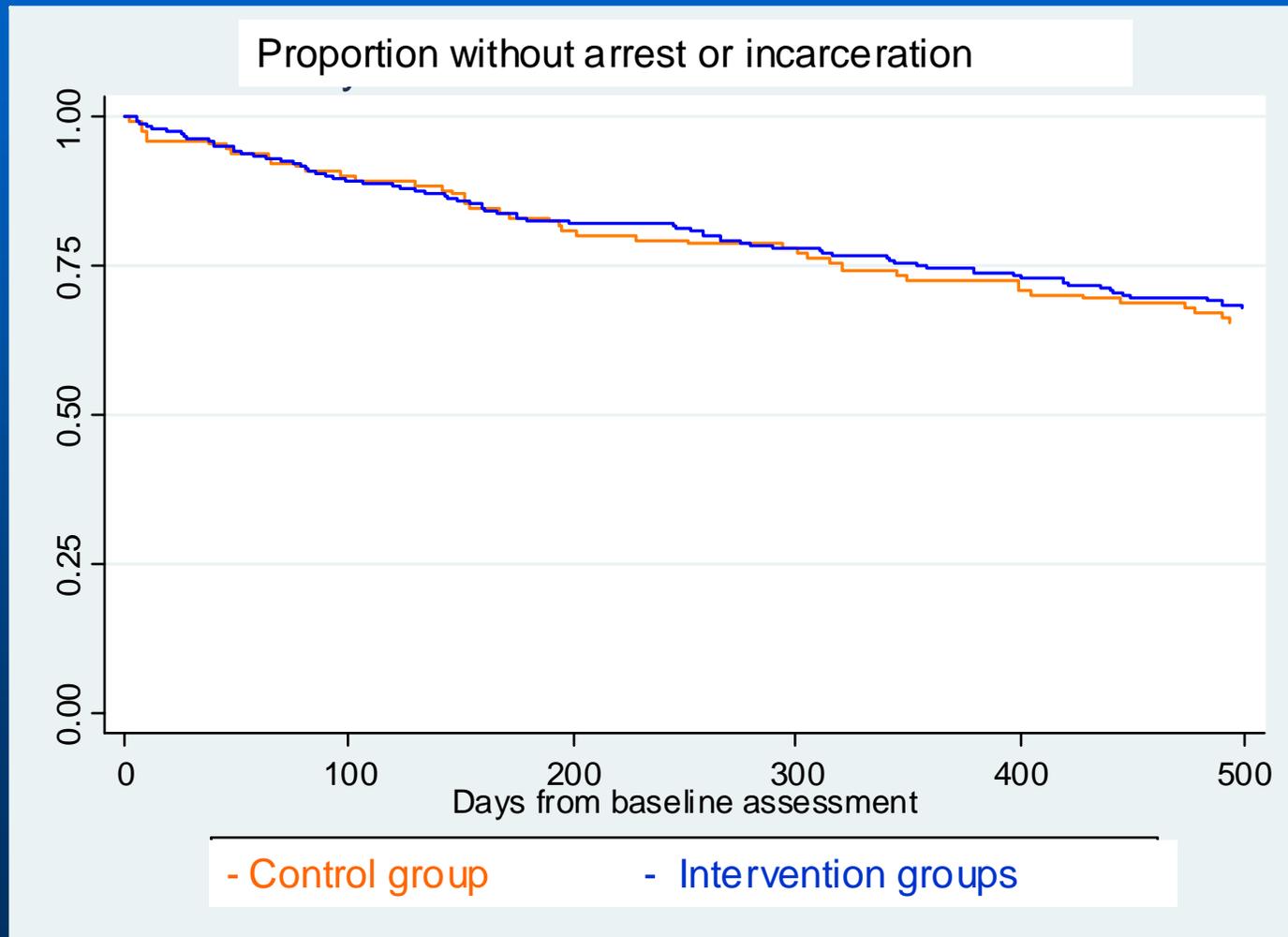
Needle sharing (*post hoc* analysis)

	Control group	Intervention groups	Intervention vs. control
Any injections with a shared needle in last 30 days			
	OR (95% CI)	OR (95% CI)	p-value
Linear trend	1.42 (0.71, 2.82)	0.62 (0.39, 0.99)	0.053
Episodes of injecting with a shared needle in last 30 days			
	IRR (95% CI)	IRR (95% CI)	p-value
Linear trend	1.18 (0.73, 1.91)	0.59 (0.43, 0.81)	0.02

Intimate partner violence

	Control group		HIV/IPV group		HIV/IPV vs. control	
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
Any intimate partner violence in last 3 months						
Assessment						
Baseline	1.00		1.00		0.87	(0.49, 1.54)
3-month follow-up	0.46	(0.25, 0.81)	0.41	(0.21, 0.81)	0.91	(0.38, 2.20)
6-month follow-up	0.30	(0.16, 0.58)	0.27	(0.13, 0.53)	0.89	(0.34, 2.30)
9-month follow-up	0.49	(0.25, 0.97)	0.43	(0.22, 0.83)	0.86	(0.33, 2.22)

Criminal recidivism (n=392)



Discussion: Unprotected intercourse

- **Reductions in prevalence and frequency of unprotected intercourse**
- **Reductions significant in magnitude**
- **Reductions sustained over follow-up**

Discussion: Needle sharing

- **Equivocal findings for needle sharing**
 - Consistent with intervention effect
 - *a priori* tests did not reach significance
 - *post hoc* test significant
- **Limited numbers of IDUs in study**

Discussion: Intimate partner violence

- **No effect on intimate partner violence**
 - Women have little control over IPV
 - Self-protective behaviors have high costs
 - Women inured by violence
- **IPV decreased over time for all groups**
 - Improvement in life stability

Study limitations

- **Self-report**
- **Non-random sample**
- **Expensive**

Conclusions

- **Partner with community corrections to reach women at high risk for HIV**
- **Motivational Interviewing-based interventions can be delivered by paraprofessionals with fidelity**
- **Efficacious with briefer intervention?**
- **Effective in other settings?**
- **Other approaches needed for IPV prevention**