
Posttraumatic Stress Disorder and Chronic Pain



VA/DoD CLINICAL PRACTICE GUIDELINES FOR PTSD (2010)

Presented by
National Center for PTSD
U.S. Department of Veterans Affairs

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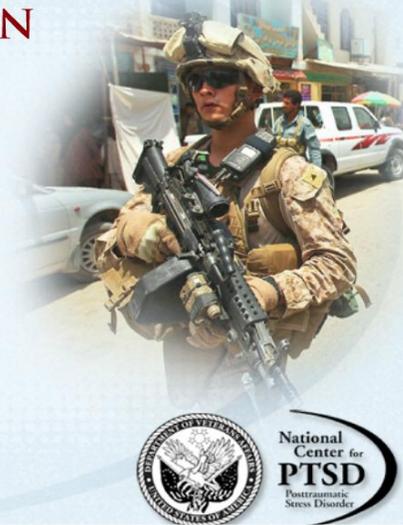
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Posttraumatic Stress Disorder and Chronic Pain

POSTTRAUMATIC STRESS DISORDER AND CHRONIC PAIN

Presented by
National Center
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U.S. Department of
Veterans Affairs



Today we will be talking about the VA/DoD Clinical Practice Guideline for PTSD from 2010 with focus to Posttraumatic Stress Disorder and chronic pain.



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My name is Carri-Ann Gibson. I'm a physician and I work at the James A. Haley Veterans' Hospital in Tampa, Florida. I'm the Chief of our Special Programs Section in the Department of Mental Health and Behavioral Sciences. I also have additional certification in pain management and I am board certified in psychiatry.

PRESENTATION OBJECTIVES

1. Discuss the complex interaction of chronic pain and posttraumatic stress disorder
2. Review the 2010 VA/DoD Clinical Practice Guideline for the treatment of pain in Veterans with posttraumatic stress disorder
3. Identify effective treatment approaches to enhance the recovery of our Veterans who have both chronic pain and posttraumatic stress disorder

And, I would like to go ahead and start our objectives. Number one, we'll discuss the complex interaction of chronic pain and Posttraumatic Stress Disorder. Number two, we'll review the 2010 VA/DoD Clinical Practice Guideline for the treatment of pain in Veterans with posttraumatic stress disorder. Number three, we'll identify effective treatment approaches to enhance the recovery of our Veterans who have both chronic pain and posttraumatic stress disorder.

Objective 1: Discuss the Complex Interaction of Chronic Pain and Posttraumatic Stress Disorder

OBJECTIVE 1:

Discuss the complex interaction of chronic pain and posttraumatic stress disorder



Objective number one: discuss the complex interaction of chronic pain and posttraumatic stress disorder.

OPERATION ENDURING FREEDOM (OEF) OPERATION IRAQI FREEDOM (OIF)

- ▶ As of August 5, 2011, 6,163 American Service Members have been killed in Afghanistan and Iraq
- ▶ Estimated that 50,000-100,00 soldiers have suffered non-mortal wounds/injuries in Iraq and Afghanistan
- ▶ Unprecedented number of injured US Soldiers

Source: <http://icasualties.org>

As of August 5, 2011, 6,163 American Service Members have been killed in Afghanistan and Iraq. There are estimates of approximately 50,000-100,000 Soldiers who have suffered non-mortal wounds and injuries in Iraq and Afghanistan. This is an unprecedented number of injured US Soldiers.

OPERATION ENDURING FREEDOM (OEF) OPERATION IRAQI FREEDOM (OIF)

CAMPAIGN	WOUNDED	FATALITIES
OEF/OIF*	16	1
VIETNAM	2.6	1
KOREA	2.8	1
WWI & WWII	2	1

*Highest wounded to fatality ratio

Gawande, 2004

In the following table, you will see a comparison of the wars in Iraq and Afghanistan as compared to Vietnam, Korea, World War I and World War II where they examined the number of wounded to the number of fatalities.

In the current conflicts in Iraq and Afghanistan, there were approximately 16 wounded Service Members to every one fatality. Then as compared to World War I and World War II together, there were two wounded Service Members to every one fatality. So, when we look at Iraq and Afghanistan, we know this has yielded the highest wounded to fatality ratio.

OPERATION ENDURING FREEDOM (OEF) OPERATION IRAQI FREEDOM (OIF)

- ▶ Much credit is due to military medicine
- ▶ More Soldiers are surviving major combat injuries
- ▶ There are medical, psychological and social costs to Soldiers, their families and the VA medical system to provide care for our survivors of combat related injuries
- ▶ Requires multimodal pain management
- ▶ Proactive, not reactive, pain management has emerged to contribute to early rehabilitation

Helmer et al., 2009

We know a lot of credit is due to military medicine in that a number of Soldiers are surviving significant major combat injuries, when in the past, these would have been mortal injuries. There are significant medical, psychological and social costs to Soldiers, their families as well as the VA medical system to be able provide care for our survivors of combat related injuries.

We also know that this requires multimodal pain management and a proactive, not a reactive, pain management approach has emerged to contribute to early rehabilitation and recovery.

CHRONIC PAIN

- ▶ Leads to distress, suffering, and functional disability
- ▶ Increased use of medical services
- ▶ Workplace absenteeism
- ▶ Most common complaint made by patients to their primary care providers
- ▶ Estimated \$75-\$100 billion a year in the US in lost productivity and healthcare costs
- ▶ Long-term mental health and substance abuse disorders
- ▶ Leading cause of short- and long-term disability among military personnel

From what we know about chronic pain, we are keenly aware that it leads to significant distress, suffering and functional disability for the individual. Those who suffer from chronic pain have an increased use of medical services, as well as a higher workplace absenteeism.

Chronic pain is the most common complaint made by patients to their primary care provider, with estimates of \$75-\$100 billion a year in the US in lost productivity and healthcare costs. There are also significant long-term mental health and substance abuse disorders associated with individuals who suffer from chronic pain. And chronic pain is also the leading cause of both short-term and long-term disability among military personnel.

FREQUENCY OF POSSIBLE DIAGNOSES AMONG RECENT IRAQ AND AFGHANISTAN WAR ZONE VETERANS

Diagnosis (n = 299,585) (Broad ICD-9 Categories)	Frequency *	%
Infectious and Parasitic Diseases (001-139)	33,783	11.3
Malignant Neoplasms (140-208)	2,611	0.9
Benign Neoplasms (210-239)	11,056	3.7
Diseases of Endocrine/Nutritional/Metabolic Systems (240-279)	61,276	20.5
Diseases of Blood and Blood Forming Organs (280-289)	6,194	2.1
Mental Disorders (290-319)	120,049	40.1
Diseases of Nervous System/Sense Organs (320-389)	98,741	33.0
Diseases of Circulatory System (390-459)	46,725	15.6
Disease of Respiratory System (460-519)	57,312	19.1
Disease of Digestive System (520-579)	92,943	31.0
Diseases of Genitourinary System (580-629)	30,451	10.2
Diseases of Skin (680-709)	46,137	15.4
Diseases of Musculoskeletal System/Connective System (710-739)	137,361	45.9
Symptoms, Signs and Ill-Defined Conditions (780-799)	111,474	37.2
Injury/Poisonings (800-999)	59,086	19.7

*These are cumulative data since FY 2002, with data on hospitalizations and outpatient visits as of September 30, 2007; Veterans can have multiple diagnoses with each healthcare encounter. A Veteran is counted only once in any single diagnostic category but can be counted in multiple categories, so the above numbers add up to greater than 299,585.

VHA Office of Public Health and Environmental Hazards January 2008

Represents 19% of the 1.6 million Service Members deployed to Afghanistan and/or Iraq

On the following table, you will see the frequency of possible diagnoses among recent Iraq and Afghanistan warzone Veterans. I have highlighted two particular areas, one being Mental Disorders with a frequency of 40.1% for our returning Veterans and diseases of the Musculoskeletal System and Connective Tissue System with a frequency of 45.9%. These are the highest occurring disorders for our Veterans returning from Iraq and Afghanistan.



We know a lot about chronic pain and PTSD in that each disorder can make the other one worse. So, individuals who suffer from posttraumatic stress disorder and have significant difficulty sleeping, problems with nightmares and flashbacks, with that chronic sleep deprivation, that in fact can drive that chronic pain experience.

For Service Members who have suffered injuries in theater and developed a chronic pain syndrome because of that injury, those reminders of that wartime experience can also drive those PTSD symptoms.

PERSIAN GULF WAR (PGW) VETERANS

- ▶ Clinical and military registries have found pain symptoms and diagnoses to be among the most prevalent conditions reported since the cease-fire in 1991
- ▶ DoD and VA PGW registries most frequently diagnosed medical conditions are:
 - Musculoskeletal pain 25%
 - Connective tissue diseases 36%



Stuart et al., 2002; Murphy et al., 1999; Kang et al., 2000

PERSIAN GULF WAR (PGW) VETERANS

- ▶ Survey of 15,000 PGW Veterans found prevalence rates:
 - Headaches 54%
 - Joint pain 45%
 - Back pain 44%
 - Muscle pain 33%
 - Abdominal pain 23%

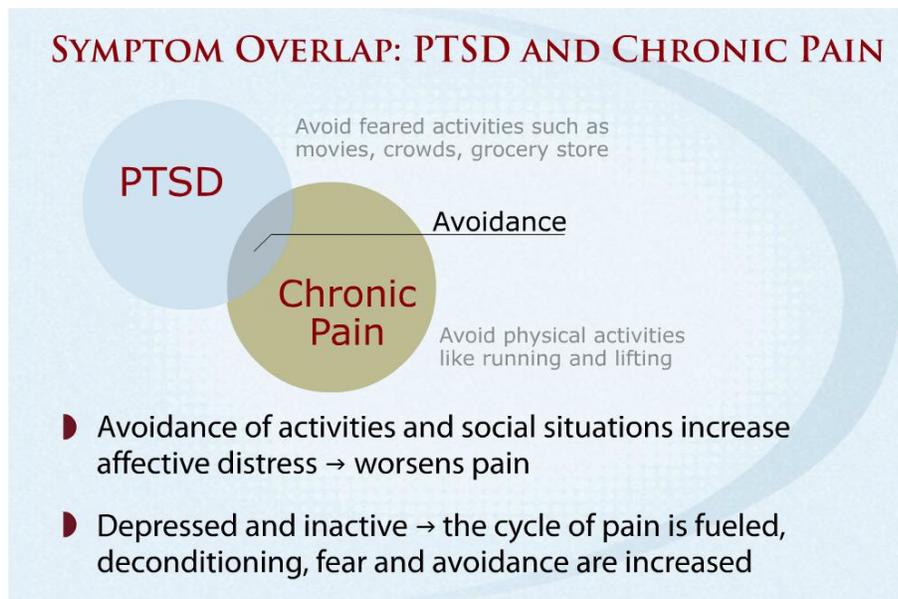


Stuart et al., 2002; Murphy et al., 1999; Kang et al., 2000

When we look at Persian Gulf War Veterans, clinical and military registries were reviewed where they found that pain symptoms and diagnoses were among the most prevalent conditions reported since the cease-fire in 1991.

Department of Defense and VA Persian Gulf War registries most frequently diagnosed medical conditions for our Persian Gulf War Veterans were musculoskeletal pain at 25% and connective tissue diseases at 36%. Again, this is close to what we are seeing for our Veterans returning from both Iraq and Afghanistan.

On a survey of 15,000 Persian Gulf War Veterans, prevalence rates for headaches were 54%, joint pain 45%, back pain 44%, muscle pain 33% and abdominal pain 23%; again a significant impact of chronic pain on our combat Veterans.



When we look at the symptom overlap for both PTSD and chronic pain, we know primarily with posttraumatic stress disorder, you will see the avoidance of feared activities. Feared activities can include going to a movie theater, and a Veteran reporting fear of not being able to get out should something happen; fears of being in crowded amusement parks, walking the mall, or going to a grocery store.

For individuals who have chronic pain, they will avoid physical activities. Each time an individual may engage in a physical activity that can drive the chronic pain experience, worsen their pain symptoms and, therefore, result in them avoiding further physical activity.

So, we know avoidance of activities and social situations can increase affective distress and thereby worsen pain. And then, this can lead to depression and, when you are depressed, you become more inactive and then this drives the cycle of pain, can worsen deconditioning, further driving fear and avoidance.

Symptom Overlap: PTSD and Chronic Pain

SYMPTOM OVERLAP: PTSD AND CHRONIC PAIN

- ▶ Impairment in social and occupational functioning
- ▶ Increased use of healthcare resources
- ▶ Hopelessness
- ▶ Helplessness
- ▶ Social withdrawal, isolation
- ▶ Irritability
- ▶ Excessive guilt
- ▶ Anxiety & Agitation



SYMPTOM OVERLAP: PTSD AND CHRONIC PAIN

- ▶ Memory and cognitive impairment
- ▶ Impaired sleep
- ▶ Suicidal thoughts/behaviors



In further evaluation of symptom overlap for people who have both PTSD and chronic pain, you will see significant impairment in both social and occupational functioning. For people who have both disorders, you'll see a much higher use of healthcare resources, significant reporting of hopelessness and helplessness. You'll also see the associated social withdrawal and isolation.

So, people who have PTSD will withdraw socially, because they're avoiding those feared situations and those who also have chronic pain will withdraw socially because they are avoiding physical activity because that drives their pain experience.

You will also see problems with irritability and guilt. People who have both PTSD and chronic pain may feel guilty about not being able to engage in activities with their loved ones and their children as they did in the past. You will see higher rates of reports of anxiety and agitation, and then you will also see more memory and cognitive impairment.

So, for people who suffer from chronic pain, it's very difficult for them to be focused on activities and people and conversations outside of their own experience because their pain symptoms and their suffering are so distracting. And you'll see the same thing for people who have PTSD. They have a constant fear that something terrible may end up happening or they may worry about events that have happened in the past, so it's very difficult for them to be in the present moment. So, their family members will report that they have difficulties with memory and focus.

You will also see significant impaired sleep for people who have both PTSD and chronic pain. And, again, when you don't sleep, this drives PTSD and chronic pain symptoms and then you can also see suicidal thoughts and behaviors.

COMPLEX INTERACTION OF PTSD AND PAIN

- ▶ Rates of PTSD when pain is secondary to a Motor Vehicle Accident range from 30-50%
- ▶ Burn patients have high rates of PTSD 45% (blasts, refueling accidents)
- ▶ Report more intense pain and affective distress, higher levels of life interference and greater disability than pain patients without PTSD
- ▶ Re-experiencing symptoms were also associated with increased pain level and pain-related disability

Villano et al., 2007; Otis et al., 2003

So, from what we have talked about so far, we know there is a significant interaction between both posttraumatic stress disorder and chronic pain. I can provide you some more statistics and, when we look at the rates of PTSD when pain is secondary to motor vehicle accident, that ranges from approximately 30-50%, so that is relatively high as compared to our general population.

When we look at burn patients, they also have very high rates of posttraumatic stress disorder at approximately 45%. So, when you are working with a Veteran who is returning from Iraq or Afghanistan you may see some of these burn injuries related to blast injuries as well as refueling accidents that can happen outside of military combat.

We know in working with our combat Veterans who have both chronic pain and PTSD, they also report more intense pain and I think I've alluded to this as the conversation has started. And they report higher levels of affective distress and life interference as well as greater disability than pain patients who do not have PTSD. So, again, you are seeing that complex interaction.

We also know that these re-experiencing symptoms are also associated with an increased pain level and pain-related disability. So, what does that mean? We know re-experiencing symptoms typically can be reported as nightmares or intrusive thoughts related to a combat trauma, and once these are reported, you may also see much higher reports of chronic pain such as back pain or headaches.

COMPLEX INTERACTION OF PTSD AND PAIN

- ▶ Pain can become treatment resistant when heightened anxiety is present
- ▶ Combat Veterans with chronic pain and PTSD are hyperaware of bodily sensations, resulting in greater severity scores of chronic pain
- ▶ Catastrophic thinking → The experience of pain is interpreted as overly threatening
- ▶ Muscle tension may be misinterpreted as pain



We also know pain can become treatment resistant when a lot of anxiety is present. So, if you have a Veteran who has posttraumatic stress disorder and they are telling you they are having significant difficulties sleeping, averaging perhaps just a couple hours a night, in essence you can provide them with a number of different pain medications and they may still report their pain symptoms at a relatively high level because sleep deprivation can be a driving factor, for treatment resistant pain.

Combat Veterans who have both chronic pain and PTSD are also very aware of their bodily sensations. So, what we see for Veterans who have posttraumatic stress disorder, they're more hyper-vigilant, they are more aware. So, a muscle twitch or some muscle tightness may be misinterpreted as an actual pain symptom or another pain-related disability because they are very tuned in to everything that happens within their physical body.

So, a good example of this I could say I have a young Marine who I worked with and his wife came into the office and his wife had reported to me, "You know Dr. Gibson, I don't understand why my husband reports so much pain. I mean he has always been a really tough guy, he exercises regularly with the kids, he is very physical, he likes to get out, and he never complained about anything until he went to Iraq. And now he has all these little aches and pains. He complains about his shoulder, he complains about his knees and he is not as active with us as he was in the past."

And again, this really speaks to that hyperawareness of bodily sensations and what I explained to the Veteran and the family member is people who have posttraumatic stress disorder experience chronic pain and physical pain at a much lower level than somebody who does not. And I think with that explanation that helps the spouse and that also helps the Veteran to understand how pain may be impacting their life and then that can help us develop further treatment plan.

We also know people who have PTSD and chronic pain may express more catastrophic thinking, and I think I referenced this during this discussion, because that experience of pain can be interpreted as overly threatening. So, if you are having some muscle tightness or you took a walk and your calf muscles may be a little more tense than usual, that can be interpreted as "perhaps I have some type of you know other malignancy or there is something else wrong with me so therefore I need to get help." So, again, that muscle tension can be misinterpreted as pain.

The image shows two side-by-side presentation slides. Each slide has a light blue background with a faint grid pattern and a silhouette of a person's head and shoulders in the lower half. The title 'PTSD AND CHRONIC PAIN' is at the top of each slide in a dark red font. The left slide lists two models and four symptoms, while the right slide lists three symptoms. Both slides have a small citation at the bottom left: 'Asmundson et al., 2002; Sharp et al., 2009'.

PTSD AND CHRONIC PAIN

Mutual Maintenance Model
Shared Vulnerability Model

- ▶ Anxiety sensitivity heightens fear, anxiety and avoidance of activities that may cause pain
- ▶ Belief that anxiety causes harmful consequences
- ▶ Cognitive distortions
- ▶ Behavioral patterns

Asmundson et al., 2002; Sharp et al., 2009

PTSD AND CHRONIC PAIN

- ▶ Attentional biases
- ▶ Cognitive demands
- ▶ Alarm caused by the traumatic stressor is combined with the alarm of physiological sensations

Asmundson et al., 2002; Sharp et al., 2009

When we look at PTSD and chronic pain, there are a number of proposed theoretical models that include Mutual Maintenance as well as a Shared Vulnerability. And they share some similar symptoms in presentation which includes anxiety sensitivity; we know that that heightens fear, and then avoidance of activities that can cause pain.

For people who have both disorders, they believe that their anxiety can have harmful consequences. They exhibit significant cognitive distortions that, “Something terrible may happen, there is something wrong with me and I am never going to get better.” Their behavioral patterns surround that avoidance so they avoid physical activity; they may avoid crowded places for fear that something bad can happen to themselves or their family members.

They have attentional biases, so they are focusing on safety – safety of the world, trust with other people; they are focused on their physical pain symptoms and this all comes with cognitive demands. So, when you are experiencing a lot of pain, it’s difficult to stay focused on your relationships and perhaps your job.

When you are experiencing PTSD, you have an internal preoccupation so you are not as available to people who are outside of you as well. So, the alarm caused by this traumatic stressor can be combined with the alarm of physical sensations. So, you may have a fear that something bad is going to happen and that may result in your heart beating faster, or perceiving that you may have some muscle tension and then this can drive the PTSD and chronic pain symptoms.

PTSD AND CHRONIC PAIN: DEPRESSION

- ▶ Depression is common
- ▶ Fatigue and reduced activity levels exacerbate and maintain both PTSD and chronic pain symptoms
- ▶ Among chronic pain patients, depression prevalence rates were estimated at 30-54%, much higher than in the general population
- ▶ Depression may result as a consequence of pain or may precede the pain and may be related to maintenance of pain

Poundja et al., 2006; Banks & Kerns 1991

PTSD AND CHRONIC PAIN: DEPRESSION

- ▶ Biopsychosocial approach to pain recognizes the relationship between pain and emotional disturbances is likely to be reciprocal

Poundja et al., 2006; Banks & Kerns 1991

We also know that depression is common in both disorders. So, when you suffer from depression, you become more fatigued, you may isolate more, you reduce your activity levels and this, in itself, can drive both PTSD and chronic pain symptoms.

When we look at people who have chronic pain, depression rates are approximately 30-54%. So, we know that that's relatively high as compared to our general population where the rates of depression may be anywhere from 15-20%, you know, perhaps lower depending on the population that you sample.

We also know that depression can be a result of that chronic pain event or it may actually come before the pain. So, it's difficult to say sometimes what causes what. So, for somebody that presents with both PTSD and chronic pain and they are depressed, you know that you do need to aggressively address that depression in order to improve their response as related to their PTSD and chronic pain.

We also know the biopsychosocial approach to pain can recognize that relationship between both the physical pain and the emotional symptoms such as depression. So, doing that comprehensive evaluation can also help you to focus your clinical approach.

PTSD AND CHRONIC PAIN: SUBSTANCE ABUSE

- ▶ Alcohol and other substances are commonly used to cope with the mental health impact of deployment (depression, anxiety, PTSD, pain)
- ▶ Under-recognition of substance use disorders in those returning from deployment
- ▶ Prevention of alcohol and substance use MUST be a high priority in this population of Veterans
- ▶ Target through screening, education, prevention and treatment

Substance abuse is also very common for people who have both posttraumatic stress disorder and chronic pain. We know in working with many of our returning Veterans, they will tell you that alcohol and other substances are ways that they may cope with the anxiety about possibly being re-deployed, having some difficulties with reintegration; they may find that they may have a couple more alcohol containing beverages at night because they are having difficulty sleeping.

So, substances can be ways that people will attempt to self-medicate and modify their depression and anxiety symptoms as well as their pain symptoms. We also know there is an under-recognition of substance use disorders in those who are returning from deployment. And I think it is difficult for people who have both posttraumatic stress disorder and a substance use disorder to receive treatment. Many of them will report that they feel guilty about the amount of alcohol they are drinking or the substances that they are now using.

They feel ashamed about receiving mental health treatment. So, when you have both disorders, that avenue to present for care can become much more challenging. So, we know that the prevention of alcohol and substance use must be a high priority for this population of Veterans and we need to be able to identify it through screening, through education and through prevention and then subsequently treatment.

PAIN IN PATIENTS WITH PTSD

- ▶ PTSD symptoms are associated with greater reporting of physical health problems and symptoms
- ▶ 80% of outpatient military combat Veterans satisfied the criteria for chronic pain in one or more sites, 77% back pain
- ▶ Findings found in all theaters: Vietnam, Persian Gulf War
- ▶ Pain threshold and tolerance are affected by elevations in anxiety
- ▶ PTSD may reduce pain threshold and pain tolerance, influence distress and increase perceived disability levels

Otis et al., 2003

So, chronic pain in patients who have PTSD, we know that PTSD symptoms are associated with greater reporting of physical health problems. When we look at a sample of outpatient military combat Veterans, we know that 77% were reporting back pain.

We know that these findings were found in all theaters, so it does not matter if a combat Veteran had served in Vietnam or the Persian Gulf War, those pain symptoms are still going to be reported at the same level. And as I had mentioned earlier, you know that the ability to tolerate pain is significantly affected by high levels of anxiety as well as sleep difficulty.

And we know that posttraumatic stress disorder can reduce the ability to tolerate pain, can also reduce the pain threshold, so those Veterans are going to experience pain at a lower level. They may report more physical symptoms and may complain more and to some providers, they may say, "Oh this patient is so somatically focused. You know, what are we going to do with this patient?"

But, the way I come to view that is, that's more a cry for help and it's almost like looking at an onion and this is what's happening on the outside but there is so much more that may be going on the inside for that particular patient.

PTSD IN PATIENTS WITH CHRONIC PAIN

- ▶ 10-50% of patients enrolled in a pain treatment center have symptoms that meet criteria for PTSD
- ▶ 10% of a random military sample being treated for chronic pain also had PTSD
- ▶ 35% with musculoskeletal injury from an accident develop PTSD; musculoskeletal injuries are the most common injuries in Iraq
- ▶ National Co-morbidity Study found that patients with musculoskeletal pain are four times more likely to develop PTSD than those without musculoskeletal pain

Bonin et al., 2000; Kessler et al., 1995; McWilliams et al., 2003

We look at PTSD and patients who have chronic pain, so these will be patients that may present to a chronic pain center. So, not specifically receiving help in, you know, a depression clinic or an outpatient mental health clinic; this is primarily in a pain treatment center. 10-50% of those patients meet criteria for posttraumatic stress disorder.

And we also looked at 10% of a random military sample who are being treated for chronic pain; they also had posttraumatic stress disorder. We have talked a little bit about musculoskeletal injuries but, there are some kind of interesting numbers when we look at 35% of people with musculoskeletal injury from an accident do go on to develop posttraumatic stress disorder.

So, if we reference that slide, from the beginning with the high rates of musculoskeletal disorders and mental illness, again we can say that musculoskeletal injuries are the most common injuries in Iraq and perhaps this is closely related to our rates of posttraumatic stress disorder.

When we look at the National Co-morbidity study, it was found that patients with musculoskeletal pain are actually four times more likely to develop PTSD. So, perhaps a good clinical focus with a patient, if they are reporting muscular pain or bone pain (this could be back pain, knee pain) look behind that and see, you know, was there a history of a combat trauma or other types of traumatic event, and screen for those PTSD symptoms.

PAIN CHARACTERISTICS ACCORDING TO PTSD STATUS

Characteristics	PTSD	No PTSD
Pain Severity	6.90 (2.65)	5.65 (2.68)
Pain Every Day	58%	21%
Head	38%	14%
Neck/Shoulders	29%	11%
Lower Back	43%	15%
Upper Limb	13%	6%
Lower Limb	25%	8%

Note: Pain severity is a global rating of severity scored on 1-10 scale. Standard deviations appear in parentheses. 77 males, 19 female participants who sustained severe TBI
Bryant et al., 1999

So, when we look at pain characteristics according to PTSD status on this following slide, you will see people reporting pain every day at a rate of 58% for those who have a diagnosis of posttraumatic stress disorder; whereas it is reported at 21% for those who do not have PTSD. Headache pain in patients who have PTSD reported at 38% and those who do not have PTSD at 14%. Low back pain, if you have a diagnosis of PTSD, is reported at 43% and if you do not have PTSD, at 15%.

So, again, this is really speaking to looking at somebody who has posttraumatic stress disorder and screening back and looking at their physical symptoms. What are they presenting with? What brings them into treatment? Are they reporting they are physically disabled? Is it their nightmares, intrusive thoughts, or other PTSD symptoms? And then allowing you to be able to look at both together.

OEF-OIF VETERANS

- ▶ Substantial number of Veterans experience ongoing or new pain post-deployment
- ▶ OIF Veterans report pain conditions more frequently than other medical conditions
- ▶ 47% report some level of current pain
- ▶ 28% reporting pain scores that are associated with functional interference and at the threshold for intervention

Girona et al., 2006

When we look at Iraq and Afghanistan Veterans, we know that a substantial number of Veterans are reporting ongoing or new pain following their deployment. Operation Iraqi Freedom Veterans report pain conditions more frequently than any other medical condition.

So, again, as we have talked about chronic pain and if that is the presenting symptom, this may be a good area for us to go ahead and continue screening our patients to make sure they are not suffering from PTSD, depression or other substance use disorders.

With Operation Iraqi Freedom Veterans, 47% are reporting some type of pain and, of that 47%, 28% are reporting pain scores that are associated with significant functional interference. So, when we look at the threshold for what we need to do to provide treatment, if they are reporting pain above four on a scale of 0-10, that means that means that we really need to look at a clinical intervention.

OEF-OIF VETERANS

- ▶ Early severity of physical problems was strongly associated with later PTSD and depression
- ▶ Soldiers with PTSD or depression at seven months did not meet criteria for either condition at one month
- ▶ They keep very busy upon return, but when things slow down, symptoms arise
- ▶ Injuries and physical problems provide constant reminders of the events of war
- ▶ Early and aggressive treatment of physical pain can reduce PTSD flashbacks triggered by pain

Grieger et al., 2006

We know the early severity of physical problems for Iraq and Afghanistan Veterans, again, is strongly associated with later development of PTSD and depression. So, many people would say, “Well you know, why would this come up, you know, seven months later?”

Looking at Soldiers with PTSD or depression, they did not meet criteria for either condition at one month. So, again, why are we seeing this later? So, we can look at our returning Veterans and see when they come home, they are trying to work again, they are getting back in school, they are taking care of their families and their kids and they are very, very busy.

And then, as time passes and things slow down, and they have more time to think, people may start looking back more at their combat experience. They may not be as distracted, so those physical pain symptoms can become overwhelming. Because we know that these injuries and physical problems are constant reminders of the events of war and, then again, driving their PTSD symptoms.

So, we know early and aggressive treatment of physical pain can reduce those PTSD flashbacks that may be triggered by physical pain.

BLAST INJURIES

3 B's: Blast injuries are based on three injuring mechanisms:

1. Ballistic
2. Blast
3. Burn

A large explosion results in a mix of traumatic injury, including penetrating fragment injuries, blast injury, and thermal injuries.

Facial and neck injuries are common.

I'd like to talk a little bit about blast injuries to understand the extent of where people can develop physical injuries as well as the number of different areas where people can witness or develop PTSD related to the psychological impact of witnessing these types of blasts.

So, there are primarily three mechanisms, number one being ballistic, two being blast and three being burn. So, primarily this is an extremely large explosion that can result in a mix of a traumatic injury that can include penetrating fragment injuries; so what that means, there may be flying debris—rocks, stones, other items, that may end up getting propelled through the air that can injure someone.

And then with the blast component and the thermal injury which includes burns. So, we see high rates of facial and neck injuries from many of our returning Veterans because their face and their neck tend to be exposed and not protected by the Kevlar or the military equipment that can prevent injury.



So, on the following slide, you will see a picture of a typical blast, and this was a US Army Explosive Ordnance Disposal team that detonated an Improvised Explosive Device. So, when you look at the primary part of the waves, where you see that large blast, you are going to have a large number of people who end up being killed.

And the secondary part of the wave, you will see fragments kind of flying around in the air and that could be, you know, rocks, pebbles. It could end up being debris from those who end up being killed because of the blast or from animals or bone debris, and these can end up penetrating and injuring people on the outside.

And then the additional part of the wave, perhaps if you look back where the trucks and these vehicles are, people may end up falling off a truck or having their bodies slammed up against a vehicle and they can sustain a physical injury there but they can also witness somebody else being injured.

Buildings may end up collapsing because of the physical impact of the blast wave too. So, you are also seeing other areas where people can be physically injured or witness others being injured; so, multiple areas of where you could end up developing PTSD and chronic pain.

BLAST INJURIES

Service members injured by blast:

- ▶ Broader spectrum of physical injuries
- ▶ Higher levels of admission and discharge
- ▶ Opioid analgesic use
- ▶ Reduced improvement in pain intensity post-treatment
- ▶ Much higher rates of PTSD and other psychiatric diagnoses than those injured by other means (combat injuries other than blast and noncombat/non-blast injuries)

Clark et al., 2009

So, when we look at blast injuries specifically, Service Members who were injured by a blast, report a broader spectrum of physical injuries. They also have much higher levels of admission and discharge to hospitals.

An interesting finding too is that they are more likely to end up being on opioid analgesics, so there is a lot of discussion about this. Is this because of having difficulty with emotional symptoms, difficulty managing their pain, the associated sleep problems associated with PTSD and a way to self-medicate their symptoms?

They also exhibit a reduced improvement in pain after treatment. So, they may come through a residential pain program and, following release from that program, they are not exhibiting the same improvement that you would see in somebody who has PTSD who was not injured by a blast. So, there's ongoing research related to this but it really lets us know that the blast injury, in itself, may have a particular emotional impact on patients as well.

THE BIG THREE

JAMES A. HALEY VETERANS' HOSPITAL PTSD CLINICAL PROGRAM

1. Headaches*
2. Back Pain*
3. Neuropathic Pain

*Lew et al., 2009



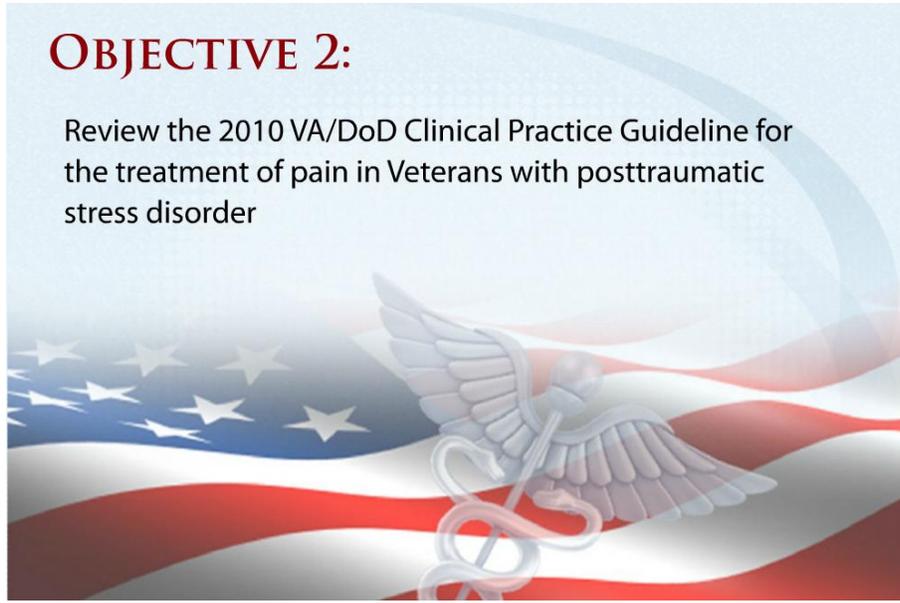
So, the next slide you'll see referenced to the big three, what we see at James A. Haley Hospital in our PTSD Clinical Program with our three primary pain complaints being that of headaches, back pain, and neuropathic pain. And this is also reported by Lew et. Al. in their "Prevalence of chronic pain, posttraumatic stress disorder, and persistent postconcussive symptoms in OIF/OEF Veterans."

So, with these being our primary pain complaints, this does give us a primary clinical focus for many of our patients who are presenting primarily for the treatment of PTSD, but also with these comorbid pain symptoms.

Objective Two: Review the 2010 VA / Department of Defense Clinical Practice Guideline for the Treatment of Pain in Veterans with Posttraumatic Stress Disorder.

OBJECTIVE 2:

Review the 2010 VA/DoD Clinical Practice Guideline for the treatment of pain in Veterans with posttraumatic stress disorder



With Objective Two, we'll review the 2010 VA / Department of Defense Clinical Practice Guideline for the treatment of pain in Veterans with posttraumatic stress disorder.

CLINICAL PRACTICE GUIDELINE RECOMMENDATIONS CONSENSUS OF WORKING GROUP EXPERTS

- ▶ Recommend pain assessment using 0-10 scale
- ▶ Complete biopsychosocial history with assessment for other medical and psychiatric problems, lethality and substance use
- ▶ Determine nature and cause of pain, including locations, quality, quantity, triggers, duration, aggravating and relieving factors
- ▶ Assess impact of pain on functioning and quality of life
- ▶ Identify avoidance behaviors that may drive emotional and physical distress/deconditioning

So, the Clinical Practice Guideline recommendations were made by consensus of working group experts, and they recommended a pain assessment using the zero to ten scale. And that means, "Please go ahead and rate your pain on a scale of zero to ten, with ten being the worst pain that you've ever experienced."

They also recommended completing a bio-psychosocial history with assessment for other medical and psychiatric problems including: lethality, such as suicidal and homicidal ideation, intent and plan as well as substance use. And, we've referenced the comorbid psychiatric disorders, as well as the substance use problems for many patients who have both PTSD and chronic pain.

They also recommended determining the nature and the cause of the pain with specific focus to the locations, the quality of the pain, the quantity of pain, what triggers the pains. So, what makes it worse? What makes it better? And how long has the individual experienced the chronic pain symptoms?

They also recommended assessing the impact of pain on functioning and overall quality of life. So, for many Veterans who may report chronic pain, they can also tell you that it does not affect their overall quality of life. They feel that they've been able to incorporate the pain in their life, and they're able to move forward and live alongside that pain experience.

So, again, it's specifically assessing the impact of pain on the individual that you're working with. They also recommended that identifying the avoidance behaviors, what we've talked about in people who have both disorders, because those avoidance behaviors drive emotional and physical distress, including subsequent deconditioning.

ASSESSING FOR PAIN

1. Clinician/
providers
2. Nursing
3. All clinical
staff
4. Web links

Reminder Resolution: TEST PAIN SCREEN

PAIN MANAGEMENT MAIN MENU

CLINICIANS

- Complete a CLINICIAN COMPREHENSIVE PAIN ASSESSMENT/PAIN HISTORY
- Complete a CLINICIAN PAIN REASSESSMENT & PAIN CARE PLAN
- Complete a COGNITIVELY IMPAIRED ASSESSMENT/REASSESSMENT & PAIN PLAN OF CARE
- Complete a CLINICIAN POST-OPERATIVE PAIN ASSESSMENT/REASSESSMENT
- Monitor OPIOID THERAPY

NURSING

- Complete a NURSING (RN) PAIN ASSESSMENT & PAIN CARE PLAN
- Complete a NURSING (RN) PAIN REASSESSMENT & PAIN CARE PLAN
- Complete a NURSING (RN) COGNITIVELY IMPAIRED ASSESSMENT/REASSESSMENT
- Complete a NURSING (LPN/NA) PAIN OBSERVATION/REOBSERVATION

APPLICABLE TO ALL

- Record a NUMERIC PAIN SCORE
- Complete PATIENT PAIN EDUCATION

[LINK to Pain Clinical Practice Guidelines](#)

[LINK to VA Pain Management Website](#)

So, in assessing for pain, there are important areas for both clinicians and providers to focus on, as well as nursing staff. And, we also have some important web links that can be very useful for providers who work within the VA system of care.

So, for a clinician completing a comprehensive pain assessment, there is a whole menu that can be triggered that will help you to outline that overall approach, and the specific questions that you need to answer. And, there is also a way that you can monitor the opioid therapy, should you initiate that for a patient.

The nursing assessment includes asking those particular questions about pain, and the impact of pain on that Veteran. And then, the nurses can work with the providers to alert them to what the patient is reporting. And again, those clinical links to both the pain clinical practice guideline and the VA Pain Management website are very helpful educational tools.

CLINICAL PRACTICE GUIDELINE RECOMMENDATIONS CONSENSUS OF WORKING GROUP EXPERTS

- ▶ Multidisciplinary management—physical, psychological, social aspects in an individualized treatment plan
- ▶ Treatment should balance pain control and quality of life
- ▶ Musculoskeletal pain can respond to addressing the underlying problem and treatment with Non-Steroidal Anti-inflammatory Drugs (NSAIDs)
- ▶ Recommend use of non-pharmacological treatments for pain control: biofeedback, massage, physical therapy, yoga, meditation, acupuncture, tai chi

So, as we continue with the recommendations, this also includes a multidisciplinary management as we've discussed this before; that multimodal pain management including both physical, psychological, and social aspects, as you develop an individual treatment plan with that patient. And, it should also be noted, that treatment should balance pain control and quality of life.

So, an example of this would be, if a patient continues to report to you significant pain, and you continue to increase the dose of the opioid analgesic, and there's no improvement in that Veteran's report of quality of life – they're not able to engage in activities, they're not getting outside of their house, but they're still reporting pain symptoms – that's something you want to particularly look at. Because, you want your treatment to help improve quality of life and reengagement, you don't want it, to in fact, have a negative effect.

We also know that musculoskeletal pain can respond to addressing the underlying problem, and then treating with NSAIDs. So, these are the recommendations from the consensus of the working group. And they also recommend the use of non-pharmacologic treatments. So, pain is not just focused on medications, but also being where that patient is at. So perhaps, that patient may prefer biofeedback, massage, the use of physical therapy, yoga, meditation, acupuncture, or in fact, tai chi.

So, this gives us a number of tools in our toolbox, and then being where that particular patient is at, and offering the treatment that's most consistent with their lifestyle and their desired recovery.

CLINICAL PRACTICE GUIDELINE RECOMMENDATIONS CONSENSUS OF WORKING GROUP EXPERTS

- ▶ Centrally acting pain medications should be used in caution due to confusion and negative impact on cognitive functioning. If necessary lower doses of opioid therapy for short duration with transition to non-narcotic treatments.

- ▶ Consider Cognitive Behavioral Therapy
 - Encourage increased activity by setting goals
 - Correct false and unrealistic beliefs about pain
 - Teach cognitive and behavioral coping skills
 - Practicing learned coping skills

The working group also recommended that centrally acting pain medications, so such opioid analgesics should be used in caution, due to the risk of confusion and the negative impact on cognitive functioning. So, opioids can cause some slowed thinking, excessive sedation, difficulty motivating self as I had referenced earlier. So, they also felt that if it was necessary to use opioid analgesics, that lower doses, for a shorter duration of time with the ending goal being a transition to non-narcotic treatments.

They also recommended the consideration of cognitive behavioral therapy. So, as we know with patients who have posttraumatic stress disorder and chronic pain, medications can be effective, but therapy is really the cornerstone of treatment. So, encouraging increased activity by setting goals, and these goals must be achievable, so that that Veteran experiences some success, and then the desired motivation to continue in their recovery.

It's important to correct those false and unrealistic beliefs about pain, such as "I'm never gonna get better. This is going to get worse." Teaching patients how to cope with their physical pain through cognitive approaches as well as behavioral coping, and then practicing these coping skills, even upon completion of treatment.

CLINICAL PRACTICE GUIDELINE: NON-PHARMACOLOGICAL TREATMENT

- ▶ Relaxation: reduce muscle tension
- ▶ Increase activity and fitness: avoid deconditioning, increase stamina and fitness
- ▶ External focusing/distraction: shift focus of attention to minimize pain
- ▶ Complementary and Alternative Medicine: massage, acupuncture, visual imagery, yoga, tai chi, breathing, stretching, meditation



So, we look at the Clinical Practice Guideline and the continued non-pharmacological treatment, relaxation was a big focus. So, if you can relax and take some slow deep breaths, that helps to reduce muscle tension and helps to reduce your focus, or your somatic focus, on that particular pain experience.

They also recommend increasing activity and fitness, primarily with the goal to avoid chronic de-conditioning. So, you increase your stamina, you increase your physical activity, and this helps to counter that chronic de-conditioning. And, also looking at external focus and distractions so, helping the individual to shift their focus away from their pain symptom. So, if you have less focus on the physical pain, it's not going to have as much control or as much power over your individual experience.

And then looking at complementary and alternative medicine, such as massage, acupuncture, visual imagery, yoga, tai chi, breathing strategies, such as those relaxation techniques, stretching (in order to help provide some relief of that muscle tightness or tension), and meditation.

CLINICAL PRACTICE GUIDELINE: PHARMACOTHERAPY

No studies evaluating pharmacotherapy and functioning for patients with co-morbid pain and PTSD

- ▶ Most common first line treatments for pain:
Acetaminophen, NSAIDs, opioids, tramadol, anticonvulsants, tricyclic antidepressants (TCAs) and Serotonin Norepinephrine Reuptake Inhibitors (SNRIs)
- ▶ First line pharmacotherapy for PTSD:
Selective Serotonin Reuptake Inhibitors (SSRIs), limited support for efficacy in the treatment of pain



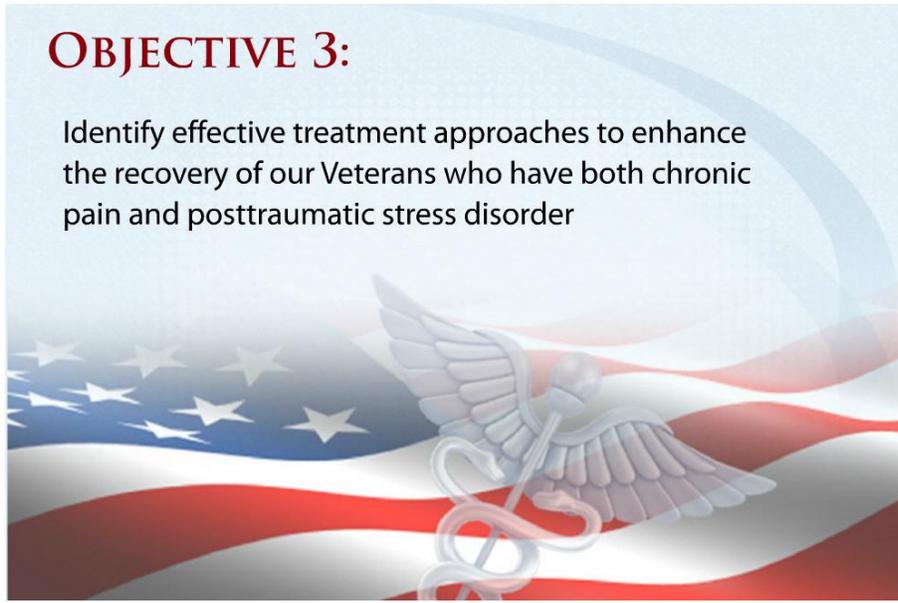
And then when we look at pharmacotherapy, we know that there are no studies evaluating pharmacotherapy and functioning for patients with co-morbid pain and posttraumatic stress disorder. So, the recommendations really focused on the most common first line treatment for chronic pain, including that of acetaminophen, the nonsteroidal anti-inflammatories, using opioid analgesics, the use of tramadol, anticonvulsant agents, the tricyclic antidepressants, and the serotonin-norepinephrine reuptake inhibitors.

So, a variety of drug classes, again with FDA approval, for the treatment of specific pain symptoms. And, the first line pharmacotherapy for PTSD includes the selective serotonin reuptake inhibitors, such as sertraline and paroxetine. So, there's limited support for the use of sertraline or paroxetine for the efficacy in the treatment of pain. So, you can see where future research is really needed in order to be able to benefit our patients who suffer from both chronic pain and PTSD, in that we need to develop a way that we can integrate these clinical treatment approaches.

Objective 3: Identify Effective Treatment Approaches to Enhance the Recovery of our Veterans who have Both Chronic Pain and Posttraumatic Stress Disorder.

OBJECTIVE 3:

Identify effective treatment approaches to enhance the recovery of our Veterans who have both chronic pain and posttraumatic stress disorder



So, with Objective 3, we are going to identify effective treatment approaches to enhance the recovery of our Veterans who have both chronic pain and posttraumatic stress disorder.

TREATMENT OF PTSD AND CHRONIC PAIN

- ▶ Multidisciplinary approach
- ▶ Integrated substance abuse, PTSD and pain management
- ▶ Rehab medicine, physical therapy
- ▶ Consult with VA chronic pain programs
- ▶ Rapid identification of chronic pain and then referral for evaluation of PTSD as soon as possible
- ▶ Cognitive Behavioral Therapy (CBT) strategies effective for treatment of both; exposure
- ▶ Overarching goal to improve functioning and quality of life

Otis et al., 2009; Bradley et al., 2005; Turk, 2003

And we know that this requires a multidisciplinary approach; we need a team of experts. So, these are our mental health providers, our pain providers, our substance abuse specialists, our physical therapists, and our rehab medicine programs. If you have the ability to access the VA chronic pain programs, these providers and these clinical programs can be significant tools to allow the recovery of our Veterans who have both disorders.

We also know that rapidly identifying chronic pain and then referring for evaluation of PTSD sooner is better. Cognitive Behavioral Therapy strategies are effective for the treatment of both. And, we know that this is through exposure, through exposure to physical activities, exposure to those feared activities and those memories that patients with PTSD have been avoiding. And again, the overarching goal for both is to improve functioning and quality of life for our Veterans

TREATMENT OF PTSD AND CHRONIC PAIN

- ▶ Help the Veteran see links between chronic pain and PTSD
- ▶ Education, symptom management, reducing suffering, improving functioning and enhancing quality of life
- ▶ The interventions and treatment modalities used should follow the current evidence-based recommendations for chronic pain and PTSD (clinical practice guidelines)
- ▶ Relaxation, social support, anger management
- ▶ Re-conceptualize pain as subject to personal control through the influence of thoughts, feelings, speech and actions

TREATMENT OF PTSD AND CHRONIC PAIN

- ▶ Modify/reduce re-experiencing symptoms; prazosin
- ▶ Reinforce positive self-efficacy beliefs, correct attentional biases, and help reduce catastrophic thinking

So, this happens when we help our patients see links between both chronic pain and PTSD. So, knowing that if you're not sleeping well, that can drive the chronic pain experience. While you're lying in bed at night, if you're having physical pain from an injury that you sustained while in combat, that can drive those nightmares and intrusive thoughts. So, making those connection and encouraging our patients to receive the treatments that they need.

So, providing education, tools to manage symptoms, can help reduce suffering and improve functioning and quality of life. And, we know that the interventions and treatments that we use should follow the current evidence-based recommendations. So, there are those clinical practice guidelines for both the management of chronic pain and PTSD. Within the PTSD Clinical Practice Guideline there's that specific section that I discussed during this presentation.

Relaxation is a cornerstone and social support is crucial for the recovery of our Veterans. They need to have the support of their family members and their understanding. And, their family members need to be involved in their care to help support and continue to be available for them. Anger management is also an important component. Helping our patients re-conceptualize pain and that it's something they can control. So, they can change their thoughts and their feelings related to their pain experience. They can learn tools to live alongside, and incorporate chronic pain into their life so that they can continue to have pleasure and enjoyment.

We can aggressively modify those re-experiencing symptoms. In our clinical program we've had much success with the use of prazosin. If we can reduce the nightmares and the intrusive thoughts and the irritability that, in itself, can modify the reporting of pain symptoms. And we help reinforce positive thinking for many of our patients, we help them correct those negative thoughts that they have and help reduce that catastrophic thinking.

TREATMENT OF PTSD AND CHRONIC PAIN

- ▶ Education about the function of cognitive and behavioral avoidance
- ▶ Activities to help cope with uncomfortable physical sensations.
 - Walking, running in place, engaging in previously avoided activities
- ▶ Decrease avoidance and increase participation in activities
- ▶ Increase confidence and gain a more positive outlook on life
- ▶ Increase self esteem/self efficacy
- ▶ Reduce cognitive and behavioral avoidance (in vivo and imaginal exposure) and increase activity levels (exposure intervention)

So, when we look at the treatment of posttraumatic stress disorder and chronic pain, we know at the cornerstone of treatment is educating the patient about the cognitive and behavioral avoidance. So, avoiding certain activities and certain feared situations can actually drive their chronic symptoms.

So, an example is of an Iraq Veteran I worked with who had witnessed a significant combat trauma of an injury of a friend who was very close to him, and they were on a patrol, so they were running at the time. When this gentleman returned home, he tried to start jogging and every time he would start jogging and his heart rate would go up, he would have intrusive thoughts related to the injury of his friend. So, what we had talked about doing is gradually approaching this activity. So, he started walking. So, walking slowly, slowly increasing the heart rate instead of running fast where his heart rate would go up very quickly.

And, what he found is, as he gradually took this approach, that he was able to tolerate it and not have the specific intrusive thoughts related to that trauma. So, helping our patients to decrease avoidance and participating in activities, they need to achieve success. And each time they achieve success, they continue to be able to move forward. So, helping them to reach these goals is extremely important, because as they increase their confidence they gain a more positive outlook on life, they feel better about themselves, their self-esteem goes up. So, reducing the cognitive and behavioral avoidance, and increasing these activities is necessary for their re-integration.

OPIOID PAIN MANAGEMENT

- ▶ For patients with moderate to moderately severe pain
- ▶ Benefits of opioid therapy are likely to outweigh the risks
- ▶ Patient is fully informed and consents to therapy
- ▶ Clear and measurable treatment goals must be established
- ▶ Provide effective pain treatment with the best benefit-to-harm profile for the individual patient

2010 VA/DoD Clinical Practice Guideline for
Management of Opioid Therapy for chronic pain

I'd like to talk a little bit about opioid pain management. This has been a very important topic within the VA system of care, and outside of the VA. And, this is for patients with moderate to moderately severe pain. And it's very important when initiating an opioid pain medication that the benefits need to clearly outweigh the associated risks.

The patient must be fully informed, and has to consent to therapy. And, it's so important to have clear and measurable treatment goals. So, this is prescribing a medication but helping that patient to continue to move forward in their social and occupational functioning and their relationships with their families. This is not prescribing a patient a medication and then that patient continues to stay home, and continues to report pain. There has to be relief of suffering and relief of that distress. So, we have to be able to provide effective pain treatment with the best benefit- to-harm profile for that individual patient.

OPIOID PAIN MANAGEMENT

- ▶ Comprehensive assessment: History, physical exam and diagnostic studies
- ▶ Risk assessment for aberrant drug-related behaviors
- ▶ Risk stratification instruments: Opioid Risk Tool (ORT), Screener and Opioid Assessment of Patients with Pain (SOAPP) Version 1 and Revised SOAPP (SOAPP-R) instruments.

How often do you take more medication than you are supposed to?

How often have you taken medication other than the way that it was prescribed?

Butler et al., 2004; 2009; Moore et al., 2009

OPIOID PAIN MANAGEMENT

How often have your medications been lost or stolen?

How often has more than one doctor prescribed pain medication for you at the same time?

Butler et al., 2004; 2009; Moore et al., 2009

So, prior to the initiation of an opioid for the treatment of pain, this requires a comprehensive assessment. So, that includes an extensive history, physical, as well as diagnostic studies to really look at what's driving the pain and then also looking at the associated mental health disorders.

A risk assessment for aberrant drug related behaviors should be conducted. And, there are also Risk Stratification tools that include the Opioid Risk tool, the Screener and Opioid Assessment of Patients with Pain, that's referred to as the SOAPP Version 1. And, then the Revised SOAPP, the SOAPP-R is also another instrument.

So, some of the questions that can help to ask patients when you're working with them clinically include, "How often do you take more medication than you are supposed to?" So, for me as a mental health provider working with patients who have PTSD, this is an excellent question because it gives me an idea as to the impact of their posttraumatic stress disorder symptoms.

So, if a patient tells me they are taking more medication than they should, because they can't sleep at night, or they're feeling more irritable and anxious during the day, and they take additional doses of their opioid pain medications, this is something that I get concerned about and then I can function as a liaison between my patient and the primary care provider who may be prescribing those opioids.

So, mental health providers are really in a unique position to be able to help our patients. Other questions include, "How often have you taken medication other than the way that it was prescribed?" "How often have your medications been lost or stolen?"--so, that may be a big indication that the patient is overtaking their medicines. And, "How often has more than one doctor prescribed opioid pain medication for you at the same time?" And again, that's concerning for a patient that may be on multiple controlled substances from different providers where those pain medications may not be monitored.

RISK FACTORS FOR ADDICTION

Complex interaction between the person at risk and properties of certain drugs

- ▶ Long v. short acting medications
- ▶ As needed versus by the clock dosing
 - What is "as needed"? Opioids incorrectly taken for emotional symptoms, not pain

Non-modifiable risk factors for addiction

- ▶ Family or personal history of substance abuse or addiction
- ▶ Personal psychiatric history of any kind

RISK FACTORS FOR ADDICTION

- ▶ Age (younger age carries a greater risk potential)
- ▶ Current status as a smoker
- ▶ Personal history of preadolescent sexual abuse

So, let's talk a little bit about risk factors for addiction. We know that there's a complex interaction between the person who's at risk and the properties of certain medications. So, when we look at long- or short-acting medicines, short-acting medications have a rapid onset of action and rapid onset. And people can become quickly addicted to short-acting opioid analgesics. And I typically do see this in patients who have posttraumatic stress disorder, that this can pose a significant clinical challenge. So, the use of longer acting agents for a shorter duration of time can be more effective.

And then, we also see difficulty in as needed versus around the clock dosing. So, for patients who have posttraumatic stress disorder, if they are instructed to take pain medication as needed, they may report to you that they get confused about what "as needed" means. So, for them, "as needed" may mean "I'm having a nightmare; I'm feeling more irritable; I'm arguing with my spouse, so I think I need to take a pain medication." So, you may see medication of psychiatric symptoms in the setting of PTSD and not just the physical pain symptom. So, we have found it more effective to prescribe medication around the clock – so on a specific schedule – that way the patient isn't responding to their emotional symptoms.

The non-modifiable risk factors for addiction include any family or personal history of substance abuse, your own personal psychiatric history so if you've had depression or posttraumatic stress disorder, if you're younger, that carries a greater risk potential. So, looking at many of our Iraq and Afghanistan Veterans, we know that these are younger Veterans who are receiving treatments. So, that puts them at a higher risk. If you're a smoker, that puts you at risk and if you have a personal history of preadolescent sexual abuse, that's also non-modifiable risk factor.

RISK FACTORS FOR ADDICTION

Probably More Predictive	Probably Less Predictive
Selling prescription drugs; prescription forgery	Aggressive complaining about need for higher doses; pseudoaddiction
Stealing or borrowing another patient's drugs	Drug hoarding during periods of reduced symptoms
Injecting, chewing, snorting oral formulation	Requesting specific drugs
Obtaining prescription drugs from nonmedical sources	Reporting emotional effects not intended by the clinician
Concurrent abuse of illicit drugs	Unapproved use of drug to treat another symptom
Recurrent loss of prescriptions/medications	Obtaining similar drugs from other medical sources
Unsanctioned dose escalations (multiple times)	Unsanctioned dose escalation (1-2 times)

And on the following slide, you'll see a chart that looks at risk factors that are probably more predictive for addiction and those that are probably less predictive. So, those that are more predictive include a patient reporting or you finding out that are selling their prescription drugs, or engaging in prescription forgery. They may be stealing or borrowing another patient's medications. One of primary things that I've seen in some of my patients who have PTSD is changing the formulation of their prescribed medication.

I've had a couple patients who have reported to me that they have chewed their narcotic analgesics in order to be able to fall asleep faster or relieve their emotional distress. That is a concern. When they're receiving prescriptions from non-medical sources, reporting losses of prescriptions, and they continue to increase their dose without approval, these are some of the signs that you should be concerned about addiction.

Those that are less predictive, include a patient that's complaining about pain and that they need a higher dose of their medicine. So, when you go ahead and you increase the dose of the opioid analgesics, their reports of pain and their complaining stops. So, that indicates to you that their pain was not adequately controlled.

Many patients will report that they hoard their prescription medication. And when you continue to ask questions about that, they will tell you because they fear running out. So, for many of our patients who have PTSD, when they've run out of their opioid pain medications, they go into opioid withdrawal. And, when they experience opioid withdrawal, and the high anxiety, and the associated physical symptoms, they start having more intrusive thoughts and more PTSD symptoms. So, they will specifically tell you that they hold on to the medications for this reason.

The unapproved use of drug to treat another symptom – again, that becomes a concern if the patient is reporting mental health difficulties and they are self-escalating their medications.

OPIOID PAIN MANAGEMENT

- ▶ Goal to provide sustained analgesia and improvements in sleep, adherence, quality of life
- ▶ Careful screening of patients being considered for long term opioid therapy to identify patients who may have difficulties in managing opioids
- ▶ Patients at risk for addiction should NOT be denied access to opioid therapy if it helps; require focused monitoring; increased frequency and intensity

OPIOID PAIN MANAGEMENT

- ▶ During therapy prescribers MUST focus on the 4 A's:
 1. Analgesia
 2. Activities of Daily Living
 3. Adverse Effects (sedation, cognitive impairment, constipation)
 4. Aberrant Drug-Related Behaviors



So, when we look further at Opioid Pain Management, the primary goal is to provide sustained pain relief. And when you provide sustained pain relief, you can improve sleep, the patient will become more adherent to their medications because their treatment is working, their quality of life can subsequently improve as they're better to engage with their family members and their loved ones.

So, screening patients who are being considered for long-term opioid therapy is very important, because we want to be able to identify difficulties prior to them potentially happening. And, we know that patients who are at risk for opioid addiction should not be denied access to opioid therapy, especially if it works. They do require focused monitoring, so they need to be seen more frequently and on a regular basis.

So, some of the things that I like to do, within my clinical practice, and also talking with other providers, for any medication that we prescribe, be it an opioid analgesic or a non-narcotic medication for the treatment of PTSD or depression, we want to make sure that: number one, the medication works and its treating the pain or its treating the depression or PTSD symptoms.

Number two, we want to make sure that the activities of daily living are improving and changing for the better, because if they're not, we really need to relook at our treatment plan. We need to monitor for adverse affects, so that sedation and cognitive impairment, and constipation from opioids. If these are becoming a problem, we need to, again, change our treatment plan.

And then, looking for and identifying those aberrant drug-related behaviors. So, urine drug screens as needed, inquiring into where patients are receiving their prescriptions, how they're taking their medications can be so important to help improve that patient's quality of life.

PTSD CLINICAL PRACTICE GUIDELINE: COGNITIVE BEHAVIORAL THERAPY

12 session integrated treatment

- ▶ Cognitive restructuring (how to recognize and change maladaptive thoughts)
- ▶ Relaxation training (diaphragmatic breathing, Progressive Muscle Relaxation)
- ▶ Time based activity pacing (become more active without overdoing it)
- ▶ Graded homework assignments (designed to decrease avoidance of activity and reintroduce a healthy, active lifestyle)

Otis et al., 2009

So, I'd like to talk about little bit about the, again, the PTSD Clinical Practice Guideline with the focus to Cognitive Behavioral Therapy. We know that Cognitive Behavioral Therapy is recommended as a first line therapy for PTSD; we've had a lot of focus on Prolonged Exposure Therapy and Cognitive Processing Therapy. And, we also know that Cognitive Behavioral Therapy for pain is similar to that type of therapy that is offered for PTSD with focus to change those maladaptive thoughts and behaviors, that in fact, can maintain and exacerbate pain.

So, the clinical approach for both PTSD and chronic pain use components of CPT, so Cognitive Processing Therapy for PTSD, and CBT, Cognitive Behavioral Therapy, for chronic pain. Otis and his colleagues had recommended a 12 session integrated treatment with focus to cognitive restructuring, so recognizing and changing those thoughts, relaxation training so that diaphragmatic breathing, deep breathing triggers the vagus nerve in the parasympathetic nervous system that allows the body to be able to relax.

They also looked at time based activity pacing, so becoming more active without overdoing it. So, going from walking to jogging to running; so gradually pacing it. And then, homework assignments that were designed to decrease the avoidance of activities and help patients to develop a more healthy and active lifestyle.

PTSD CLINICAL PRACTICE GUIDELINE: COGNITIVE BEHAVIORAL THERAPY

Outline of the integrated treatment for pain and PTSD

Session	Session Topic
Session 1	Education on chronic pain and PTSD & goal setting
Session 2	Making meaning of pain and PTSD
Session 3	Thoughts/feelings related to pain and PTSD & cognitive errors
Session 4	Cognitive restructuring
Session 5	Diaphragmatic breathing and progressive muscle relaxation
Session 6	Avoidance and interoceptive exposure
Session 7	Pacing and pleasant activities
Session 8	Sleep hygiene
Session 9	Safety/trust (related to pain and PTSD)
Session 10	Power/control/anger (related to pain and PTSD)
Session 11	Esteem/intimacy (related to pain and PTSD)
Session 12	Relapse prevention and flare-up planning

Includes weekly readings and homework, pre- and post-treatment measures of pain, PTSD, physical disability and psychological distress

Otis et al., 2009

On the next slide, you'll see a table that outlines the integrated treatment for pain and PTSD as it's broken down from session one through twelve; and again, with focus to education on chronic pain and PTSD, a lot of what we've talked about during the presentation today; the meaning of pain and PTSD, looking at thoughts and feelings, engaging in cognitive restructuring, promoting the relaxation techniques, looking at avoidance, pacing so engaging in activities that are pleasant, that don't cause distress, so that you feel success, improvement in self esteem and confidence.

Looking closely at sleep because sleep deprivation drives chronic pain and PTSD symptoms, focusing on the areas of CPT or Cognitive Processing Therapy that include looking at safety, trust, power, control, anger, intimacy, and isolation, as well as self esteem. And, then, finally, closing with relapse prevention so that patients continue to have tools upon their completion of treatment. So, this includes weekly readings and homework assignments. There were pre- and post-treatment measures for both pain and PTSD, physical disability, and psychological distress.

PTSD CLINICAL PRACTICE GUIDELINE: COGNITIVE BEHAVIORAL THERAPY - PILOT FINDINGS

Pretreatment and posttreatment assessment results for pilot participants

	Participant 1		Participant 2		Participant 3	
	Pre	Post	Pre	Post	Pre	Post
Clinician Administered PTSD Scale (CAPS)	83	35	91	55	91	79
PTSD Checklist - Specific (PCL-S)	73	36	64	48	60	54
McGill Pain Questionnaire (MPQ)	15	1	41	16	41	40
Beck Depression Inventory (BDI-II)	30	34	28	21	24	33
Roland and Morris Disability Questionnaire	15	10	8	4	20	11

CAPS & PCL-S clinical cutoff = 50; BDI range of scores = 0 to 9 = minimal, 10 to 16 = mild, 17 to 29 moderate, 30 to 63 = severe.

Otis et al., 2009

Okay and on this slide, you'll see a table that describes the pilot findings. There were three participants who completed the study. And, there were pre-treatment and post-treatment assessments for the pilot participants, and that included the CAPS—the Clinician Administered PTSD Scale, the PTSD checklist (the specific version), the McGill Pain Questionnaire, the Beck Depression Inventory, and the Roland and Morris Disability Questionnaire.

And when you look at the findings, you'll see significant improvement in PTSD symptoms. And in one participant, you'll see an increased report of depression symptoms which may be a surprise to a number of us. And, the thought was that the increase in depression was related to the comorbid disorder that the participant had, which included bipolar disorder, and also a significant number of social stressors that this patient had had at the time.

So, when we look at the pilot findings, the quantitative findings include the pre- and post-treatment assessments, which you see on this slide, but the qualitative findings--they also looked at the importance of establishing trust and that there were some challenges that were faced in the development of this between the providers and the patients who had PTSD and chronic pain.

They looked at the attendance and length of treatment. So, unfortunately, if there are dropouts from treatment, it's difficult for the patient to obtain the full benefit from treatment because they do miss sessions. So, the researchers had engaged in phone call reminders and other ways to help those patients reengage in treatment. They talked a lot about avoidance with their patients, so the pros and cons of avoidance. And, then breaking down their goals into smaller steps so that they can achieve success, and the improvement in their self-esteem, and then they also had a focus on homework completion, as well.

So, where these pilot findings are at this time, it's progressing towards a randomized controlled trial where they're comparing CBT for pain to CPT for PTSD to this integrated treatment approach that I've discussed, as well as a wait list control. So, there's more research coming, and this will be very interesting to see where it heads.

TREATMENT OF CHRONIC PAIN AND COMBAT-RELATED PTSD

- ▶ Acknowledge loss of physical prowess
- ▶ Many of the severely injured in combat hoped for a lifelong military career
- ▶ For many, with medical discharge from the military comes the loss of close friendships, “family” and connection to “something greater than oneself”
- ▶ These factors, independent of war-related injuries is devastating for many of our Veterans
- ▶ In many cases new life skills and new vocational skills must be taught

Recovery, Resilience, Reintegration

So, when we look at the treatment of chronic pain in PTSD as clinicians, it's so important for us to acknowledge that Service Member's loss of physical prowess. We know for many of the Veterans that we work with, they had hoped for a lifelong military career. And then when they are severely injured in combat, their entire life changes before their eyes.

So, for many Veterans, a medical discharge from the military, in itself, comes with a loss of close friendships and family in that connection to doing something that's greater and bigger than oneself. And then when you add a war related injury on top of it, that becomes even more difficult for our patients to process and be able to move forward.

So, part of our goal as VA clinicians is to be able to promote our Veterans' recovery, strengthen their resilience, and be able to help them with their reintegration. Because, we know for many of these Service Members new life skills and new vocational skills need to be taught. And, their families also are so important to their recovery and must be involved in every step.

FUTURE THOUGHTS

- ▶ Increased research on the treatment of acute pain and development of chronic pain in combat Veterans
- ▶ Studies to examine pharmacotherapy
- ▶ The window to PTSD in combat Veterans can be provided through chronic pain assessment and management
- ▶ Outreach, education and ongoing changes in the current model of health care delivery

DeCarvalho, Whealin, 2006; Jenewein et al., 2009

FUTURE THOUGHTS

- ▶ Must acknowledge courage and strength in seeking treatment
- ▶ To ensure the recovery of our combat Veterans we must appreciate the complexities of PTSD and chronic pain

DeCarvalho, Whealin, 2006; Jenewein et al., 2009

So, future thoughts, and I think I've alluded to throughout the presentation, we need more research on the treatment on acute pain and the development of chronic pain in our combat Veterans who have PTSD. The pharmacotherapeutic approach to PTSD and chronic pain is separate at this time where we should look at the integration of these treatments and what we can do to help improve the quality of life and reduce suffering for these individuals who have both disorders.

We do know that the window to posttraumatic stress disorder for many of our combat Veterans can be provided through that chronic pain assessment and management. So, through the development of trust and rapport, our patients are going to be more likely to step through that door and engage in that PTSD treatment that they, may in fact, be avoiding.

We know that outreach, education, and continued changes in our current model of healthcare delivery is crucial. Our patients need to receive treatment where they feel comfortable and where they're at. So, be that through their chronic pain program, their primary care clinic, or their PTSD clinical team, that would help to overall improve their quality of life, perhaps their response to treatment and the speed of which they can access treatment.

So, we have to acknowledge our Veterans' courage and strength in seeking treatment. We know that this is not easy for them by any means. And, their families also need to be acknowledged, as well. So, to ensure the recovery of our combat Veterans, we must appreciate the complexities of PTSD and chronic pain.

INFORMATION LINKS

VA Pain Treatment

- ▶ View clinical practice guidelines
<http://www.va.gov/painmanagement>

Additional Resources:

- ▶ American Academy of Pain Management
<http://www.aapainmanage.org>
- ▶ American Pain Society
<http://www.ampainsoc.org/>
- ▶ American Chronic Pain Association
<http://www.theacpa.org/>

And, I like to close with some information links. You'll see that the VA Pain Treatment link. There's also the VA Pain Clinical Practice Guidelines. Also, the PTSD Clinical Practice Guidelines, and then, additional resources for the American Academy of Pain Management, the American Pain Society, and the American Chronic Pain Association.