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The content of my material/presentation in this CME activity will include discussion of unapproved or investigational uses of products or devices as indicated:

Discussion of evidence-based but non-FDA approved medications for the treatment of PTSD including fluoxetine, venlafaxine, nefazodone, imipramine, phenelzine and prazosin.

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Dr. Bornemann is board certified in family medicine. He is a military veteran who has eight years of experience working as a family physician in the U.S. Army, including a combat deployment in support of Operation Enduring Freedom. His military awards include the Combat Medical Badge for providing medical care under direct fire. His interests include teaching point-of-care ultrasound and behavioral health strategies for primary care.
Learning Objectives

1. Screen all new patients with a validated tool for symptoms of PTSD initially and then on an annual basis, or more frequently, if clinically indicated due to clinical suspicion, recent trauma exposure (e.g., major disaster), or history of PTSD.

2. Assess for co-morbid physical and psychiatric conditions

3. Develop a multidisciplinary treatment plan and initiate trauma-focused psychotherapy when available, and/or pharmacotherapy.

4. Assist patients in connecting with mental health resources, including medication and different types of therapy, to manage and understand symptoms and aid in recovery from PTSD.

Audience Engagement System

Step 1

Step 2

Step 3
PTSD Definition

“Trauma is personal. It does not disappear if it is not validated. When it is ignored or invalidated the silent screams continue internally heard only by the one held captive. When someone enters the pain and hears the screams healing can begin.”

— Danielle Bernock, Emerging with Wings: A True Story of Lies, Pain, and the Love That Heals

PTSD Incidence

• General Population – 1-5%
• Primary Care Clinic – 12%
• Post Deployment Military
  – Non combat unit rates similar to general population (5%)
  – Direct combat (13%)
  – High intensity combat units - up to 25%
Clinical Vignette

• CC: “Hip Pain”

• HPI:
  – 47 y/o active army male MSG
  – Symptoms since PCS to Fort Irwin 1 month ago
    • Losing temper, intense anxiety in crowds/avoidance, insomnia
    • Affecting relationship with wife and ability to perform duties
  – IED blast – 2008 – OIF
    • Witnessed the death of several soldiers

Clinical Vignette

• PMH/PSH:
  – Femur Fracture w/ ORIF - March 2009
  – Chronic Pain
  – Hypertension
  – Obstructive Sleep Apnea
  – Insomnia
  – mTBI: 1997 jump injury LOC < 1 hour

• Medications:
  – Amlodipine 5 mg daily
  – Zolpidem 10 mg QHS
Clinical Vignette

- Social
  - Operations group
  - Married
  - Mild EtOH use, no tob or drugs
- Family history
  - Father – Hypertension

Clinical Vignette

- PE
  - Gen: Vitals reviewed, A/Ox3, NAD
  - Appearance: Normal
  - Mood: “I'm in pain”
  - Affect: Broad, nearly tearful at times. Appropriate. Congruent with mood.
  - TP: Normal. Goal directed.
  - TC: No SI/HI. No delusions or hallucinations.
  - J/I: Normal.
Traumatic Stress Reaction Spectrum

- Acute Stress Reaction
  - Hours to days
- Acute Stress Disorder (ASD) *
  - Two days to one month
- Post Traumatic Stress Disorder (PTSD) *
  - Lasting > 1 month after trauma
    - Delayed onset (6 months after trauma)
    - Chronic (lasting > 3 months) – Not in DSM-5

Poll Question 1

What percent of patients with ASD will go on to develop PTSD?

A. 5 – 10%
B. 20 – 25%
C. 50 – 60 %
D. 70 – 80%
Rate of Progression

Study of Motor Vehicle Accidents

Only 30 – 60% who developed PTSD met criteria for ASD previously


Risk Factors

Pre-Traumatic
- Ongoing life stress
- Lack of social support
- Young age at time of trauma
- Pre-existing psych disorder
- Female gender
- Low socioeconomic status
- Prior trauma exposure
- Family history

Peri-Traumatic
- Severe trauma
- Interpersonal nature of trauma
- High perceived threat to life
- Community (mass) trauma
- Peri-traumatic dissociation

Post-Traumatic
- Ongoing life stress
- Lack of social support
- Bereavement
- Major loss of resources
- Children at home and distressed spouse
Poll Question 2

Which has **NOT** shown potential to prevent PTSD in survivors of trauma?

A. Morphine  
B. Benzodiazepines  
C. Propranolol  
D. Psychological First Aid  
E. Targeted Brief CBT

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Prevention

<table>
<thead>
<tr>
<th>Beneficial</th>
<th>Some Benefit</th>
<th>Potential Benefit</th>
<th>No Benefit</th>
<th>Harmful</th>
</tr>
</thead>
</table>
| • Targeted, brief Cognitive Behavioral Therapy | • Social support  
• Psycho-education and normalization | • Psychological first aid  
• Propranolol  
• Prazosin  
• Morphine | • Group psychological debriefing | • Individual psychological debriefing  
• Benzodiazepines |
Poll Question 3
How often do you screen your patients for PTSD?

A. Never
B. If they have other psych diagnosis
C. Once a year or more frequently
D. Every visit

Screening Recommendations

• VA/DOD Joint Guideline (2010)
  – Universal screening initially then yearly
  – Paper or computer-based screening tool
• Institute of Medicine Report (2012)
  – Yearly screening for all deployed in VA or DOD
Screening Tools

• **GAD-7**
  – Seven questions
  – Validated for GAD, Panic Disorder, Social Anxiety Disorder and PTSD

• **PC-PTSD**
  – Four questions

• **PCL-5**
  – Screening – cut off > 33
  – Diagnostic tool
  – Score can be followed

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**GAD-2 and GAD-7**

<table>
<thead>
<tr>
<th>Feeling nervous, anxious, or on edge</th>
<th>Not at all</th>
<th>Several days</th>
<th>More than one half of the days</th>
<th>Nearly every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not being able to stop or control worrying</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Worrying too much about different things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Having trouble relaxing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Being so restless that it is hard to sit still</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Becoming easily annoyed or irritable</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Feeling afraid, as if something awful might happen</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

*Total GAD-2 score* = __________ + __________ + __________

*Total GAD-7 score* = __________ + __________ + __________

- Sensitive for GAD, panic disorder, social anxiety disorder and PTSD
  - GAD-2 > 3
  - GAD-7 > 8
PC-PTSD-5

Sometimes things happen to people that are unusually or especially frightening, horrible, or traumatic. For example:

- A serious accident or fire
- A physical or sexual assault or abuse
- An earthquake or flood
- A war
- Seeing someone be killed or seriously injured
- Having a loved one die through homicide or suicide

Have you ever experienced this kind of event?
If yes… In the past month, have you…

1. Had nightmares about the event(s) or thought about the event(s) when you did not want to?
2. Tried hard not to think about the event(s) or went out of your way to avoid situations that reminded you of the event(s)?
3. Been constantly on guard, watchful, or easily startled?
4. Felt numb or detached from people, activities, or your surroundings?
5. Felt guilty or unable to stop blaming yourself or others for the event(s) or any problems the event(s) may have caused?


PCL-5

- Full DSM-5 Diagnostic Criteria
- Can grade severity
- Can be followed longitudinally

- Scoring
  - Screen Positive if 33 or greater
  - 5 point change is reliable
  - 10 point is clinically significant

Diagnosis / DSM-5

- History of trauma
- Symptoms
  - Intrusion (1)
  - Avoidance (1)
  - Neg cognition/mood (2)
  - Increased arousal (2)
- Duration > 1 month
- Clinically significant impairment
- Not attributable to a substance

Clinical Vignette

- PCL: 75
- PHQ-9: 13
  - No significant depressive symptoms
  - No suicidal ideation
Diagnosis / DSM-IV TR

- History of trauma ✓
- Symptoms
  - Re-experiencing (1) ✓
  - Avoidance / numbing (3) ✓
  - Increased arousal (2) ✓
- Duration > 1 month ✓
- Clinically significant impairment ✓

Poll Question 4

In men with PTSD, what is the most common psychiatric co-morbidity?

A. Major Depressive Disorder
B. Substance Use Disorder
C. Social Anxiety Disorder
D. Dysthymia
**Psychiatric Comorbidities**

- **Alcohol Abuse**
- **Drug Abuse**
- **Depression**
- **Dysthymia**
- **Social Phobia**

![Bar chart showing percentages of psychiatric comorbidities for men and women.](chart)

*Kessler RC, et al. Arch Gen Psychiatry 1995*

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**PHQ-9**

- **Diagnosis**
  - DSM-5 Criteria
- **Severity Rating**
  - 10 – 15: Mild
  - 15 – 20: Moderate
  - ≥ 20: Severe
- **Longitudinal tracking tool**
  - 5 point decline is significant
  - Response to treatment: improvement of 50 percent from baseline
  - Remission: 4 or less, maintained for at least 1 month

CAGE-AID Questionnaire

<table>
<thead>
<tr>
<th>Item</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Have you ever felt you ought to cut down on your drinking or drug use?</td>
</tr>
<tr>
<td>2.</td>
<td>Have people annoyed you by criticizing your drinking or drug use?</td>
</tr>
<tr>
<td>3.</td>
<td>Have you ever felt bad or guilty about your drinking or drug use?</td>
</tr>
<tr>
<td>4.</td>
<td>Have you ever had a drink or used drugs first thing in the morning to steady your nerves or to get rid of a hangover?</td>
</tr>
</tbody>
</table>


Other Co-morbidities

- Chronic pain
- Insomnia
- Post-Concussive Syndrome (TBI)
  - Cognitive complaints
- Cardiovascular disease
  - Autonomic and neuroendocrine dysregulation
Suicidality

- PTSD is a risk factor for suicide
  - 20% per year attempt
- Predictors
  - Aggressiveness in men
  - Depressive symptoms in women

Acierno et al 2000

Poll Question 5

Patients with symptoms of PTSD who do not meet full DSM criteria are at increased risk of suicide.

A. True
B. False
Subthreshold PTSD

• Do not meet DSM-5 criteria
• Linear increase with PTSD symptoms
  – Increased risk for suicide
  – Increased co-morbidities
  – Increased functional impairment

Treatment

• Everyone
  – Psychoeducation
  – Self management
  – Symptom-specific treatment
• Psychotherapy or pharmacotherapy
• Regular follow-up
  – At least every 3 months for chronic PTSD
Psycho. vs Pharm. Therapy

- Pharmacotherapy alone was inferior to psychotherapy alone or combined therapy
- VA/DOD CPG recommends psychotherapy first line

Merz, J., et al. JAMA Psychiatry. 2019

Poll Question 6

Which form of therapy has the LEAST evidence for treatment of PTSD?

A. Prolonged Exposure Therapy
B. Eye Movement Desensitization and Reprocessing
C. Psychodynamic Therapy
D. Cognitive Behavioral Therapy
Treatment - Psychotherapy

• Trauma-focused psychotherapies:
  – Prolonged Exposure
  – Cognitive Processing Therapy
  – Eye Movement Desensitization and Reprocessing
  – Cognitive behavioral therapies for PTSD,
  – Brief Eclectic Psychotherapy
  – Narrative Exposure Therapy
  – Written narrative exposure

Poll Question 7

Which medication is FDA approved for treatment of PTSD?

A. Fluoxetine
B. Paroxetine
C. Venlafaxine
D. Amitriptyline
E. Diazepam
Treatment - Pharmacotherapy

Education
- It only works if taken every day
- It is not habit forming or addictive
- Benefits appear slowly
- Mild side effects are common and usually will improve
- Contact prescriber before stopping medication
- The goal is remission, which may take a few tries
- Does not preclude deployment

First Line
- SSRIs
  - Paroxetine★
  - Sertraline ★
  - Fluoxetine
- SNRIs
  - Venlafaxine

Second Line
- Nefazodone
- TCA
  - Imipramine
- MAOI
  - Phentolamine
- Alpha Blocker
  - Prazosin
  - Adjunctive treatment of sleep/nightmares

FDA Approved for PTSD
## Initial Treatment

<table>
<thead>
<tr>
<th>Severity / PCL-5 Score</th>
<th>Treatment</th>
</tr>
</thead>
</table>
| Sub-Threshold < 33     | • Consider pharm or psychotherapy.  
                      | • Or follow closely.  
                      | • Follow up in 4 weeks.  |
| Mild-Moderate 33 - 55 | • Start psychotherapy +/- pharm  
                      | • Follow up in 2-4 weeks.  |
| Severe > 55            | • Start combination pharm and psychotherapy.  
                      | • Follow up in 2-4 weeks.  |

## Follow up

<table>
<thead>
<tr>
<th>PCL-5 Score Change</th>
<th>Treatment Changes</th>
</tr>
</thead>
</table>
| Decreases 10 points or more | • No change.  
                               | • Follow up in 4 weeks.  |
| Decrease of 5 to 10 points  | • Increase dose.  
                               | • Or follow closely.  
                               | • Follow up in 4 weeks.  |
| Decrease of less than 5 points | • Consider augmentation or switching with or to pharm or psychotherapy.  |
Poll Question 8

What percent of patients treated for PTSD are in remission 1 year after diagnosis?

A. Less than one half  
B. One half to three quarters  
C. Greater than nine out of ten

Future Directions for Treatment

- SMART-CPT  
- Cannabidiol  
- Transcranial Magnetic Stimulation  
- MDMA Assisted Psychotherapy

Bitencourt RM, et al. Front Neurosci. 2018  
Am J Psychiatry. Published online June 24, 2019  
https://maps.org/research/mdma
Prognosis

• Untreated
  – 1/3 in remission at one year
  – Average duration of 64 months
  – 1/3 still symptomatic at ten years
• Treated
  – ½ in remission at one year
  – Average duration of 36 months
• Maintenance
  – 5% vs 26% relapse on sertraline at 28 weeks


Clinical Vignette

• Started on low-dose SNRI
• 4 week follow up
  – PCL 61 → 56
• 8 week follow up
  – PCL 64
  – Added on prazosin for nightmares
  – Agreed to start in clinic PTSD group
• 6 month follow up
  – Endorsing significant improvement
  – PCL 51
Best Practice Recommendations

• PTSD can be managed in primary care
• Screen for PTSD
• Make diagnosis with PCL tool / DSM-5
• Screen for co-morbidities
• Screen for suicidality at EVERY visit
• Treat with psychotherapy +/- SSRI/SNRI first line
• Assess response with repeat PCL scores

Contact Information

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Questions