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Gender Differences in Treatment Access and Outcome Following an ED SBIRT Intervention

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Agenda

- To provide an overview of CTN-0047 SMART-ED design and primary outcome
- To examine gender & treatment group differences in:
 - Barriers to accessing drug abuse treatment
 - Drug abuse treatment services received
- To examine relationship between barriers & treatment utilization

Background

- Numerous Screening, Brief Intervention, and Referral to Treatment (SBIRT) interventions have been successfully implemented in emergency departments (ED) for alcohol problems.
- The application of SBIRT interventions to drug abuse screenings in an ED setting has not been widely implemented or studied.
- NIDA CTN conducted a multi-site study to examine the efficacy of an SBIRT intervention for drug users in an ED setting. **SMART-ED - Screening, Motivational Assessment, Referral and Treatment in the Emergency Department.**

SMART-ED Primary Objective

- To contrast substance use and related outcomes among substance abusing ED patients randomly assigned to:
 - Minimal Screening Only/informational pamphlet (**MSO**);
 - Screening, Assessment, and Referral to treatment (if indicated) (**SAR**); or
 - Screening, assessment, and referral plus a Brief Intervention (BI) with two telephone follow-up Booster calls (**BI-B**).

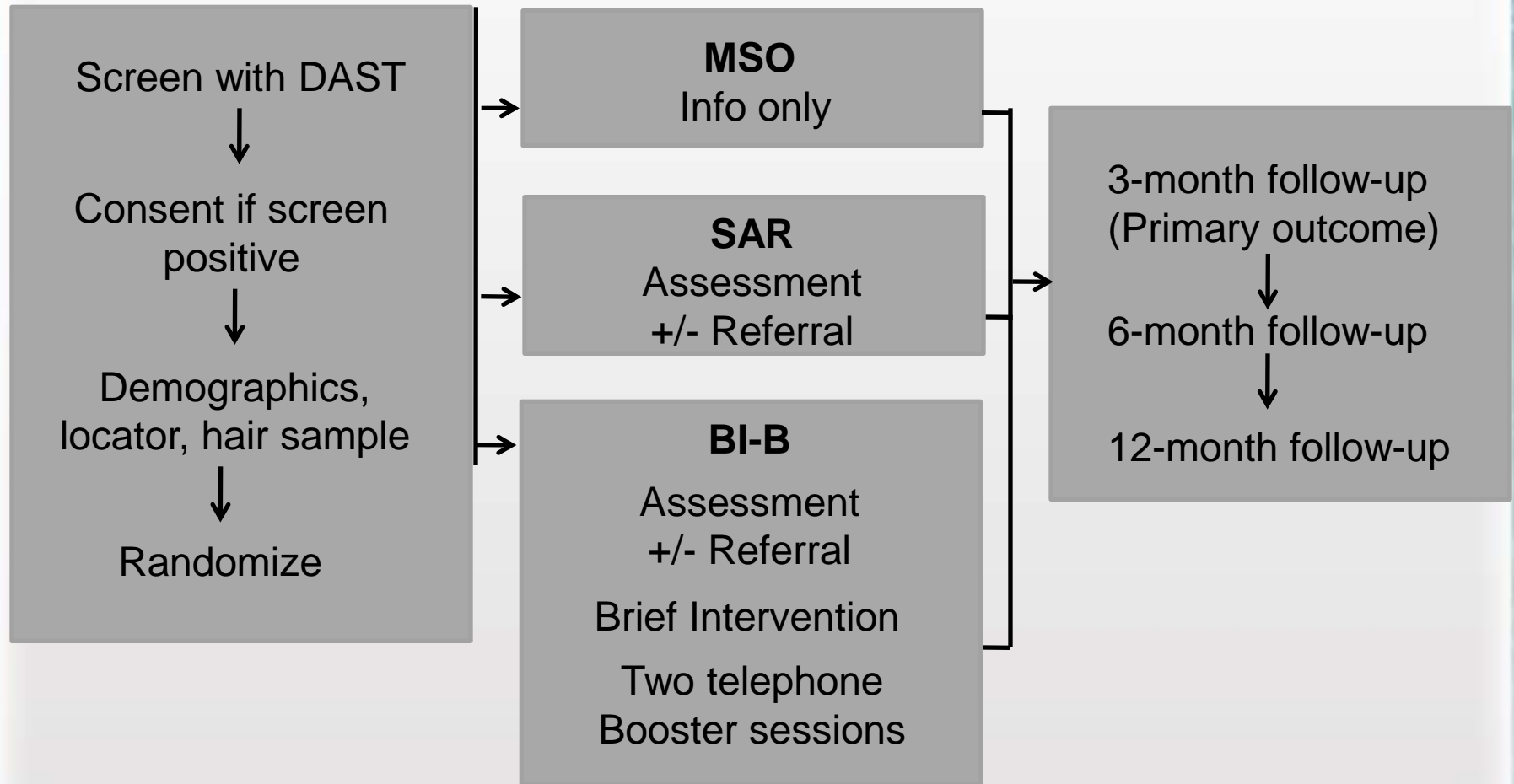
SMART-ED Protocol Team & Sites

- **Lead Investigator (LI):**
Michael P. Bogenschutz, M.D. Southwest Node
- **Co-Lead Investigator (Co-LI):**
Dennis M. Donovan, Ph.D. Pacific Northwest Node
- **Sites**
 - University of New Mexico Hospital, Albuquerque, NM
 - University of Cincinnati Medical Center, Cincinnati, OH
 - Bellevue Hospital, New York, NY
 - Chestnut Ridge Center, Morgantown, WV
 - Jackson Memorial Hospital, Miami, FL
 - Massachusetts General Hospital, Boston, MA
- **Booster Call Center:**
- University of Washington Alcohol & Drug Abuse Institute

Screening Measures

- *DAST-10* – designed to identify drug-use problems in past year (Skinner, 1982).
 - Scores ≥ 3 probable abuse/dependence
 - Follow-up questions: primary drug of abuse and days of use in past 30 days
- *Demographics* – Gender, Age, Marital Status, Education, Employment, Income
- *AUDIT C* – 3 questions about alcohol use for identifying alcohol disorders (Bush et al, 1998).

Design Overview



SMART-ED Summary

- Setting: EDs of 6 academic hospitals.
- Sample:
 - Adult ED patients scoring ≥ 3 on DAST &
 - Past 30-day use of primary substance
- 1285 patients randomized:
 - MSO (n=431)
 - SAR (n=427)
 - BI-B (n=427)
 - 99% of BI sessions, 57% of 1st Boosters, 39% of 2nd Boosters were completed

SMART-ED Primary Outcome Results for Gender

- No significant effect of gender or gender*treatment interaction for primary outcome

Treatment Access/Utilization Measures

- *Barriers to Treatment Inventory* – 25 items assess treatment barriers (Rapp, et al. 2006)
 - Absence of Problem, Negative Social Support, Fear of Treatment, Privacy Concerns, Time Conflict, Poor Treatment Availability, and Admission Difficulty
 - 3 items added: child care, custody, CPS
 - Rated on 5-point Likert scale
- *Treatment Services Review* (McLellan et al. 1992)
 - Drug treatment services received in past 90 days coded as yes/no

Gender Differences in Barriers to Treatment Secondary Analysis - Method

- Barriers to Treatment Inventory (BTI) administered at 3-month follow-up only
- Sample for analyses have BTI data
N=1026
- Analysis time point - 3-month follow-up

Statistical Analysis

- Chi-square analyses categorical variables
- T-tests or ONEWAY ANOVA group comparisons
- Logistic regression models predicting any drug abuse treatment received:
 - Gender, Barrier to Treatment Inventory
 - Added Gender by Barrier Interaction to model

Sample Characteristics by Gender

Characteristic	Male N=708	Female N=318	Total N=1026	Sig
BI-B	32.5%	32.7%	32.6%	ns
SAR	32.3%	36.2%	33.5%	
MSO	35.2%	31.1%	33.9%	
DAST	5.8	5.6	5.8	ns
AUDIT-C	5.8	4.6	5.4	<.001
Marijuana	44.1%	48.4%	45.4%	ns
Cocaine	29.4%	24.5%	27.9%	ns
Opioids	20.6%	21.7%	21.0%	ns
Methamphetamine	3.1%	3.8%	3.3%	ns

Sample Characteristics – Cont'd

Characteristic	Male	Female	Total	Sig
Age	37.1	34.8	36.4	0.003
Hispanic	25.4%	22.0%	24.4%	ns
White	46.4%	53.4%	48.6%	ns
Black	39.7%	33.4%	37.8%	
Multi-racial	5.4%	5.8%	5.5%	
Other	8.4%	7.4%	8.1%	
Married-Cohabiting	15.7%	25.8%	18.8%	<.001
Not Married Now	20.5%	22.0%	21.0%	
Never Married	63.8%	52.2%	60.2%	

Sample Characteristics – Cont'd

Characteristic	Male	Female	Total	Sig
Full Time	20.3%	13.8%	18.3%	<.001
Part Time	19.9%	10.4%	17.0%	
Unemployed	41.0%	45.0%	42.2%	
Other	18.8%	30.8%	22.5%	
< High School	31.6%	36.5%	33.1%	ns
High School	33.2%	26.4%	31.1%	
Some College	24.7%	28.6%	25.9%	
College Degree	10.5%	8.5%	9.8%	
\$0-\$15,000	61.4%	66.7%	63.1%	ns
\$15,001-\$30,000	15.1%	12.6%	14.3%	
OVER \$30,000	12.4%	11.0%	12.0%	

Barriers to Treatment – Items by Gender

	Male	Female	Sig
<i>Absence of Problem</i>			
I don't have drug problems	2.78	2.73	ns
No one said I have drug problem	2.49	2.49	ns
Drug not causing problems	2.75	2.74	ns
Treatment won't make life better	2.78	2.77	ns
Handle drug use myself	2.96	3.01	ns
I don't think I need treatment	2.98	2.93	ns

Barriers to Treatment – Items by Gender

	Male	Female	Sig
<i>Negative Social Support</i>			
Lose friends if I go treatment	1.96	1.85	0.041
Friends tell me not to go to treatment	2.1	2.01	ns
People think bad of me if go treatment	2.03	1.93	ns
Family doesn't want me to go treatment	1.91	1.84	ns
Family embarrassed if I go treatment	1.93	1.93	ns
<i>Fear of Treatment</i>			
Bad experience with treatment	2.3	2.22	ns
Afraid of what happens in treatment	2.16	2.16	ns
Afraid of people in treatment	2.12	2.03	ns
Too embarrassed to go treatment	2.06	1.94	0.035

Barriers to Treatment – Items by Gender

	Male	Female	Sig
<i>Time Conflict</i>			
Hard to get treatment; things to do at home	2.39	2.37	ns
Hard to schedule treatment	2.43	2.35	ns
<i>Poor Treatment Availability</i>			
Moving too far to get treatment	1.96	1.82	0.002
Don't know where to get treatment	2.33	2.29	ns
Difficulty getting to treatment	2.4	2.3	ns
<i>Admission Difficulty</i>			
Waiting list for treatment	2.62	2.58	ns
Too many steps to get treatment	2.55	2.38	0.013

Barriers to Treatment – Items by Gender

	Male	Female	Sig
<i>Privacy Concerns</i>			
Don't like to talk in groups	2.73	2.82	ns
Hate personal questions	2.55	2.56	ns
Don't talk about personal life with other people	2.7	2.75	ns
<i>Child Issues</i>			
Difficulty finding child care	1.88	1.97	ns
Afraid losing custody	1.89	2.06	0.012
Afraid child protective service	1.89	2.11	0.002

Barriers to Treatment – Subscale by Treatment Group

Subscale	MSO	SAR	BI-B	Sig
Absence of Problem	16.94	16.85	16.34	ns
Negative Social Support	9.65	9.86	9.96	ns
Fear of Treatment	8.41	8.67	8.57	ns
Privacy Concerns	7.99	8.23	7.85	ns
Time Conflict	4.84	4.59*	4.94*	0.035
Poor Treatment Availability	6.71	6.46	6.64	ns
Admission Difficulty	5.23	5.09	4.97	ns
Child Issues	5.79	5.75	5.90	ns

*BI-B > SAR

Barriers to Treatment – Subscale by Gender

Subscale	Male	Female	Sig
Absence of Problem	16.74	16.66	ns
Negative Social Support	9.94	9.56	ns
Fear of Treatment	8.64	8.35	ns
Privacy Concerns	7.98	8.13	ns
Time Conflict	4.82	4.72	ns
Poor Treatment Availability	6.69	6.41	0.048
Admission Difficulty	5.17	4.96	ns
Child Issues	5.66	6.13	0.007

Drug Treatment Utilization by Treatment Group

Drug Treatment Type	MSO	SAR	BI-B	Total	Sig
Urine Screens	14.7%	18.3%	19.5%	17.4%	ns
NA Or CA Meetings	11.2%	12.2%	12.9%	12.1%	ns
Inpatient Drug Treatment	8.9%	8.4%	8.7%	8.7%	ns
Individual Drug Counseling	8.0%	9.0%	8.1%	8.4%	ns
Drug Education Classes	8.3%	7.8%	6.3%	7.5%	ns
Group Drug Counseling	6.9%	7.8%	7.5%	7.4%	ns
Medical Detox	7.8%	7.8%	6.6%	7.4%	ns
Medical Maintenance	4.9%	6.7%	5.1%	5.6%	ns
Relapse Prevention Session	6.0%	4.7%	6.0%	5.6%	ns
Meds To Block	3.7%	5.8%	3.0%	4.2%	ns

Drug Treatment Utilization by Gender

Drug Treatment Type	Male	Female	Sig
Urine Screens	16.7%	19.2%	ns
NA Or CA Meetings	12.6%	11.0%	ns
Inpatient Drug Treatment	8.6%	8.8%	ns
Individual Drug Counseling	8.1%	9.1%	ns
Medical Detox	7.3%	7.5%	ns
Drug Education Classes	7.1%	8.5%	ns
Group Drug Counseling	6.6%	9.1%	ns
Medical Maintenance	6.1%	4.4%	ns
Relapse Prevention Session	5.1%	6.6%	ns
Meds To Block	4.4%	3.8%	ns

Predicting Any Drug Treatment Utilization – Gender & Barrier Subscales

Variable	Odds Ratio	95% CI		Sig
Female	1.029	0.744	1.424	ns
Absence of Problem	0.857	0.831	0.884	<0.001
Negative Social Support	1.015	0.957	1.076	ns
Fear of Treatment	1.038	0.972	1.109	ns
Privacy Concerns	1.001	0.946	1.058	ns
Time Conflict	1.094	0.997	1.201	<i>0.059</i>
Poor Treatment Availability	0.86	0.785	0.942	0.001
Admission Difficulty	1.08	0.979	1.191	ns
Child Issues	1.031	0.964	1.104	ns

$X^2(9) = 146.9; p < 0.001; 74.4\%$ classified

Predicting Any Drug Treatment Utilization – Gender by Barrier Interaction

Variable	Odds Ratio	95% CI		Sig
Female	1.50	0.25	9.16	ns
Absence of Problem	0.85	0.82	0.88	<0.001
Time Conflict	1.14	1.01	1.28	0.029
Poor Treatment Availability	0.87	0.77	0.97	0.013
Female*Admission Difficulty	1.298	1.048	1.607	0.017

$X^2(17) = 154.7$; $p < 0.001$; 74.4% classified

Barriers to Treatment – Comparison to Treatment Seeking Individuals

	SMART-ED	VALIDATION SAMPLE
<i>Absence of Problem</i>		
I don't have drug problems	37.6%	12.5%
No one said I have drug problem	27.9%	12.2%
Drug not causing problems	36.9%	8%
Treatment won't make life better	32.2%	10.3%
Handle drug use myself	44.0%	16.1%
I don't think I need treatment	42.7%	8.1%

Barriers to Treatment – Comparison

	SMART-ED	VALIDATION SAMPLE
<i>Time Conflict</i>		
Hard to get treatment; things to do at home	21.1%	12.5%
Hard to schedule treatment	20.6%	1.2%
<i>Poor Treatment Availability</i>		
Moving too far to get treatment	3.2%	4.2%
Don't know where to get treatment	18.6%	7.7%
Difficulty getting to treatment	19.9%	20.2%
<i>Admission Difficulty</i>		
Waiting list for treatment	21.4%	34.3%
Too many steps to get treatment	20.3%	15.7%

Summary – Gender Findings

- No effect of gender on primary outcome
- Demographic differences in BTI sample:
 - Females younger, more likely to be married, less likely to be employed full- or part-time, less problematic alcohol use
- Few Gender Differences in Barriers
 - Child issues greater barrier for females than males
 - Poor treatment availability less of a barrier for females than males
- Female * greater admission difficulty associated with greater treatment utilization in interaction model

Summary – Treatment Group & Treatment Utilization Findings

- Treatment Group Differences in Barriers
 - Time conflict greater barrier for BI-B than SAR
- Drug Treatment Utilization
 - Overall very low, range 4-17%
 - No difference in utilization by gender or treatment group

Summary – Barriers & Treatment Utilization

- Barriers related to treatment utilization
 - Absence of problem associated with less utilization
 - Poor treatment availability associated with less utilization
 - Time conflict associated with greater treatment utilization in interaction model

Conclusions

- Gender minimally associated with barriers. No association with utilization.
- Absence of problem primary barrier associated with less treatment utilization and is more likely to be endorsed in this sample than treatment seeking.
- How to best intervene on drug issues in screening interventions.

Limitations

- Exploratory analyses of gender differences for BTI items. No statistical adjustment.
- Gender differences in demographics in the BTI sample not controlled for in models.
- Relationship between BI-B dosage, barriers and utilization not examined.
- Low frequency of drug treatment service utilization may have influenced validity or generalizability of findings.



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