2016 Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE) Summit

September 13 - 15, 2016

“Medically Ready Force...Ready Medical Force”
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Position
• Deputy Director, Veteran Affairs Northeast Program Evaluation Center
• Associate Professor, Yale University School of Medicine Department of Psychiatry

Research interests
• Health Services Research
• Psychiatric Rehabilitation and Recovery

Education
• Special Mental Illness Fellow, New England Mental Illness Research, Education, and Clinical Center, VA Connecticut Healthcare System
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Position
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Research interests
- Post-deployment readjustment for Veterans diagnosed with traumatic brain injury (TBI) and other health conditions
- Integration and coordination of health care teams
- Implementing evidence-based practices

Education
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Position
- Health Services Researcher at VA Portland Healthcare System
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Research interests
- Epidemiology, prevention, and control of traumatic brain injury (TBI) and other traumatic injuries
- Post-deployment reintegration into families, work, and community

Education
- PhD, MS, Epidemiology, University of Minnesota School of Public Health
- Postdoctoral Fellowship in Health Services Research, VA Minneapolis Health Care System
Learning Objectives

At the conclusion of this presentation, the participants will be able to:

- Describe Supported Employment (SE) and its provision within the VHA system of care.

- Discuss patterns and perspectives of serving Veterans with TBI among VHA SE Managers and Vocational Rehabilitation Specialists.

- Identify employment needs and vocational service interests among Veterans with TBI receiving VHA care.
The Provision of Supported Employment to Veterans with TBI in VHA

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Dr. Resnick, Dr. Pogoda and Dr. Carlson have no relevant financial relationships to disclose.

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Why Individual Placement and Support (IPS) Supported Employment (SE)?

Overview of vocational rehabilitation services and the practice of supported employment

Sandra G. Resnick, PhD
VA Northeast Program Evaluation Center, OMHO
Yale University School of Medicine
What is the goal of vocational rehabilitation?
Ideological Continuum of Vocational Services: Goals
Ideological Continuum of Vocational Services: Goals (cont.)

- Distraction from symptoms
- Improve self-esteem
- “Gain work experience and work hardening”
- “pre-vocational”
- Become accustomed to a schedule
- Learn about work
Ideological Continuum of Vocational Services: Goals (cont.2)

- Community-based employment
- Matched with interests and abilities
- Not therapy (although therapeutic)
- Integrated, real world settings
Ideological Continuum of Vocational Services

sheltered & graduated approaches

work as therapy

work
Ideological Continuum of Vocational Services (cont.)

Individualized Placement and Support (IPS) Supported Employment

work as therapy

work
IPS/SE Principles

- Goal is competitive employment
- Zero-exclusion
- Rapid job search
- Individualized job search
- Systematic job development
- Long-term follow along support
- Benefits Counseling
- Integration with Mental Health Team

Bond & Drake (2014)
NEPEC Program Evaluation

Veterans

Fiscal Year

HVSEP

Enrollments
Completions
<table>
<thead>
<tr>
<th>NEPEC Data Received FY15</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrollments</td>
<td>14,678</td>
</tr>
<tr>
<td>Completions</td>
<td>13,838</td>
</tr>
<tr>
<td><strong>Total Unique Veterans</strong></td>
<td>21,706</td>
</tr>
<tr>
<td>Program Locations Submitting Data</td>
<td>181</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VHA Workload, Unique FY15</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SE, TW, CBES</td>
<td>51,000</td>
</tr>
<tr>
<td>Vocational Assistance</td>
<td>39,000</td>
</tr>
<tr>
<td>Incentive Therapy</td>
<td>5,500</td>
</tr>
<tr>
<td><strong>Total Unique Veterans</strong></td>
<td>79,500</td>
</tr>
</tbody>
</table>
## Selected Demographics FY15

<table>
<thead>
<tr>
<th>Selected Demographics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (mean)</strong></td>
<td>49.3</td>
</tr>
<tr>
<td><strong>Male</strong></td>
<td>90.4%</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>48.7%</td>
</tr>
<tr>
<td>Black</td>
<td>42.5%</td>
</tr>
<tr>
<td>Other</td>
<td>9.6%</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
</tr>
<tr>
<td>Divorced</td>
<td>39.4%</td>
</tr>
<tr>
<td>Never married</td>
<td>32.2%</td>
</tr>
<tr>
<td>Other</td>
<td>28.4%</td>
</tr>
</tbody>
</table>

### Veterans’ Age Groups at Enrollment in FY15

- Age 18-40: 74.5%
- Age 41-65: 22.5%
- Age 66-85: 3.0%
Period of Service

Fiscal Year

- Persian Gulf era
- Post-Vietnam era
- Vietnam era
- Between Korean and Vietnam eras
- Korean era
At program completion, 35.6% of veterans were competitively employed.

FY15 Discharge Status

- Competitively Employed: 35.6%
- Unemployed: 30.4%
- Unknown: 13.2%
- Retired / Disabled: 10.8%
- Other: 9.7%
- Student, Trainee, Volunteer: 7.1%
- Employed in VA's IT or CWT: 4.3%
- NISH: 0.4%
Competitive Employment at D/C

FY10 (N=11,153)  FY11 (N=11,736)  FY12 (N=15,575)  FY13 (N=16,463)  FY14 (N=12,363)  FY15 (N=8,640)

TW  HVSEP  SE
What does the research say?

- **SE is an Evidence-Based Practice for severe mental illness**

- Promising data on SE for veterans with PTSD

- Two TW randomized controlled trials
  - No difference in outcomes vs. referral to DOL
    (Penk, Drebing, Rosenheck, Krebs, Van Ormer & Mueller, 2010).
  - Inferior to SE for PTSD (Davis, Leon, Toscano, Drebing, Ward, ...Drake, 2012)
Competitive Employment Rates in 23 Randomized Controlled Trials of IPS

Bond (2015)
What does the research say?

• SE is an EBP for SMI

• Promising data on SE for Veterans with PTSD

• Two TW Randomized Controlled Trials (RCTs)
  • No difference in outcomes vs. referral to DOL
    (Penk et al., 2010)
  • Inferior to SE for PTSD (Davis et al., 2012)
RCT of SE for Veterans with PTSD
Davis et al., (2012)

Primary outcome: Obtained competitive employment over 12 month follow-up
Supported Employment for Veterans with TBI History

Patterns and perspectives of VHA SE Managers and Vocational Rehabilitation Specialists

Terri K. Pogoda, PhD
VA Boston Healthcare System
Boston University School of Public Health
Populations Served by Supported Employment in VHA

- **TBI**
  - Image

- **Severe Mental Illness**
  - Image
  - Resnick & Rosenheck (2007)

- **PTSD**
  - Davis et al., (2012)

- **Spinal Cord Injury**
  - Ottomanelli, Goetz, Suris, McGeough, Sinnott, …Thomas, (2012)

- **Homelessness**
  - Rosenheck & Mares (2007)
Polytrauma Network Site Team Required Core Staffing

- Vocational Rehabilitation Specialist
- *Certified Prosthetist
- *Blind Rehab Outpatient Specialist
- Clinical Psychologist
- Occupational Therapist
- Physical Therapist
- Registered Nurse
- Social Worker/Case Manager
- Speech-Language Pathologist
- Rehab Physician
- *Not required for PSCT
Pilot Study to Provide Supported Employment at 13 Polytrauma Network Sites

VHA Polytrauma/TBI System of Care

Polytrauma Network Site Team

VHA Vocational Rehabilitation Programs

- Vocational Assistance
- Compensated Work Therapy
- Incentive Therapy

Supported Employment (SE) - Transitional Work (TW) - Veterans Construction Team - Sheltered Workshops
SE for Veterans with TBI

- Follow-up with 13 pilot and other non-pilot SE programs

Objectives

1. Determine whether differences exist between SE programs that have (pilot) or have not (non-pilot) received funding for veterans with TBI.

2. Describe current SE program staffing, communication between the SE and TBI clinical teams, and staff experiences with providing SE to veterans with TBI.
Methods

Sample:

<table>
<thead>
<tr>
<th>Site type</th>
<th>SE Managers</th>
<th>SE Vocational Rehabilitation Specialists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot</td>
<td>13</td>
<td>90</td>
</tr>
<tr>
<td>Non-pilot</td>
<td>133</td>
<td>159</td>
</tr>
</tbody>
</table>

Data Collection: August 2014 web surveys with open and closed-ended questions on providing SE to veterans with TBI history and interactions with the PT/TBI clinical team.

Analysis:
- Quantitative: T-test, chi-square, Fisher’s Exact Test
- Qualitative: Coded for *a priori* constructs and emerging themes
# Results

## Survey of Supervisors of SE programs

<table>
<thead>
<tr>
<th>Survey Item</th>
<th>Site Type</th>
<th></th>
<th></th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAMC provides SE to Veterans with TBI</td>
<td>Pilot</td>
<td>100%</td>
<td></td>
<td>.09</td>
</tr>
<tr>
<td></td>
<td>Non-pilot</td>
<td>59.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE VRS FTEE* dedicated to veterans with TBI</td>
<td>Current</td>
<td>.70 ± .45</td>
<td>.76 ± .87</td>
<td>.89</td>
</tr>
<tr>
<td></td>
<td>Ideal</td>
<td>1.80 ± .45</td>
<td>1.67 ± .93</td>
<td>.77</td>
</tr>
</tbody>
</table>

*SE VRS FTEE = Supported employment vocational rehabilitation specialist full-time employee equivalent*
## Results

**Survey of SE vocational rehabilitation specialists**

<table>
<thead>
<tr>
<th>Survey Item</th>
<th>Site Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pilot (n = 14)</td>
</tr>
<tr>
<td>Provide SE to veterans with TBI</td>
<td>.75</td>
</tr>
<tr>
<td>Worked with TBI team</td>
<td>.78</td>
</tr>
<tr>
<td>FTEE* dedicated to SE for veterans with TBI</td>
<td>.98 ± .06</td>
</tr>
<tr>
<td>Communication frequency with TBI team about SE referrals</td>
<td>3.86 ± 1.35</td>
</tr>
<tr>
<td>0 (Never) to 7 (Daily or almost daily)</td>
<td></td>
</tr>
<tr>
<td>Perceived helpfulness in working with TBI team</td>
<td>4.29 ± 1.11</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*FTEE = Full-time employee equivalent
Managers of SE Programs: In their own words

- "This has been a very **successful** program from my perspective, largely due to the **dedication of the...SE-Polytrauma specialist.**” (Pilot site)

- "Most often active Polytrauma cases are staffed and discussed in a very 'medical /acute rehab' manner. **Vocational rehabilitation is seen as a tertiary referral** that often comes just prior to discharge from other Polytrauma services. This delay in referral and focus on vocational rehabilitation also results in veterans feeling that **vocational options are not part of their future planning**, and also allows complacency and/or a focus/mindset on 'obtaining/maintaining disability benefits’ to set in.” (Non-pilot site)

- "**SE services are extremely valuable for all Veterans needing vocational assistance.**....limiting services to specific targeted groups does not allow local VAs to maximize positive vocational impact on the veteran population as a whole. Perhaps a 'priority of SE service' could be developed to maximize our positive impact.” (Non-pilot site)
SE vocational rehabilitation specialists: In their own words

- “I would like more training and education regarding TBI so that I am more prepared when employers talk with me about the TBI as well as the potential benefits/concerns.” (Non-Pilot Site)

- “I believe the Polytrauma/TBI program could benefit from further education on EBSE practices and success stories to further encourage involvement and integration with SE.” (Pilot Site)
SE vocational rehabilitation specialists: In their own words

• “Most of our SE for TBI clients have been diagnosed with a mild TBI. Although the symptoms of mild TBI are often invisible to the public, they cause significant disruption in the veteran's life. Unlike SMI, there is no medication that significantly reduces TBI symptoms.

• Unlike PTSD, there are no significantly effective treatment protocols for TBI. There is also a lack of understanding of mild TBI and how it impacts on our veterans in the general public. **Even the terminology of mild TBI is problematic. The term mild implies that this condition is not serious.**

• In addition, most veterans who have TBI also have other conditions including PTSD, depression, substance abuse, chronic pain and orthopedic injuries which also significantly impair their daily functioning. Very few medical and mental health providers are properly trained to help veterans with TBI. **Veterans with TBI often end up feeling isolated.**” (Pilot Site)
Section 2 Summary

1. 2006 pilot funding for SE for veterans with TBI positively related to team outcomes reported in 2014.

2. Pilot and non-pilot SE managers feel understaffed.

3. Education of SE and Polytrauma/TBI teams would facilitate integration.
Employment Needs and Vocational Service Interests among Veterans with TBI Receiving VHA Care

Kathleen F. Carlson, PhD
VA Portland Health Care System
Oregon Health & Science University
Background

- Over 20,000 Iraq and Afghanistan war veterans with a history of TBI are cared for annually by the VHA (Taylor, Campbell, Nugent, Fletcher, Bidelspach, … Sayer (2015).
- TBI can lead to chronic physical and mental health symptoms that interfere with vocational functioning and contribute to disability.
- VHA administrative data suggest large proportions of Veterans with TBI history are unemployed (Cohen, Suri, Amick, & Yan, 2013; Pogoda, Stolzmann, Iverson, Baker, Krengel …Meterko, 2016).
- Among Veterans with TBI, the need for/interest in vocational rehabilitation services like SE is unknown.
Background (continued)

Objectives

Among recent Veterans with TBI who are receiving VHA services:

1. Quantify the need for vocational rehabilitation services.

2. Examine interest in SE to meet Veterans’ vocational needs.
Methods

• Mixed methods research (qualitative-then-quantitative).
• Cross-sectional, mailed survey involved Iraq and Afghanistan war veteran VA patients.
• Sampling frame included veterans who were confirmed to have incurred one or more TBIs during deployment via a VHA clinician-administered Comprehensive TBI Evaluation (CTBIE).
  • TBI severity categorized as mild vs. moderate/severe using VA/DoD definitions.
• 1,800 veterans were randomly sampled and recruited to participate in the mailed survey following modified Dillman methods (Dillman, Smyth, & Christian, 2014).
• Veterans with moderate/severe TBI were oversampled.
Survey

Veterans received:
• Letter of introduction
• Survey booklet
• Multiple mailings
• $2 unconditional incentive
• $10 upon completion of survey

Surveys asked about:
• Employment Status and Barriers
• Knowledge and past receipt of VA and non-VA vocational services
• Interest in SE
• Demographics, health, economic, and social factors
  • Where possible, standardized measures were used to assess factors of interest
Methods

Analysis

- VHA administrative data were used to identify healthcare use, including physical and mental health diagnoses.
- Interest in SE (yes/no) was assessed by veterans’ demographic, health, economic, and social characteristics.
- Data were weighted to account for oversampling by TBI severity and for potential response bias, estimated as a function of age, geographic region, and history of PTSD diagnosis in VA records.
Results

Employment

- 44% of veterans were unemployed
  - 43% mild TBI; 50% moderate/severe TBI

- Among unemployed veterans, 32% were looking for work
  - 35% mild TBI; 25% moderate/severe TBI

- Among employed veterans, 51% were looking for a different job
  - 51% mild TBI; 52% moderate/severe TBI
Results

Barriers to achieving employment goals were similar by TBI severity. Those most frequently endorsed included:

- Difficulty managing mental health disorders (45%)
- Difficulty with memory or thinking (43%)
- Lack of education or training (31%)
- Difficulty managing pain (30%)
- Problems controlling anger (30%)
- Employers not understanding military experience (30%)
- Lack of available jobs (23%)
Veterans with TBI history: In their own words

• “The memory issue with the TBI, forgetting things my boss asked me to do. That ended up in a change of careers. Now I’m dealing with school. Memory issues and statistics are not a good thing to put together.”

• “I got discharged because of my injury. Looking for work [in] what I was trained to do in the military – outside the military, [this work] just doesn’t exist…What I did instead was go into communications. It was the only job I could find. I did that, which doesn’t pay anything really.”

• There is a lot of uncertainty as to what, in our military experience, we can even put onto a resume, and how to word it, etc.”
Veterans with TBI history: In their own words
(continued)

- “My boss said to me, ‘Alcoholics can get help for their alcoholism. Why can’t you square yourself away?’ I wanted to throat punch him, I really did. This guy does not understand; he hasn’t been in combat.”

- “I interviewed for the IT department and they looked at me like…’Do you have PTSD?’ They didn’t say that, but they were saying that. In a roundabout way I’m like, ‘Well, probably. But I’m not an angry Veteran.’”

- “I interviewed for many jobs…when [they] look at my record – a Veteran with multiple deployments – the hiring teams are scared. They get extra points for hiring disabled Veterans, but they are scared.”
Results

Use of Employment Services or Benefits:

- 19% of veterans reported using VHA employment services
- 66% reported using GI Bill benefits
- 0.5% reported using SE
  - 13% heard of SE

- Use of employment services/benefits varied little by TBI severity
Use of Employment Services or Benefits by TBI Severity

<table>
<thead>
<tr>
<th>Employment-related Service/Benefit</th>
<th>Mild TBI</th>
<th>Moderate/Severe TBI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Any VA Employment Service</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have used</td>
<td>19%</td>
<td>21%</td>
</tr>
<tr>
<td>Have not used</td>
<td>61%</td>
<td>55%</td>
</tr>
<tr>
<td>Unsure</td>
<td>14%</td>
<td>16%</td>
</tr>
<tr>
<td><strong>GI Bill for School</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have used</td>
<td>67%</td>
<td>62%</td>
</tr>
<tr>
<td>Have not used, but do know about</td>
<td>27%</td>
<td>29%</td>
</tr>
<tr>
<td><strong>Supported Employment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have used</td>
<td>0.5%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Have not used, but do know about</td>
<td>11.0%</td>
<td>15.0%</td>
</tr>
<tr>
<td><strong>Homeless Veterans Supported Employment Program</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have used</td>
<td>1.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Have not used, but do know about</td>
<td>19.0%</td>
<td>24.0%</td>
</tr>
<tr>
<td><strong>Transitional Work</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have used</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Have not used, but do know about</td>
<td>15%</td>
<td>22%</td>
</tr>
</tbody>
</table>
Results

After reading a description of SE:

- 42% of Veterans reported they would be moderately or very interested in the program if it were offered to them
  - 42% mild TBI; 45% moderate/severe TBI

- Interest in SE did not vary by:
  - PTSD, depression, substance abuse, or pain diagnoses

- Interest in SE varied by employment status and financial/housing insecurities
## Interest in SE Across TBI Severity

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Interested in SE</th>
<th>Bivariate OR* (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unemployed</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>48%</td>
<td>52%</td>
</tr>
<tr>
<td>No</td>
<td>38%</td>
<td>62%</td>
</tr>
<tr>
<td><strong>Under 100% Poverty Threshold (estimate)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>No</td>
<td>41%</td>
<td>59%</td>
</tr>
<tr>
<td><strong>Difficulty Living on Current Income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficult/Extremely difficult</td>
<td>56%</td>
<td>44%</td>
</tr>
<tr>
<td>Not at all/Somewhat difficult</td>
<td>35%</td>
<td>65%</td>
</tr>
<tr>
<td><strong>At Risk of Homelessness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>No</td>
<td>41%</td>
<td>59%</td>
</tr>
</tbody>
</table>
Section 3 Summary

1. Unemployment and employment barriers among Iraq and Afghanistan war veterans with a history of TBI are common.
   - During focus groups/interviews, veterans attributed their challenges to TBI sequelae, mental health symptoms, lack of education/training, and perceived workplace discrimination.

2. Barriers do not seem to vary by TBI severity.

3. Although many veterans with TBI endorse an interest in utilizing SE, few have heard of the program.

4. Financial insecurity and risk of homelessness appear to drive interest in SE.
Future Directions

Improving Access to SE for Veterans with TBI
(Pogoda, Carlson, Resnick et al.; under VA HSR&D merit review)

• **Aim 1:** Identify actionable barriers and facilitators to referring and providing veterans with Polytrauma/TBI to SE

• **Aim 2:** Adapt and refine current toolkit materials to develop an intervention package to facilitate integration between the SE and Polytrauma/TBI clinic teams.

• **Aim 3:** Implement SE and the intervention package and document provider and veteran outcomes.
References


References


References


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- To qualify to receive continuing education (CE) credit(s), you must have registered for the summit before **11:59 p.m. (PT) on September 15, 2016**.

- To obtain CE(s), you must **complete the post-test and CE evaluation after the conclusion of the session** at [http://dcoe.cds.pesgce.com](http://dcoe.cds.pesgce.com).