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ADVANCING SCIENCE AND PROMOTING UNDERSTANDING OF TRAUMATIC STRESS
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PTSD 101 Course

Transcript for: Overview of the VA/DOD Clinical Practice Guideline for PTSD

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Hello, I am Matt Friedman. I'm the Executive Director of the VA's National Center for Posttraumatic Stress Disorder.

I'm going to be talking to you about the revised VA/Department of Defense Clinical Practice Guidelines for PTSD that were just finalized during the past year.

The objectives for this talk are to compare the new guideline with its predecessor, which came out in 2004. Specifically, I'll be talking about evidence for psychotherapy recommendations and evidence for the pharmacotherapy recommendations, and, finally, we will be talking about recommendations for treating a complex comorbid conditions and symptoms

So, let's start by talking about what a guideline is good for. It's no good if it is just something some academicians have cooked up for their own use. It needs to be accepted by a broad range of clinicians in the field. Clinicians need to see it as helpful to them, as relevant and useful. A guideline is based on the best evidence about what works best, for whom, under what circumstances, and you need to understand that cost considerations play no role in the guideline. What this exercise is about is to find out, and talk about, the best treatments for patients under any circumstances.

It is also important to understand that all guidelines are not created equal. There have been about half a dozen other guidelines for PTSD developed by the American Psychiatric Association, The International Society for Traumatic Stress Studies, there is a British guideline, there is an Australian, etc. I think what distinguishes the VA/DoD guideline from all of these others is that the point of entry into the care system is in the primary care setting, whereas all of these other guidelines, the point of entry really is in a mental health setting, and that really does make a difference in terms of how these are framed and what gets prioritized. For those of you that would like to know more about the various guidelines and how they compare with each other, I would strongly advise a paper by David Forbes that appeared in the 2010 issue of Journal of Traumatic Stress. It is called "A Guide to Guidelines". Having said that, since the guideline is based on the best evidence, the best scientific evidence, they have a lot more in common than different and therefore there is a tremendous amount of overlap between one guideline and the next.

So, let's talk about how we actually construct the guideline. What happens is we look at all the studies that have been published on treatment for PTSD, and then we have to code those studies so that to

decide which are the best studies and which are the ones that are not all that good. And there are two criteria by which studies are coded; one is the quality of evidence. A study that is considered good, in that regard, has at least one randomized trial, preferably more and preferably large, well-controlled, rigorous studies, and studies that are poor are those that might be an expert opinion or single case reports or just general clinical observations, and then the fair grade goes to those somewhere in the middle. And, then the second criterion besides quality of evidence is the net benefit. It is very important that the benefit be much greater than the risk. So, those are the two criteria for looking at a study.

So, in terms of rating the strength of the recommendation, as I said before, is based on both the quality of evidence and the net benefit, and putting those two together, we have a rating system which, as you can see, is A, B, C, I or D.

So, let's talk about what these different letters signify, and these are all letters to signify the strength of the recommendation. An "A" recommendation – that's the highest recommendation we can give – is a very strong recommendation where the quality of the evidence is very good and the net benefit is very good. At the other end of the spectrum is the "D" recommendation. "D" recommendations are based on good solid data, and here the evidence is very strong that a treatment is not any better than a placebo. Whether or not there is harm, if the harm outweighs the benefit, that also is going to put something in the "D" category. So, between "A" and "D" we have three other letters. "I" is a very important category, which I'll be talking about quite a bit, and that is where there is insufficient evidence. Basically, we just don't know if a treatment, that you may like, actually, has an "I" recommendation, all it means is that the research hasn't been done. We just don't know, and we can't make a recommendation because we don't know. And then "B" and "C" are as you might expect, they are not as good as "A". A lot of treatments in the "B" category have some evidence supporting them, but it is not as strong as in the "A" category. And, the "C" is really, we just really can't make a recommendation for or against. There is data out there, it is mixed, but there is some suggestion the treatment might be beneficial, but the evidence is just not strong enough for a recommendation one way or the other.

So, comparing the 2010 Guideline with its predecessor in 2004, there are a few things that are new and worth noting. The original guideline had 5 modules, this one only has two. The first module, the "A" module, we are not going to talk about today. It deals with acute stress reactions and acute stress disorder. In other words, what kinds of interventions would be useful during the immediate aftermath to the first 30 days following exposure to a traumatic event? Remember, PTSD can't be diagnosed until after 30 days have elapsed. As you might imagine, this module is of particular interest to our military colleagues dealing with acute combat psychological distress or people in the disaster field working with hurricanes, terrorist attack survivors, etc. We are going to focus entirely on the B module which is really about PTSD treatment. And, in addition to the usual suspects, psychotherapy and pharmacotherapy, we are going to talk a little bit about complementary and alternative medicine, because we looked at that this time around. We didn't do that in 2004. And, then we are going to talk about the fact that since PTSD rarely occurs by itself; usually PTSD occurs there is another diagnosable condition such as depression, or substance use disorder, or traumatic brain injury, or it is usually accompanied by specific symptoms that are particularly clinically important such as insomnia, pain and aggression, and we are going to talk about that towards the end of this lecture.

So, here's your first evidence table. This is on psychotherapy, and the way the table is laid out, we are looking at the strength of the evidence in the vertical columns. In this case we have "A", "C" and "I", there is no "B" strength recommendations and no "D" recommendations. And then looking across horizontally, we have the benefit versus harm, the balance, the beneficial balance, from substantial to somewhat to unknown. And, the level "A" treatments are those in the upper left-hand corner, and there are trauma focused psychotherapies, and there is stress inoculation training. Among this trauma focused psychotherapy, there are three: cognitive therapy, exposure therapy, and Eye Movement Desensitization and Reprocessing, and we will be talking in some detail about that later on. And, then moving down and

across the slide you can see, in the somewhat beneficial “C” and “I” level groupings, a number of different treatments that we will talk about. And then, finally, in the lower right-hand corner, where we have the insufficient evidence section, where the benefit is unknown because we just do not have any data on it, and I’ll be talking about all of these in more detail later on.

So, this slide is just a quick reminder of what was in the upper left hand corner. The three trauma focused treatments: cognitive therapy, exposure therapy and Eye Movement Desensitization and Reprocessing. And, the fourth treatment, which is not a trauma focused approach, but a package of skills for managing anxiety, Stress Inoculation Therapy.

So, the first category of our level “A” psychotherapy treatments is cognitive therapy, and there are many well designed trials showing cognitive therapy is an effective approach for PTSD. These trails have been done in Veterans and civilians and they included men and women, and we are going to be talking about one specific cognitive therapy, Cognitive Processing Therapy, or CPT, because it is the best researched cognitive therapy package.

So, what is Cognitive Processing Therapy? It is a short-term treatment that helps people understand how the trauma has changed the way they think. This is important because people who have been exposed to a traumatic event often have erroneous thoughts that haunt them and are a major factor in their distress. They think they weren’t quick enough, they should have done this, they should have done that, that they can’t cope with the world, that the world is malevolent. And the therapy really needs to alter these cognitions, because once you change the cognitions, you change all the emotional baggage and the symptoms that go along with it. And, this is the job for the therapist, to challenge these unhelpful thoughts and then to give them the tools to challenge them themselves. So, like most cognitive behavioral approaches, Cognitive Processing Therapy has certain modules. Some of these are consistent from one treatment to the next, the first being psycho-education; learning about the symptoms. What is PTSD and how is it affecting my life? And then, accurately labeling what are these erroneous thoughts and feelings that are making my life so miserable, and then developing the skills to challenge these thoughts and feelings. This is called cognitive restructuring. Cognitive Processing Therapy also does have an exposure component. It is not as intensive as in exposure therapy, that I’ll be discussing later on, and involves putting together a written narrative about the account of the traumatic event, and then understanding these common changes in beliefs.

So, the next slide shows some data from a study with Veterans with PTSD who were given Cognitive Processing Therapy. What we are measuring on the vertical axis is the intensity of their PTSD. This is the CAPS scale, for those of you who are familiar with this, the Clinician Administered PTSD Scale. And, what we are looking at are two groups of patients. The treatment as usual group, the TAU group, and the Cognitive Processing Therapy group. As you can see, if you look at the dark bars for both group, this is the amount of their CAPS scores, or the PTSD severity at baseline, and both of them are about equal and they have very a severe PTSD averaging in the high 70 range. But, then if you look at the lighter shaded bars, the treatment as usual group shows very, very little improvement, whereas the Cognitive Processing Therapy group shows a major change, actually almost a 20-point decrement on the CAPS, which is very significant clinically.

Now, the question is, what is the element, because as I told you, Cognitive Processing Therapy includes both a cognitive component and an exposure, or written account, component. Is one of these elements more important or more effective than the other? And, Dr. Patricia Resick, who really developed this treatment, did a recent study, with 150 rape or assault victims, to find out about this. And, she had three groups, one group had the full package that I just described of the Cognitive Processing Therapy. They did the written accounts, they did the cognitive restructuring. The second group only did the cognitive work, they did not do the written accounts, and the third group only did the written accounts, or the exposure component. And, what she found was that all three approaches were equally affective at the

end of treatment, however the group that received cognitive therapy alone seemed to improve more quickly than the others.

Now we turn to the second level “A” psychotherapy, and this is exposure therapy, and there are many well designed, randomized clinical trials showing that exposure therapy is very effective for treating PTSD, and again, these trials have been done with Veterans, with civilians, with men and women. And, we are going to talk about a specific exposure therapy, the one developed by Edna Foa and her colleagues, called Prolonged Exposure, because it is the most researched exposure treatment packet.

So, Prolonged Exposure Therapy was developed by Edna Foa and her colleagues, and it is a short term treatment, and whereas cognitive therapy focuses on the thoughts that occur after a trauma exposure, Prolonged Exposure focuses on the feelings: the panic, the fear, the anger, the anxiety that arises as a result of the traumatic exposure and following exposure to traumatic reminders. It helps patients learn that reminders of trauma don’t have to be avoided; that a memory of a rape or a memory of a combat scene can’t kill you, can’t harm you, and that distinction is something that is often not apparent to a person with PTSD. And, as with cognitive therapy, there are different components; it starts with a psycho-education component, then there is breathing retraining to promote some relaxation, and then there are two ways that the individual is exposed to his or her traumatic reminders. One is in the real world, or what we call in-vivo exposure, where for example, a person who might have been involved in a fatal automobile accident is taken back to the intersection where the accident occurred.But, more frequently one uses imaginal exposure, where the patient is asked to think about what happened to them in Vietnam or Iraq or Afghanistan or in their home or in the disaster site.

Let’s look at some data showing the effectiveness of Prolonged Exposure. This is from a very large VA cooperative study that involved 9 VA Medical Centers, 2 Vet centers and 1 Military Hospital. Over 240 women were involved in this study. It was a very rigorous, well-controlled study, and this compared Prolonged Exposure, shown by the circles in the graph, compared to a very, very good present-centered treatment where the individual was allowed to talk about how the PTSD symptoms were affecting their lives, their marriages, their jobs but not allowed to do any trauma work where they were able to actually engage with the traumatic memories, and that’s shown with the squares. And, what we are showing in the plot is that baseline, which was very high CAPS scores, to post-treatment, and you can see that both groups got better, but the Prolonged Exposure group got much better. And, at 3 and 6 month follow-up the Prolonged Exposure group continued to show the superiority of this treatment.

So, the next slide breaks down this data a little better. Here we are looking are odds ratios comparing Prolonged Exposure to present-centered therapy. So, if you look at the bottom horizontal bar, what it shows is that people who had Prolonged Exposure were more than two times as likely to have total remission than those who received the other treatment. If we look at the middle bar, what this shows is that people who had Prolonged Exposure were about 1.7 times as likely to lose their PTSD diagnosis as those who received the other treatment. The upper bar basically shows that in terms of symptom improvement, again, the Prolonged Exposure was superior to the present-centered treatment.

So, an important point about these treatments is how long do they last. I mean a patient is only getting 10 or 12 sessions and one might wonder how enduring such a recovery might be. Well, in point of fact, in one very large study where CPT and PE were compared with each other, again done by Dr. Patricia Resick, looking at these patients 5 years later, they still had maintained their improvements. So, that’s really quite amazing and fantastic, and it’s important to note, when you compare this with the medication approaches, that a patient who has had a good response to medication will only maintain that response if the medication is continued, so if the medication is discontinued, there is great likelihood that they’re going to have a relapse. So, this is a very important argument in favor of these psychotherapeutic approaches; that an investment of 10 or 12 sessions can lead to sustained improvements for at least 5 years.

So, now let's look at the third level "A" treatment of psychotherapy, and that is EMDR, Eye Movement Desensitization and Reprocessing. This treatment has a novel delivery approach that I'll talk about in a minute or two, but it's worth noting that there have been fewer trials for EMDR than for cognitive therapy or exposure therapy, and the early trials were really not as rigorous, but that has changed. In more recent years, there have been really well controlled trials so that EMDR does have a level "A" rating. It's important to understand, however, that the guiding theory for EMDR appears not to be true. It was believed by its developer, Dr. Francine Shapiro, that to do a repetitive motor movement, to have your eyes follow a therapist's finger or rotate your hands on your thighs repetitively, was incompatible with having a traumatic thought; keeping that in your mind.But, there have been a number of studies now, we call dismantling studies, where people have received the whole EMDR package with the repetitive motor movements and without the repetitive motor movements, and they both perform equally well, and they both perform well. So, it appears that the repetitive movements don't play the role in EMDR that was originally theorized.This is really not that unusual in medicine. Just to remind you that we knew that penicillin worked for 20 years before we knew how it worked. So, we know that EMDR works. Its a mechanism of action remains an important question, and I am sure in the next few years we will have a much better idea of what the mechanism of action is.

So, what is EMDR? As I said a minute ago, it focuses on repetitive motor movement, hand movements, tapping or following the therapist's finger with your eyes, and while that is going on, the patient is instructed to think – not to talk – but think about their traumatic event. And, while they do that, they learn to hold that thought, and to relax, and to handle whatever emotional distress occurs. With repeated presentations as an exposure therapy the amount of distress they experience while holding that thought becomes less and less, and they are instructed to insert or substitute a more positive thought rather than the distressing traumatic related thought. So, one installs positive thoughts and images once the negative images are no longer distressing and reviews how a much more relaxed and capable one is of coping with these traumatic memories.

So, the final level "A" psychotherapy is stress inoculation treatment and, as stated earlier, this is an approach that doesn't necessarily involve trauma focused work. In fact, the two randomized trials that have been done on this treatment, specifically eliminated any exposure component, and in these studies stress inoculation therapy was shown to be as effective as Prolonged Exposure. I should add, however, that these are relatively small studies and one could say that the studies were not sufficiently powered to detect the differences between these two active treatments.

But what is stress inoculation therapy? It really is a toolkit of coping strategies, skills for coping with the traumatic distress and the PTSD symptoms. So, in addition to psycho-education, which is a common denominator in all of these treatments, the person receiving stress inoculation training is taught to how to relax, some breathing control, there is role-playing to help them develop their skills of coping with the stressor, thought stopping – a traumatic thought enters you mind, how to stop it so it does not go any further, positive thinking, and its original form, stress inoculation training also did have an exposure component, but it's an effective treatment.

So, to summarize our 4 level "A" treatments, these are the ones that have the strongest evidence. We don't know which treatment might be better for which persons. So, for example, are there people who might benefit more from exposure therapy than from stress inoculation training or EMDR? We really don't know that at this point in time. It's obviously an important area for further research. If any of you are interested in learning more about these particular treatments, there are separate courses in this series on that. Dr. Kate Chard has one on CPT. Dr. Sheila Rauch on Prolonged Exposure, and Dr. Josef Ruzek, one on EMDR and stress inoculation training. So, tune in to those if you want to learn more about these treatments

So, now that we've talked about the level "A" treatments, and there are no level "B" treatments for psychotherapy, let's turn to level "C". And, just to remind you, a level "C" recommendation, there's no recommendation for or against the routine provision of the intervention. There's fair evidence that the intervention might be beneficial, but the balance of benefits and harms is too close to justify a specific recommendation and favorite. So, as you can see, there are 5 different treatments on this list. One is patient education / psychoeducation, which, remember, is a component of all the level "A" treatments. But here, we are talking about patient education, all by itself, being a sufficient treatment for PTSD. Imagery rehearsal treatment is an interesting approach focusing specifically on traumatic nightmares and dreams where, using cognitive behavioral approaches, the patient is taught to basically come up with a Hollywood ending to what had been previously a horrific traumatic nightmare. And, there is some evidence that it is effective but not sufficient. Psychodynamic treatment, my guess is you all are familiar with traditional approaches. The unfortunate reality, from my perspective, is that there just hasn't been enough research in this area. There's no reason why it can't be done, but it hasn't been done. Likewise, hypnosis or hypnotherapy, has some favorable findings, but nothing that is rigorous enough to bet the ranch on and to make a specific recommendation. The final bullet on the slide is group therapy is something I'm going to talk a little more about. So, let's look at Group Therapy in more detail.

Group therapy is used a great deal in many different settings, and, certainly, if you compare group therapy to a waitlist control, people benefit from that type of intervention. When you think about group therapy, they are not all the same. There actually are three different kinds of group therapy approaches. One is cognitive behavioral approach, and there is specific Cognitive Processing Therapy group approach that is currently being tested. There is a more traditional psychodynamic type of process group, as they're called, and then there are more supportive therapy groups. And, what's interesting is if you look at the data, and there's not a lot of it, it doesn't seem to matter what kind of group you're in, a cognitive therapy group, or a psychodynamic, or a supportive group. People who participate in groups seem to have the same amount of benefit. So, it seems like the power of the group, being in a group with people who have also been exposed to a traumatic experience: motor vehicle accident, combat, or sexual trauma, that seems to be helpful, but the amount of help is nowhere near as much as has been shown with the individual treatments that I've discussed previously. There is currently a clinical trial which we're all very interested in comparing Cognitive Processing Therapy provided in an individual format versus a group format, and stay tuned, we'll just have to see how that comes out.

So, finally, with regard to the evidence table I showed you some time ago, we are going to talk about the "I" level psychotherapies, and remember, "I" means insufficient, insufficient evidence, so there is not enough data out there to support a recommendation one way or the other. These treatments may, in time, prove to be extremely effective, but that evidence is not present at this time. And, on this list you may see some treatments that you happen to like or believe in. Certainly web-based cognitive behavior treatments are becoming used more and more, both in Europe and in the United States, and often the web-based treatments, this is just a vehicle for delivering the treatment. They're still getting exposure treatments, or cognitive therapy, or stress inoculation training. Acceptance and Commitment Therapy, ACT, is a treatment that has been utilized in depression right now. There's a lot of enthusiasm for this treatment. There's a lot of enthusiasm in the PTSD community, but again, the evidence just isn't there. There have, as yet, been no clinical trials of ACT in PTSD. Dialectical Behavioral Therapy, DBT, is a treatment that has been used for many years for a very difficult patients, often suicidal, reckless behavior, substance abusing, frequent hospitalization, and many people use DBT quite regularly and often use it in conjunction with other PTSD treatments. Again, the question is will DBT be a sufficient treatment on its own for PTSD. There's reason to believe that it's certainly worth testing, because so many of the vast majority of patients who require DBT have been exposed to traumatic events themselves and, so, the link between DBT and PTSD is a link that is definitely worth testing in clinical trials.The final bullet on this list, family therapy, again, is something, you know, we all utilize, to bring the family in, in one way or another, but there are no randomized trials right now of its efficacy in PTSD.

Now, let's talk about family therapy for a minute. As I just said, there is currently insufficient evidence for family or couples interventions as first line treatments for PTSD. Often, because PTSD can be very, very disruptive to a family, or a marriage, you know, family therapy becomes a necessary component of the treatment menu, but not with the expectation that it, in itself, is going to ameliorate the PTSD symptoms. At the very least, what family therapy does is it forms an opportunity for the other members of the family to understand what PTSD is about, what their loved one is going through, and to talk, and maybe strategize, about how to cope with those symptoms and how, maybe, to make the individual in the family better able to function in the family setting. We know that social support is one of the most powerful protective elements in PTSD, and if we can get family support to help this individual, it's going to be beneficial, whether or not it has a direct impact on PTSD symptom severity itself. There's recent changes in VA Policy which has really opened the doors for more family therapy, so I am sure that there's not only going to be more treatment, but going to be more research in this area.

This slide is the final slide in our series on psychotherapy, and here we're talking about what do you do when your initial treatment hasn't produced the kind of results you were hoping for. And, we see this very frequently in the clinic where we give a patient a full course of exposure therapy or cognitive therapy or medication even. And, at the end of the course of treatment, they may somewhat better, but they sure as heck not cured, or in remission, from their PTSD. So, the first two bullets talk about medication exposure therapy combinations for partial responders. So, in the first case, we have patients who have been on a medication, and I'll talk about this medication later, it's sertraline, it's an SSRI, who've had an adequate clinical trial and have only shown a partial response. So, after this trial, they were then randomized and either kept on the medication but given exposure therapy in addition or just kept on the medication. And, what this experiment showed was that the addition of exposure therapy, for these partial medication responders, had great results, and the patients had full remission after the augmentation with exposure therapy. So, augmentation of medication with exposure seems like something that's worth testing some more and considering in the clinic. If you do this experiment backwards, and start with exposure therapy, and then look at the patients who had a full course of exposure therapy and still only had a partial response, and then you randomize them so that half of them get some medication in addition, what you find is that it doesn't make any difference. The medication doesn't have any value added. There's no additional improvement. So, again summarizing, augmentation of medication with exposure therapy seems like a good idea. Augmentation of exposure therapy with medication doesn't seem like a good idea. But remember, there have only been one experiment on each of these possibilities. The third bullet is about augmentation of exposure therapy with D-cycloserine. D-cycloserine is a medication which we have reason to think will make exposure therapy more successful, and successful more quickly. It's already proven to be effective in patients with social phobia and fear of heights, and now it's being tested in PTSD and we'll just have to wait and see what the results are.

So, now we are shifting gears and we're going to talk about pharmacotherapy for PTSD. And again, we are showing you the evidence table that summarizes the clinical practice guideline. Again, the vertical columns are the strength of the evidence A, B, C, D, and I, and the horizontal columns show the balance of benefit versus harm, substantial to no benefit or actually harmful. I'm going to go into detail about just about all of these medications in subsequent slides, but I do want to call your attention to a few things on this slide. First of all, look in the "B" box somewhat and look at Nefazodone, where we have a parenthetical statement that says "caution". Nefazodone is a very good drug for PTSD. It's very effective. There've been a number of trials, and it really works extremely well. The problem is that Nefazodone also produces liver damage, so much liver damage that its manufacturers have removed it from the market, although you can still get it generically. So, that's why Nefazodone is noted as such. If we now skip down to the "D" column, look at Benzodiazepines. Not only is there good evidence that Benzodiazepines don't work, but in addition to being ineffective, they are harmful. So, that is what is reflected in the table.

So, now we are going to go in more detail about the information that is shown on the evidence table. First, the upper left hand corner which are the medications for which we have the strongest evidence.

And, these include: SSRIs selective serotonin reuptake inhibitors, and the 3 medications in that category that have the strongest support are fluoxetine, paroxetine, and sertraline. Also, SNRI's which are first cousins, Serotonin–norepinephrine reuptake inhibitors, and here the medication venlafaxine has very strong support for treating PTSD. If we turn to the "B" box, where the strength of the recommendation is a "B" level and considered somewhat beneficial, there are a number of medications, all antidepressants, with one exception, that are in that category. And, these include mirtazapine, tricyclic antidepressants, Monoamine oxidase inhibitors, phenelzine is the only drug in that class that has been tested. I've already told you about nefazodone that the caution because of the liver damage. And, the last drug in that category is prazosin, but it's important that you recognize that prazosin only has a "B" recommendation for nightmares, not for PTSD in general.

Turning to the "C" recommendations, again, there is no recommendation for the use of prazosine as a monotherapy for PTSD, but, as I just said, only for the specific case of traumatic nightmares and improving sleep. Moving to the "D" level, we have a number of drugs, and these are all medications in which there have been randomized clinical trials which have been negative. These drugs have been shown to be ineffective in treating PTSD.

So, we have a fair amount of confidence, at this point in time, in recommending against their use, and in addition to benzodiazepines, which I mentioned earlier, which in addition to be ineffective, are potentially harmful, we have tiagabine, topiramate, and valproate, all of which have been shown to be ineffective in large randomized trials. And, finally, guanfacine, which is a antiadrinergic drug, it's actually an alpha adringergic agonist, has also been shown to be ineffective in managing PTSD symptoms in large randomized trials.

Finally, we come to the "I" level, the insufficient to recommend category, and you can see that there are a number of medications in that category. The drug that is used, I think, most frequently, for which there's insufficient evidence in PTSD, is bupropion, Wellbutrin, which is an excellent antidepressant, but we just have no data supporting its use in PTSD. Other medications are Buspirone, trazodone, which we recommend for sleep, but not for PTSD. Other antidepressants lamotrigine, gabapentin and, finally, antipsychotics, both conventional and atypical antipsychotics, are not recommended for use in PTSD treatment as monotherapies, treatments on their own.

As we did with psychotherapy, we are going to talk about augmentation strategies for pharmacotherapy. But here, the augmentation is always with another medication. And frankly, this happens a lot clinical practice, sometimes consistent with the guidelines, sometimes less consistent.

Prazosin, for a patient who is still having traumatic nightmares, is a good drug to consider, adding as an augmentation strategy. And, that's the level "B" recommendation.

To talk about level "I" evidence for augmentation strategy for pharmacotherapy, we just don't have evidence to recommend adding an antiadrinergic sympatholytic drug, such as Propranolol or Clonidine, or an anticonvulsant, as adjunctive therapy.

Although previous evidence from a number of small single site studies suggested the effectiveness of atypical antipsychotics, particularly risperidone and olanzapine, as adjunctive therapy, a recent large randomized controlled trial found negative results with Risperidone as adjunctive therapy for partial and non-responders to antidepressants, SSRIs and SNRIs. As a result, the clinical practice guideline does not recommend use of atypical antipsychotics as adjunctive agents for PTSD. The current recommendation is against the use of Risperidone for this purpose. For all other atypicals, the evidence is insufficient to make a recommendation.

So, this slide just gives a graphic example of a stepped care approach within the context of evidence based treatments that we've been talking about. So, initially, you're going to start a medication, a level "A" medication, SSRI or SNRI or psychotherapy, as we discussed previously. If everyone is lucky, this treatment will work. If you only have a partial response, you should consider switching to another SSRI or switching to psychotherapy. And, if that doesn't work, than you go down the list to perhaps "B" level medications, such as mirtazapine or tricyclic. And, if your still not successful, then you'll want to look at some of the alternatives that are shown in the evidence tables.

As I mentioned at the beginning, one of the unique aspects of this guideline is we looked into all of the literature we could find involving complementary and alternative medicine, or CAM approaches. And frankly, there's very little out there. And, there is insufficient evidence to recommend any CAM approach as a first line treatment for PTSD, however, there have been a couple of interesting studies with acupuncture which suggest that acupuncture may indeed be helpful as an adjunctive agent, and so, it has a level "C" rating.

As we said at the beginning, PTSD is often accompanied by some very important clinically relevant and very distressing symptoms above and beyond the PTSD. The three that we identified in the practice guideline were insomnia, pain, and anger or aggressive behavior. So, the practice guideline would still be in effect. If a person has these symptoms, we are saying you should still adhere to the practice guideline, but, in addition, for sleep, you might consider a cognitive behavioral approach. There is something called a CBT-I, CBT for insomnia, which seems to be very, very effective. We're not recommending sleeping pills, sleeping medications. In addition, prazosin, as stated earlier, is a very useful drug for traumatic nightmares, if it's the nightmares that are keeping the individual up at night. And, trazodone, which is an antidepressant, which is ineffective in treating PTSD, per se, is a good adjunctive agent for promoting sleep, particularly in combination with SSRIs or SNRIs. With regard to chronic pain, the guidelines for treating chronic pain strongly recommend against using opioids, such morphine, demerol, or oxycontin on any chronic basis. Those drugs should be limited to no more than a 7 or 10 day acute trial during the acute painful situation. But, there are some cognitive behavioral approaches that have been developed specifically for treating pain in the context of PTSD, and that's not an unusual occurrence. I mean very often the PTSD results from an injury, whether at work or in a combat situation, so this is not an unusual problem that the clinician is confronted with. And finally, aggression, anger, there are other approaches to address this; cognitive behavioral, SSRIs and SNRIs are often useful, and we strongly recommend against the uses of benzodiazepines, which might actually disinhibit the individual and make the aggressive behavior more likely to occur, and therefore, the situation, a lot worst.

If you have PTSD, there is an 80% likelihood that you are going to have at least one other psychiatric problem. The three that are most commonly encountered, particularly in VA and DoD settings, are PTSD plus depression, PTSD plus substance use disorder and PTSD plus traumatic brain injuries. Sometimes all four of these disorders might occur in the same individual, and each of these co-occurring problems has its own guideline. So, what we recommend is that the PTSD Guideline, that we've been talking about, not be modified because an individual has a substance use disorder, depression, or traumatic brain injury, but that one use evidence based treatment for PTSD and, in combination, evidence based treatments for depression or substance use disorder or TBI. Now, I should say there's a lot of research going on right now to see whether not an individual with PTSD alone, compared with an individual with PTSD plus a co-occurring disorder, will benefit as much as a each other, and we just have to wait and see about that. But, right now, use the guidelines for each disorder concurrently.

We all occupy different places in the spectrum of health care that's available. Some of us are in primary care, some of us in mental health, some of us in Vet centers, etc. and obviously, where we're located is going to dictate what treatment options might be most available or what might be best. Wherever you are, it's important that you provide a treatment that you know, understand and are comfortable in delivering. But, in addition to your comfort, it's important that the patient's preferences are taken into the

mix. So, you may have a patient who you think would be a perfect candidate for exposure therapy, but they insist on getting a medication. Those patient preferences need to take precedence if you can't make a case to convince them otherwise. Also, it's important to realize that whatever treatment you provide is embedded in a continuum of care: everything from peer counseling, community based clinic, such as Vet centers, to tertiary care, highly specialized in-patient treatments.

In VA and the Department of Defense, there has been a move to integrated care models where behavioral health, mental health treatment is provided within the primary care setting. This has many advantages. It destigmatizes the provision of such PTSD treatment. It makes the people more willing to come forward without fear of stigma. It also provides an opportunity to have a multidisciplinary team who may work with you for the medical problems which often accompany PTSD as well. Certainly there is very good evidence that we can screen quite effectively for PTSD in a primary care setting. If, however, an integrated approach is not successful, it's important to know when to refer and to refer a patient to a more specialized tertiary care mental health setting, and most frequently, these complicated patients, who have comorbid mental disorders or comorbid symptoms, traumatic brain injury is another good example where you would want, maybe, specialized care. All of these things need to be taken into consideration.

So, when we talk about the roles of the primary care practitioner or mental health personnel who are imbedded in a primary care setting, one needs to, while offering PTSD treatment, also discuss the option of providing a specialized treatment. This would be a concurrent with educating about their PTSD symptoms; how they're affecting them, and also providing regular follow up and monitoring the symptoms, so that you are sure that your treatment is or isn't working after you've provided it.

So, to conclude, we've basically tried to give you the best information we can on what we know, but it's equally important that we tell you what we don't know, and also what we know doesn't work and what is yet to be tested. We strongly recommend that you give your patients treatments that fall in the level "A" categories initially, and only go to augmentation strategy, or "B" level approaches, when you've exhausted the "A" level options. Remember that the level "I" categories may include treatments that you favor. We're not saying they don't work, we're just saying we don't have evidence that they work, and that remains to be seen, so we can't make any recommendations. And, finally, as I've tried to emphasize throughout this talk, research is ongoing. A clinical practice guideline is a living document. As more research is done, we may need to modify some of the recommendations we've made previously, and that's good. I mean that's progress. If we have more evidence to support what we recommend or what we strongly recommend against. Thank you very much.