Use of Trauma-Focused Interventions in the Veterans Health Administration: Implications for Providing Care to Veterans with Comorbid PTSD and Substance Use Disorders

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Objectives

• Discuss and challenge common myths in the literature around treatment for co-occurring PTSD-SUD

• Provide an overview of patterns of evidence-based psychotherapy (EBP) health service utilization of individual PE and CPT within the VHA for co-occurring PTSD-SUD

• Give an overview of clinical implications for using trauma-focused interventions to treat PTSD-SUD based on nationwide VHA administrative data
What percentage of your caseload has a diagnosis of co-occurring PTSD and substance use disorder (PTSD-SUD)?
PTSD and Co-Occurring SUD

- Commonly comorbid [1]
- Poorer prognosis than PTSD alone [2]
- Veterans more at risk than civilians [2]
- Veterans with PTSD-SUD at greater risk for other harms including:
  - Health-related stressors [3]; More severe medical and psychiatric symptomology [4,5]; Suicide [5]
  - Legal problems [6]
  - Homelessness [7]
  - Aggression [8]; Intimate partner violence [9]
Development of Comorbid PTSD-SUD
Self-Medication Hypothesis [8]

PTSD

Frequent experiences of negative affect

Coping-oriented substance use

Temporary relief of symptoms

Negative reinforcement of avoidance behavior over time

Negative reinforcement of substance use

Model from Berenz, McNett & Paltell, 2019 [10]
Susceptibility/High Risk Model [9]

Substance use and problems

Increased vulnerability to perpetrators of assault

Increased likelihood of engagement in risky behaviors

Increased risk for exposure to traumatic events

Model from Berenz, McNett & Paltell, 2019 [10]
Shared Liability Hypothesis [18]

- Moderate overlap in phenotypes for PTSD and substance dependence
  - Evidence mixed
- Lack of diversity among twin studies
Implementing EBPs for PTSD-SUD
Evidence-Based Treatment of PTSD-SUD

• Concurrent Treatment of PTSD and SUD using Prolonged Exposure (COPE; Back et al., 2019)

• Trauma-focused + pharmacologic component (Foa et al., 2013)
• Prolonged Exposure
• Cognitive Processing Therapy
• Seeking Safety
What are some barriers to providing trauma-focused treatment for veterans with comorbid PTSD-SUD?
Clinical Myths

Integrated treatment most effective, yet these guidelines not consistently followed

Clinician training issues
(Gielen et al., 2014)

Secondary gain concerns
(Bujarski et al. 2016)

Patient attitudes toward treatment

Stigma associated with treatment seeking higher in SUD population
(Luoma et al., 2017)

Clinician fears that concurrent treatment will exacerbate symptoms
(Lancaster et al., 2019)
Research on Trauma-Focused Treatment for PTSD-SUD

- Symptom exacerbation hypothesis may be false [14,19]
- Individuals with comorbid SUD are beginning to be included in clinical trials for PTSD interventions [19,20]
- Little known about how participants with PTSD-SUD in naturalistic settings respond to EBPs for PTSD
- Access to Electronic Health Record data can help understand EBPs outside of the "laboratory"
Purpose of Our Research

1. Elucidate patterns of EBP initiation and completion within the VHA at a population level

2. Better understand trauma-focused care initiation/completion in dually diagnosed Veterans

3. Provide implications for mental health clinicians treating dually diagnosed Veterans based on population-wide health service utilization data
Investigating Trauma-focused Care Completion Rates in the VHA

PTSD-only

- Completion of individual PE

PTSD-SUD

- Completion of individual CPT
Study Design

Retrospective case-control study

Time period: January 1st, 2015 and December 31st, 2019

Source population:
- At least 10 unique visit days in the VHA during study period
- Positive PC-PTSD screen
- Diagnosis of PTSD within 1 year of first positive PC-PTSD screen

Cases: Veterans with at least one health factor for CPT or PE within 1 year for incident PTSD diagnosis

Controls: Veterans with an incident PTSD diagnosis between 2015 and 2019 that did not engage in CPT or PE

All data was gathered from the VA's Corporate Data Warehouse
- Extracted all encounters from VA clinic stop codes 501–599
- Demographics, diagnoses were based on ICD codes, all PTSD and Depression symptom measures from MH Assistant
Definitions

- **Diagnosis of PTSD**: One inpatient ICD-9/10 code for PTSD or at least two outpatient ICD-9/10 codes for PTSD within any 1-year window by a mental health professional (VA clinic stop codes 501–599)

- **Health Factor**: a discrete data field automatically generated by use of EHR structured note template

- **Engagement in EBP for PTSD**: First encounter in a mental clinic with a Health Factor for Cognitive Processing Therapy or Prolonged Exposure

- **Complete dose of EBP for PTSD**: 8 or more encounters with a Health Factor for Cognitive Processing Therapy or Prolonged Exposure within a 24 weeks of the first encounter
Inclusion & Exclusion criteria

1,494,132 unique patients received VA services between 2015 and 2019

Include patients with at least 10 unique visit days between 2015 and 2019
N = 1,365,688

Include patients with a new diagnosis of PTSD between 2014 and 2019
N = 541,360

Exclude patients that died prior to December 31st, 2019
N = 522,851

Patients with at least one encounter of evidence-based psychotherapy for PTSD between 2015 and 2019 were categorized as Treatment Initiators
N = 55,878

Include patients with a PLC-5 measure and PHQ-9 measure recorded within 1 year prior to starting treatment
N = 21,366

Patients with 8 or more encounters for EBP within 24 weeks of their first EBP encounter are categorized as Treatment Completers
N = 10,575

129,044 patients excluded

824,328 patients excluded

18,509 patients excluded

466,973 patients excluded

34,512 patients excluded
Sample size by exposure & outcome
Proportion of Male and Female Veterans receiving EBP for PTSD by SUD exposure group

Gender
Race

**Distribution of race categories recorded in CPRS among Veterans receiving EBP for PTSD by SUD exposure group**

- **White**
  - PTSD Only: 69.73%
  - PTSD-SUD: 68.26%
- **Al/AN**
  - PTSD Only: 1.04%
  - PTSD-SUD: 1.27%
- **Asian**
  - PTSD Only: 1.23%
  - PTSD-SUD: 1.27%
- **Black**
  - PTSD Only: 1.37%
  - PTSD-SUD: 1.6%
- **Multi-racial**
  - PTSD Only: 0.47%
  - PTSD-SUD: 0.47%
- **Pacific Islander**
  - PTSD Only: 0.15%
  - PTSD-SUD: 0.12%

Note: Veterans were categorized as Multi-racial if more than one race was indicated in CPRS.
N missing: PTSD Only = 1079; PTSD-SUD = 181
Proportion of Veterans identifying as Hispanic or Latino/a in CPRS among Veterans receiving EBP for PTSD by SUD exposure group

- PTSD Only:
  - Not Hispanic or Latino/a: 88.82%
  - Hispanic or Latino/a: 11.18%

- PTSD-SUD:
  - Not Hispanic or Latino/a: 89.86%
  - Hispanic or Latino/a: 10.14%
Military branch of Veterans receiving EBP for PTSD by SUD exposure group

Note: Veterans of the Coast Guard and US Public Health Service were categorized as Other
Proportion of Veterans engaging in CPT or PE for PTSD by SUD exposure group

EBP Type

72.11% for PTSD Only, 73% for PTSD-SUD.
Baseline symptom severity

Mean PTSD and Depression symptom severity before entering EBP for PTSD treatment by SUD exposure group

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<thead>
<tr>
<th></th>
<th>CPT</th>
<th>PE</th>
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<tr>
<td>PCL-5 Total</td>
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<tr>
<td>PHQ-9 Total</td>
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PTSD Only  | PTSD-SUD      | PTSD Only  | PTSD-SUD      |

Mean Total Score
Research Questions

• **Hypothesis (1):** Veterans with comorbid PTSD and SUD will complete EBPs for PTSD at a lower rate compared to veterans with PTSD only.

• **Hypothesis (2):** Given the current literature, we hypothesized that the proportion of veterans with comorbid PTSD and SUD that complete PE will be lower than the proportion of veterans with comorbid PTSD and SUD that complete CPT.
Comparison of treatment completion between Veterans with PTSD compared to comorbid PTSD and SUD

• Veterans with comorbid PTSD and SUD were more likely to complete treatment than Veterans with PTSD-only
• Asian Veterans were more likely to complete treatment and Black or AI/AN Veteran were less likely to complete treatment compared to white Veterans
• Air Force and Marine Veterans were more likely to complete treatment compared to Army Veterans
• Veterans with a history of MST were more likely to complete treatment compared to Veterans without a history of MST
Comparison of treatment completion between EBP types (CPT vs PE) among Veterans with comorbid PTSD and SUD

Among Veterans with comorbid PTSD and SUD...

- Veterans engaging in CPT were more likely to complete treatment compared to those engaging in PE
- Black Veterans were less likely to complete treatment compared to white Veterans
- Married Veterans were more likely to complete treatment compared to non-married Veterans
Future Directions
Among Veterans with SUD diagnosis, who initiates treatment after receiving a PTSD diagnosis?
Do rates of initiation and completion differ among subtypes of SUDs?

Veterans with SUD and PTSD diagnosis

Initiation of EBP for PTSD

EBP Completion
What factors are associated with EBP initiation and completion among Veterans with comorbid PTSD-SUD?

<table>
<thead>
<tr>
<th>Predisposing factors:</th>
<th>Health System factors:</th>
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<tbody>
<tr>
<td>• Age</td>
<td>• EBP provider case load</td>
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<tr>
<td>• Race/Ethnicity</td>
<td>• Access to SUD specialty care</td>
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<tr>
<td>• Marital Status</td>
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<table>
<thead>
<tr>
<th>Enabling factors:</th>
<th>Need factors:</th>
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<tr>
<td>• Veteran proximity to health care provider (urban/rural)</td>
<td>• PTSD, Depression, SUD symptom severity</td>
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<tr>
<td>• Service connection</td>
<td>• Comorbid mental health disorder</td>
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<tr>
<td>• Time since SUD and PTSD diagnosis</td>
<td>• Anxiety</td>
</tr>
<tr>
<td>• Engagement with SUD specialty clinic</td>
<td>• Depression</td>
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<td>• TBI</td>
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Are predictors moderated by biological sex?

- EBP initiation
- Predisposing
- Enabling
- Needs
- Health System
- EBP Tx Completion

Sex
Inclusion/Exclusion Criteria:

- Active SUD diagnosis
- New positive screen on PC-PTSD
- New diagnosis of PTSD within 1 year of positive PC-PTSD screen
- Engaged in EBP for PTSD within 1 year of new PTSD diagnosis
- Treatment completion = engaged in 8 EBP sessions w/in 6 months
Generalizing the Findings to Clinical Care
Clinical Considerations for Treatment Based on Our Findings

• **Summary:** These data show many VHA clinicians are successfully doing EBPs for Veterans who have co-occurring PTSD-SUD

• **Clinical Considerations:**
  - Consider stabilization factors first
  - Consider doing an EBP for PTSD even if your patient has current/chronic/recurrent SUD
  - VHA-wide use of EBP templates helps improve the accuracy of electronic health record research data (don’t cut & paste; be sure to click through the templates)
  - Thanks for using EBP templates!!! 😊
  - More RCTs needed to determine how Veterans with PTSD-SUD benefit from PE & CPT
Limitations

- Very recent OIF/OEF post-911 Veterans, may not generalize
- Large population database makes it difficult to examine certain variables
- Data are very different from RCT data
- “Sick patient bias”
- SUD severity not assessed beyond alcohol
- CPRS data on demographic variables
Are there other research questions that could be answered which would be helpful to your clinical work?
Questions?

• Thank you for listening to our presentation!
• Please feel free to email us if you have any questions, comments, or ideas for our future research:
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References


