Self-Reported Changes in Injection- and Sex-Risk Behaviors for In- and Out-of-Treatment Opiate Dependent Individuals

S. G. Mitchell [1], K. E. O'Grady [2], S. M. Kelly [1], B. S. Brown [1, 3], R. P. Schwartz [1]

[1] Friends Research Institute; [2] University of MD, College Park; [3] University of North Carolina, Wilmington

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BACKGROUND

- Intravenous heroin use has been associated with HIV infection through the sharing of syringes, cookers, cottons and rinse water.
- Risky sexual behaviors among drug dependent individuals, including sex without the use of condoms and trading drugs for sex, contribute to the spread of HIV infection (Prendergast, Urada, & Podus, 2001).
- While drug use has been shown to consistently decrease with treatment, drug use risk factors associated with the spread of HIV infection have not consistently been shown to be associated with treatment entry (Kwiatkowski & Booth, 2001).
- HIV sexual risk behaviors among drug users enrolled in treatment have not been widely studied.
- A number of questions remain to be answered regarding the impact of methadone treatment entry on the reduction of HIV risk behaviors.

PURPOSE

To compare changes in self-reported injection- and sex-related HIV risk behaviors for opiate dependent individuals in- and out-of-treatment over a 12 month period of time.

METHODS

Participants:

- 515 opioid-addicted adults recruited for a study of entry and engagement in methadone maintenance treatment in Baltimore, Maryland.
  - ✓ 351 **in-treatment participants** recruited upon admission to one of six Baltimore area methadone maintenance programs.
  - ✓ 164 **out-of-treatment participants** who met the criteria for methadone maintenance but had not sought drug-abuse treatment during the past 12 months.

Procedures:

- Participants were interviewed at baseline, 6- and 12-months post-study entry.

Measures:

- **TCU AIDS Risk Assessment:** A brief questionnaire assessing HIV drug use risk behaviors and sex risk behaviors.

Statistical Analysis:

- Generalized estimating equations were conducted for all items on the AIDS Risk Assessment scale to examine group differences in reported risk behaviors over time. All questions addressing risk behaviors in the last 30 days were re-coded as binary except for the number of times the person reported having sex.

RESULTS

Table 1. Demographic differences between in- and out-of-treatment samples (N = 515)

Variable	Total Sample (N = 515)	In-Treatment Sample (n = 351)	Out-of-Treatment Sample (n = 164)	Test Statistic	p
Male, n (%)	280 (54.4%)	187 (53.3%)	93 (56.7%)	$\chi^2(1) = .53$	.47
Race, n (%)				$\chi^2(1) = .16$	.69
Black	385 (74.8%)	260 (74.1%)	125 (76.2%)		
White	125 (24.3%)	87 (24.8%)	38 (23.2%)		
Other	5 (1.0%)	4 (1.2%)	1 (0.6%)		
Married, n (%)	121 (23.5%)	39 (23.1%)	25 (33.8%)	$\chi^2(1) = .01$	.91
Mean age (SD)	41.5 (8.0)	41.2 (8.2)	41.9 (7.7)	$F(1, 513) = .86$	.35
Mean no. years of education (SD)	11.2 (1.7)	11.2 (1.6)	11.0 (1.7)	$F(1, 513) = 1.23$	.27

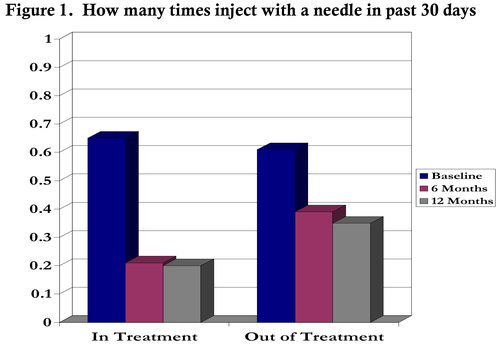
Note: Test statistic for Race was obtained by collapsing data into two categories: White (n = 125) *v.* Black/Other (n = 390).

Table 2. Group Main Effect for HIV AIDS Risk Assessment

	Test Statistic	p	Mean	
			In Tx	Out Tx
INJECTION RISK ITEMS: Past 30 Days				
How many times inject with a needle	33.041	**.000**	.33	.45
How many times use dirty needle or syringe	5.204	.074	.02	.07
How many times share cooker, cotton or rinse water	7.007	**.030**	.05	.15
How many times inject with others around	16.824	**.000**	.11	.24
How many people share works with	6.351	**.012**	.04	.15
SEX RISK ITEMS: Past 30 Days				
How many different partners	1.412	.494	.68	.65
How many times had sex	5.210	**.006**	8.143	9.654
How many times had sex without condom	3.764	.152	.50	.39
How many times sex w/o condom w/casual partner	1.096	.578	.05	.10

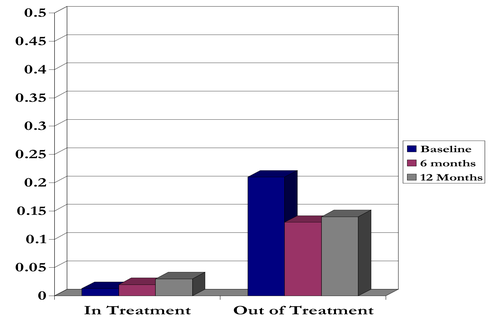
All items recoded as binary, except for the number of times reported having sex. For binary items, group means represent the predicted probability of the behavior (1 = yes)

Figure 1. How many times inject with a needle in past 30 days



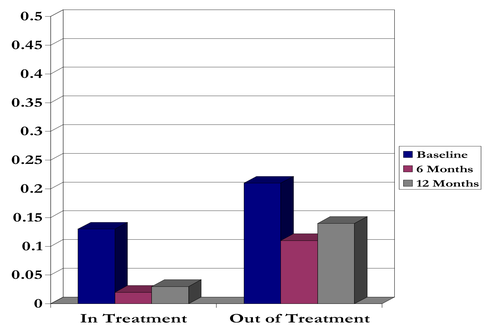
$p < .001$

Figure 2. How many times share cooker or cotton in past 30 days



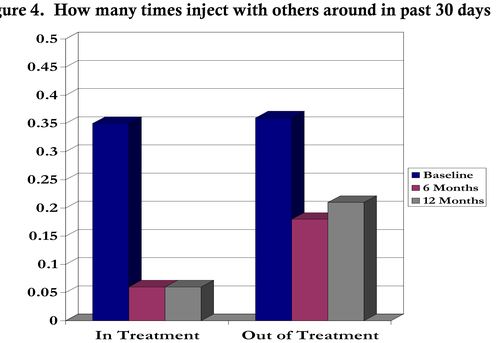
$p < .05$

Figure 3. How many people share works with in past 30 days



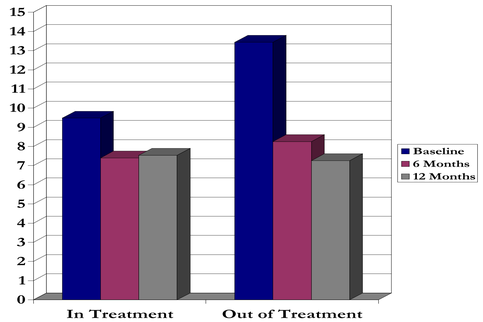
$p < .05$

Figure 4. How many times inject with others around in past 30 days



$p < .001$

Figure 5. How many times had sex in the past 30 days



$p < .01$

CONCLUSIONS

- Methadone treatment participation is associated with decreases in numerous HIV risk behaviors over the course of 12 months.
- Injection drug use activities are more likely to be impacted, reflecting improvements in the individual patient's health as well as public health benefits.
- Many sex-related risk factors did not change over time for those in treatment, including condom use with main or casual partners, despite the fact that many methadone patients may have partners who are also at risk for HIV.
- Methadone treatment programs need to emphasize the HIV sex risks associated with chronic substance use and increase awareness among patients.

REFERENCES

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Kwiatkowski, C. F., & Booth, R. E. (2001). Methadone maintenance as HIV risk reduction with street-recruited injecting drug users. *JAIDS*, *26* (5), 483-489.

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Corresponding author:
smitchell@friendsresearch.org

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