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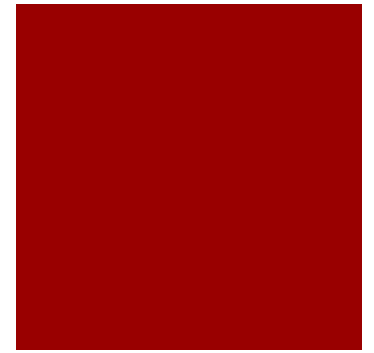


# Differences in substance-related risk behavior between dual and triple diagnosed severely mentally ill adults

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# Objective



- Although it is well established that **SMI** adults engage in high-risk behaviors, it is unknown if there are differences in the type of substance-related risk behaviors in which adults with **dual** and **triple diagnoses** engage. The purpose of this study was to examine substance use behaviors between both groups and to compare them with regard to the types of substances and routes of administration used in the 30 days prior to study enrollment.



# Background



## Prevalence among SMI:

- Dual diagnosis (50-60%) (Dixon, 1999; Levin & Hennessy, 2004)
- HIV (1.7-5.0%)
- HCV (19%) (Rosenberg et al, 2001)
- HIV/HCV co-infection (1.7%) (Rosenberg et al, 2005)

## Primary Substance-Related Risk Factors:

- IDU (17-20%) (Osher et al, 2003; Strauss et al, 2006)
- Sharing non-IDU paraphernalia, i.e. snorting or sniffing equipment (Tortu et al, 2004)

## Sexual Risk Secondary To Substance Use:

- Increased substance use severity is associated with multiple sex partners, sex trading for drugs, alcohol, or money (Meade & Sikkema, 2007)
- High risk sexual networks include partners who inject drugs, exchange sex for goods or money, and/or are HIV positive (Wright & Gayman, 2005)



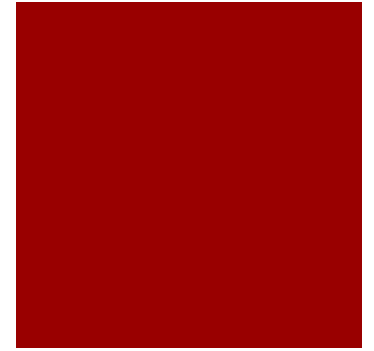
# Methods



- **Design:** Secondary analysis of data from a RCT. Cross-sectional data utilized were collected at enrollment.
- **Sample (Inclusion/Exclusion Criteria):**
  - **Parent Study (N=309):** Included participants  $\geq 18$ yo, admitted to residential crisis a program, English-speaking
  - **Current study (N=252):** Excluded participants who denied any lifetime history of substance use or spent  $\geq 3$  weeks in the hospital in the 30 days prior to enrollment
- **Data and Measurement:**
  - **Standardized, self-report instruments included:**
    - Addiction Severity Index – lifetime and previous 30 days substance use
    - Quality of Life Interview – socio-demographic characteristics, i.e. age, race, homelessness, etc.
  - **Clinical and Billing Records:**
    - Medical records from residential crisis programs included comprehensive health assessment and diagnostic data
    - Mental health service utilization records to determine eligibility
- **Analysis:**
  - Utilized SPSS, version 11.0 to compare subjects with dual and triple diagnoses using descriptive (t-tests and chi-square) and logistic regression analyses

# Results

- Primary Sample Characteristics
  - White (n=113, 44.8%)
  - Male (n=175, 69.4%)
  - Mean age 38±9.8
  - Non-schizophrenia dx (n=176, 69.8%)
- HIV and HCV Diagnoses
  - HIV or HCV (triple dx'd): n=64 (25.4%)
  - HIV only: n=15(6.0%)
  - HCV only: n=38 (15.1%)
  - HIV and HCV: n=11 (4.4%)



# Results:

## Lifetime and Recent IDU by HIV/HCV Status

	No HIV (N=237)	HIV (N=15)	$\chi^2$	p
	n(%)	n(%)		
<b>IDU 30</b>			6.54	.03
No	211(89.0)	10(66.7)		
Yes	26(11.0)	5(33.3)		
<b>IDU lifetime</b>			7.72	.01
No	174(73.4)	6(40.0)		
Yes	63(26.6)	9(60.0)		

	No HCV (N=214)	HCV (N=38)	$\chi^2$	p
	n(%)	n(%)		
<b>IDU 30</b>			4.98	.03
No	192(89.7)	39(79.6)		
Yes	22(10.3)	10(20.4)		
<b>IDU lifetime</b>			49.98	<.0001
No	171(79.9)	9(23.7)		
Yes	43(20.1)	29(76.3)		

# Results:

## ■ Logistic Regression: Substances Used

- Amphetamines (aOR 2.6,  $p=.05$ )
- \*Number of drugs used over lifetime (aOR 1.6,  $p<.0001$ )

## ■ Logistic Regression: Routes of Administration

- IDU (aOR 3.9,  $p=.001$ )
- \*Age (aOR 1.04,  $p=.03$ )

\*Continuous variable



# Conclusions

- **Adults with TD engaged in more severe substance-related risk behaviors than those with DD**
  - Individuals with TD were 3.9 times more likely to report recent IDU and 2.6 times more likely to use amphetamines. They were also significantly older and used more drugs over the lifetime.
  - Individuals with TD and DD did not differ with regard to their use of alcohol to intoxication, cocaine, crack, or marijuana, nor by use of non-injection routes including smoking crack and nasal routes.
  - Therefore, there remains a high risk for transmission of HIV/HCV among TD to others and a high risk for exposure among DD individuals as well.
- **HIV and HCV Prevention Studies Targeting SMI:**
  - Of 8 studies located that address HIV/HCV prevention among SMI, 2 identified substance use behavior change was a component of the intervention, but all focused primarily on sexual risk behavior as the primary outcome.
  - Due to the high rate of dual diagnosis among SMI and the potential exposure to HIV and HCV that results from ongoing substance use, prevention efforts that emphasize only sexual risk will likely be ineffective. Evidence-based methods aimed at addressing the risks/needs of substance using populations might be more effective if implemented with this group.



# Recommendations



- **Develop interventions to address the unique needs/risks of SMI by:**
  - Integrating mental health and substance use treatment strategies (Drake, 2007)
  - Utilizing or adapting evidence-based interventions developed for substance using individuals or people living with HIV/AIDS for individuals with SMI (Hampton et al, 2012)
  - Incorporating strategies that have been effective in substance using populations including: intensive counseling, education, and harm reduction (Drake, O'Neal, & Wallace, 2008)
- **Harm reduction strategies might include:**
  - Education to prevent initiation and/or transition to IDU (Bravo et al, 2003)
  - Outreach to methamphetamine users who might not utilize needle-syringe programs (Cao & Treolar, 2006)
  - Augment needle-syringe programs with safe smoking and/or snorting devices (Leonard et al, 2008)