

# Disparities in Access to and Effectiveness of Evidence-based Supported employment for Persons with Co-occurring Serious Mental Illness (SMI) and Substance Use Disorder (SUD): Evidence from a State-wide Policy Intervention

IV International Congress on Dual Disorders, Barcelona, 20/04/15

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Grant support from U.S. National Institute of Mental Health (NIMH).



# What is Evidence-Based Practice Supported Employment (EBP-SE)?

- EBP-SE – an employment service for persons with Serious Mental Illness (SMI) that differs from “traditional” vocational rehabilitation (VR).
- Uses a “Place, then Train (and support)” approach, instead of traditional “Train first then Place (and support)”.
- Key Characteristics of EBP-SE (a.k.a. IPS):
  1. Competitive Employment
  2. Rapid job placement – according to client’s job preferences
  3. Job support / Job coaching after placement
  4. Training, if needed, after placement.



# Background

- Randomized Controlled Trial Evidence for EBP-SE
  - EBP-SE superior in job outcomes (compared to “traditional VR services”).
- Population with co-occurring SMI and SUD
  - High morbidity & high costs (Drake et al. 1996; Dickey & Azeni 1996)
  - Little research on use & effectiveness of EBP-SE for these persons
  - Frounfelker et al. (2011) - 1,748 patients at one clinic (2008-2009)
    - a) Similar interest in work, b) Lower EBP-SE take-up, c) Similar employment rates
- State-funded SE services in Maryland – only funded EBP-SE after July 2002



# Study Design

## Data

Public Mental Health System (PMHS) claims & Medicaid claims ( 2000-2010) – data on SE services, SMI Dx, SUD services

Outcomes Measurement System (OMS) – semi-annual PMHS survey  
(data on current employment status)

## Population included in study

Persons who used the PMHS; had at least 1 claim with an SMI diagnosis in fiscal years 2002, 2003, or 2004

Had  $\geq$  10 months of Medicaid (public insurance for low-income) enrollment in fiscal year 2002, 2003, or 2004

## Study groups

4 groups based on 2 dimensions (from claims in 7/1/2003 – 6/30/2006)

a) Dual disorder: at least 1 SUD claim (based on EDC PSY02)

b) use vs. non-use of EBP-SE services



# Diagnosis Data from Medicaid Claims

- SMI Diagnosis Groups
  - 1. Schizophrenia (43.6%)
  - 2. Bipolar (21.6%)
  - 3. Major Depression (27.5%)
  - 4. Delusions/other Psychosis (6.7%)
  - 5. Schizotypal/ Borderline Personality disorder (0.7%)
- SUD Diagnosis – Any diagnosis included in Extended Diagnosis Cluster (PSY02) of claims based on the Johns Hopkins ACG grouping system. (Note -tobacco EDC claims excluded.)

# PMHS Claims Signifying Receipt of Supported Employment Services

## **State-Funded EBP-SE services**

Pre-placement (intake, goals assessment, etc.)

Job placement

Extended Support Services

Psychosoc. Rehabilitation Services to individuals in SE

Intensive job coaching

Clinical Co-ordination

**SE service recipients for analysis – Defined by receipt of at least 1 SE service in the period 2004-2006.**

## Two Alternative Sets of Study Group N's

	PMH SE Claim in Any Year (2004-2006)	
SUD 1: SUD EDC Claims in Any 1 Year (2004-2006)	Yes	No
Yes (SUD)	105	2082
No	479	5455
SUD 1: SUD EDC Claims in Any 2 Years (2004-2006)		
Yes (SUD)	45	1059
No	539	6478

# % EBP-SE Take-up for Persons with Co-occurring disorders vs. SMI only

	FY '04	FY '05	FY '06
SUD =1 in at least 1 yr.	<b>2.5%</b> (N=54)	<b>2.8%</b> (N=62)	<b>2.3%</b> (N=50)
SUD≠1 in at least 1 yr.	<b>4.7%</b> (N=280)	<b>4.6%</b> (N=271)	<b>4.3%</b> (N=256)
chi2 test (significance)	20.6 (<0.001)	12.2 (<0.001)	18.2 (<0.001)
SUD=1 in at least 2 yrs.	<b>1.6%</b> (N=18)	<b>2.2%</b> (N=24)	<b>2.0%</b> (N=22)
SUD≠1 in at least 2 yrs.	<b>4.5%</b> (N=316)	<b>4.4%</b> (N=309)	<b>4.1%</b> (N=284)
chi2 test (signifiicance)	20.0 (<0.001)	12.1 (0.001)	11.1 (0.001)





# % Employed in FY for Persons who Received EBP-SE services (co-occurring vs. SMI only)

	% Emp. FY '07	% Emp. FY '08	% Emp. FY '09	% Emp. FY '10	% Emp. Avg.
SUD=1 in at least 1 yr.	<b>27.3%</b> (n=75)	<b>20.1%</b> (n=73)	<b>21.5%</b> (n=65)	<b>13.2%</b> (n=68)	<b>18.9%</b> (n=103)
SUD≠1 in at least 1 yr.	<b>38.3%</b> (n=346)	<b>32.5%</b> (n=364)	<b>28.2%</b> (n=324)	<b>26.6%</b> (n=322)	<b>30.3%</b> (n=472)
Test sig.	0.075	0.038	0.273	0.023	0.021
SUD=1 in at least 2 yrs.	<b>24.1%</b> (n=27)	<b>15.1%</b> (n=31)	<b>20.7%</b> (n=29)	<b>5.2%</b> (n=29)	<b>15.8%</b> (n=44)
SUD≠1 in at least 2 yrs.	<b>37.2%</b> (n=394)	<b>31.6%</b> (n=406)	<b>27.6%</b> (n=360)	<b>25.8%</b> (n=361)	<b>29.3%</b> (n=531)
Test sig.	0.177	0.062	0.423	0.029	0.062



# Conclusions / Next Steps

Evidence of Disparities –

Significantly lower supported employment (SE) take-up rates for persons with dual disorders (SMI and SUD).

Significantly lower employment rates, following SE service use, for persons with dual disorders (SMI and SUD).

More detailed research needed on

(1) causes of these disparities and

(2) strategies for increasing SE take-up and subsequent employment for persons with dual disorders.

Inclusion of additional covariates is required (e.g., Dx, work history, etc.)

