Transcript
Short Takes on Suicide Prevention Podcast
Episode 132: Suicide among Veterans with TBI, ALS and Stroke
with Dr. Jordan Wyrwa and Dr. Lisa Brenner

[00:00:00] **Announcer:** You're listening to Short-Takes on Suicide Prevention, where experts talk to each other about how research is shaping suicide prevention. This podcast is brought to you by the VA Rocky Mountain MIRECC.
And now onto today's conversation.

[00:00:26] **Wyrwa:** Hello. I'm Dr. Jordan Wyrwa. I'm a Fellow Physician in the Pediatric Rehabilitation Medicine Fellowship Program at Children's Hospital, Colorado. And I'm joined here with Dr. Lisa Brenner. and, if you'd like, to introduce yourself Lisa?

[00:00:36] **Brenner:** I would. Hi, my name is Lisa Brenner, Clinical Research Psychologist and the Director of the Rocky Mountain, Mental Illness, Research Education, and Clinical Center, and a Professor of Physical Medicine, Rehabilitation, Psychiatry, and Neurology at the University of Colorado Anschutz, School of Medicine.

[00:00:52] **Wyrwa:** And today we'll be talking about three papers on suicide rates among Veterans, focusing on three different topics, traumatic brain [00:01:00] injury, Amyotrophic Lateral Sclerosis, also known as ALS and stroke. Also known as Cerebrovascular Accidents. Lisa and I actually wrote the paper together on the last one, the stroke population. All of these studies were quite impressive, very large scale retrospective studies using VA electronic medical records.

[00:01:20] **Brenner:** Jordan, maybe we can talk a little bit about like how we started going down this path, or I think probably how I started going down this path and then got experts like yourself to come along with me

[00:01:28] **Wyrwa:** Sure.

[00:01:29] **Brenner:** I used to be a clinical rehabilitation psychologist, I guess I'm still a rehabilitation psychologist, but I worked on the inpatient rehab unit here at the VA and have an outpatient practice. And so I have a kind of a long history of working with folks with different. neurodegenerative conditions and all three of these conditions, traumatic brain injury, ALS for people sometimes call Lou Gehrig's disease and stroke were conditions that we'd frequently see individuals recovering from on the inpatient rehabilitation unit. And some of these conditions have very specific overlaps [00:02:00] and some things about them that are really, really different. And I think you know, when we talk about traumatic brain injury, that probably has the widest variability, although stroke can have a lot of variability also. So I think for both stroke or CVA and TBI or traumatic brain injury, you can see folks who've had, maybe smaller events or a mild TBI and that , people generally have

good recovery and they are able to kind of get back to their previous level of functioning. they may require some rehab and using some compensatory techniques. generally though, they are able to kind of get back to the way things were in many, many cases. however, for more severe. And for more severe brain injuries and then for ALS, people can have more challenging courses, certainly ALS is generally a shorter course, people's lives are shortened, and that makes it unique in terms of these three conditions, ALS. has a really short lifespan, in terms of post-diagnosis, whereas TBI actually has a somewhat shortened [00:03:00] lifespan if you have a moderate, severe injury, but not, wildly shorter. And I'm guessing the same is true for CVA, although I don't know, but I think the thing that's different about CVA is a lot of people have strokes when they're older.

Right. and so that's another thing that's a little bit different about these three conditions. Traumatic brain injury kind of has bimodal population with younger adults getting brain injuries, and then older adults with falls. Stroke is also generally older adults, for the most part, though, you can have a stroke when you're younger. And ALS Jordan, I would say like, people in their 50, 60 seventies Jordan, is that, is that right?

[00:03:33] **Wyrwa:** Mm hmm, correct.

[00:03:36] **Brenner:** And Jordan maybe also what would be helpful is - you are an interesting kind of doctor some people on our podcast might not know, what physiatrists are, why they're special or why I love to live with physiatrists so much.

Maybe you can tell us a little bit about physiatry And why it's so important for folks to work on interdisciplinary teams, where they have rehabilitation, psychologists and psychiatrists like yourself.

[00:03:56] **Wyrwa:** Thank you, Lisa, physiatry or physical medicine rehabilitation, which is [00:04:00] kind of the full specialty name if I remember it correctly kind of had that to origins actually with the VA and military when patients were coming back from the second world war with a bunch of traumatic injuries and learning how to readapt to civilian life. And then end it evolved from there.

We take care of people that have had devastating injuries. Be it acquired traumatic brain injury or stroke or something like a neurodegenerative process, like ALS where we try and figure out not necessarily how to cure or like a medication or something that would take away what's going on, but helping them the best they can to still be as functional and as independent as possible.

And we work very closely with rehabilitation psychology and the rehab team, which includes physical therapy, occupational therapy, speech therapy, rehabilitation nursing, social work, case management. On my side of the pediatric world of rehab, we work very closely with our school teachers.

And then as you graduate and get into the adult land that looking at vocational rehab and recreational rehab and [00:05:00] helping people reenter the workforce and also the activities that they loved to do and figuring out how to do that with new challenges that they might be facing with these diagnoses.

[00:05:10] **Brenner:** Jordan I think that brings up a really good point, and part of, I think the crux of why suicide might be such a problem, particularly for folks with brain injury or stroke, in terms of challenges associated with functioning or challenges, getting back to what they used to do. And people really having a sense that they may have lost their sense of self.

They may lose their job. Sometimes people have challenges in relationships, certainly have economic challenges and all these stressors are things that we know are related to suicide.

The other thing that I always like to remind folks of is, you know, we're talking about, injuries or events, things that are happening in the brain or related to the brain or related to the central nervous system and mood and, psychiatric conditions are also related to the brain.

So maybe you could tell us a little bit about kind of your thinking about [00:06:00] rates of psychiatric conditions in all these different populations. And how that might relate to suicide risk.

[00:06:07] **Wyrwa:** Sure, with chronic disease in general, that kind of puts you at higher risk for mental health conditions, just because you're dealing with a different ball of wax than you were before. And then you throw in, as I mentioned with rehab medicine and rehab psychology, focusing on life changing diagnosis, that's not uncommon to see people having difficulties gripping with it resulting in mental health issues down the road.

And I think as you mentioned, being a large interdisciplinary group we're fortunate to have lots of different chefs in the kitchen, being able to help people out in different ways. So that allows us to kind of get a 360 plus view of the patient, seeing them in various different aspects of life, as opposed to someone popping into their PCP or neurologist office once or twice a year and helping to see where they might be struggling in ways that they might not be bringing up or not even being [00:07:00] cognizant of. Cause a lot of the issues that make the diagnosis, mental health issues might pop up in different ways, like using depression in this example, losing interest in the activities that you're going to do, which dovetails very nicely into, as I was mentioning, we're trying to help people getting back to what they like to do. So if someone's noticing So-and-so that had a stroke is not enjoying life as much as they used to that it would be a kind of red flag and reason to bring the whole team together and talk about ways we can better support them

[00:07:30] **Brenner:** Yeah. And I really appreciate that. And, I think, there is kind of the functional challenges that people have after brain injury, and then there does

seem to be something about the injury or insult to the brain that also does increase the risk and trying to parse out, is it the brain injury itself is it functioning after brain injury? And those are questions that we are still struggling,

[00:07:50] **Wyrwa:** So Lisa I noticed in the traumatic brain injury paper that they use different classifications. There's mild, moderate, severe. Can you speak more to that?

[00:07:58] **Brenner:** Yeah, we were able to [00:08:00] look at mild TBI versus more moderate, severe TBI. And I think one thing that's really important to know is that those who had more severe injuries were at greater risk for suicide.

So a lot of times talking about TBI and suicide, the number that kind of keeps coming up. depending on what you control for what you don't control for its like two times more likely. Our paper found that really. It seemed as though those who had moderate to severe TBI were even greater than two times more likely and more likely than those with mild TBI. So again, those conditions, certainly, often the mechanisms of injury, how people get injured can be the same but the severity and the impact of the brain does seem to have a pronounced effect in terms of suicide risk with more severe injury. I guess another thing we should also mention Jordan, is that what we found consistently is, for many of the conditions, our rates of psychiatric conditions were much, much higher amongst those who had the neurodegenerative conditions.

And this was across the board. And I think one thing that was, you know, consistently higher was [00:09:00] depression and I know we mentioned this a bit ago, but that really reinforced for me the idea that we absolutely need to be screening for depression, frequently and consistently. There's tons of data that actually supports this from Veteran and non-veteran populations, but that depression is often undertreated in individuals who have neurodegenerative conditions and that we do have good interventions for depression and that individuals can benefit from. Medication treatment and they can also benefit psychotherapy. Sometimes folks think, oh, people who have cognitive impairments can't benefit from psychotherapy. That is not the case. Individuals who have these conditions can benefit from psychotherapy and, uh, should be offered psychotherapy medications to address depression and other mental health conditions.

One of the things that, that I know you and I both strongly believe in is finding ways to screen for depression or suicide risk and to be tracking, and even if, you are seeing somebody let's say in an outpatient setting and the whole team isn't [00:10:00] there, but you know, they're having kind of a follow visit with PT or a follow-up visit with physiatry that it would be great to have depression screening and risk screening, be a part of that process and being able to kind of loop other folks in.

[00:10:12] **Wyrwa:** And I think that also, lends itself towards this being a kind of different patient population kind of adapting some of the common screening models since a lot of the symptoms that could pop up with that would be common, especially with brain injury where you can have emotional dysregulation, which might be

primarily because of the centers that were affected in the injury. Or it could be a mental health issue.

Or, sometimes it's a combination of the two and you really can't pull them apart. So, making sure that besides screening for it making sure that the screening tools are adept to that specific patient population to make sure we're not picking up noise that would normally be there for other reasons.

[00:10:55] **Brenner:** Well, you know, that measurement and accuracy of measurement is near and dear to my heart. So let's talk [00:11:00] a little bit more about these three papers. There's so many things I appreciate about the VA, but one thing that makes studies like this possible, and it has been hard to do these kinds of studies, in the, United States, because we just don't have integrated large medical records and you just need lots and lots and lots of data, to be able to look at these relationships, both, suicide, every suicide is a loss to many, many people, but it is a low base rate behavior and brain injury, particularly moderate, severe brain injury, pretty low base rate, same with ALS or strokes. So you really need millions and millions of medical records to be able to do each of these different studies and, the rationale for this method certainly is to begin to understand signal. And you know, one thing I know we talked about in the papers, Jordan, is this idea that these are epidemiologically, derived risk factors. And it helps us understand a little bit about kind of increased risks associated with each of. these conditions. It doesn't like you were just highlighting, tell us what's going to happen to any [00:12:00] specific person.

So as a clinician, thinking about epidemiologic risk versus individual risks, how do you hold both of those things?

[00:12:07] **Wyrwa:** I think it actually speaks very nicely to the movement in the past couple of years from like, obviously evidence-based medicine has its place, but then kind of applying it to the patient, which we're looking more at kind of personalized or precision medicine, whatever term most people like nowadays. This is the starting point for something like that, where we're able to say, yes there's signal here, there's something going on. And then over time it can be kind of applied and adapted to figure out how it specifically applies to the patient sitting in front of you. But bringing awareness to the issue in the first place, that's the starting point for that all to get kicked off in the first place.

[00:12:44] **Brenner:** So maybe we could talk a little bit specifically about this stroke paper, since you're author on the stroke paper, Jordan. And you can give us a, just a brief summary about what you all did, what you all found and kind of some key takeaways from it.

[00:12:56] **Wyrwa:** So as you're mentioning, one of the prime benefits of [00:13:00] working with the Veterans Health Administration is that plethora of data. So this was a fairly large study looking at, about 1.6 million Veterans overall, 1.4 of them without stroke, and about 241,000 with stroke. Screening for patients that have had stroke,

and a kind of regular VHA utilization, during some specific years, and then running some models to see if there was an increased risk for suicide and specifically also parsing out the methods specifically looking at firearm, looking at demographics, but then also looking at mental health diagnoses too, to see how that factored in and then leveraging your previous work, brain injury and suicide rates, also using that as a factor too, to see how that played into it.

[00:13:44] **Brenner:** Yeah. So what we're really trying to do, Jordan, I think in this paper and all these papers is we say, okay, we know all these things travel along with stroke that can also increase risk, like perhaps dementia or disability level or depression, but can we do some analyses to kind of try to parse out how [00:14:00] much the stroke itself contributes? And, I know that's kind of weird because people are not just the stroke. They're certainly like all the parts and even more. Right. But we're trying to kind of understand, like we said before about the signal, is stroke itself, regardless of depression, that the problems with that or disability that travels with that is stroke a signal. And so did you find that stroke was this signal?

[00:14:20] **Wyrwa:** We did, yeah. After pulling out all those additional factors it seemed that stroke is still a risk factor for significantly elevating your risk of suicide. It had been previously described in the few other large studies. One was done [inaudible], if I remember correctly, Netherlands but this was the first one, demonstrating it in a U S population.

[00:14:39] **Brenner:** And can you tell us a little bit about the firearm finding too? Cause I think in some ways, what is the same or what is it like in all three of these articles was firearm and, I think, big clinical implications that may surprise some people across these studies, what we found,

[00:14:53] **Wyrwa:** So it did significantly increase the risk of suicide by firearm. Clinically that's very helpful because [00:15:00] besides saying this patient populations at risk for suicide, so they warrent an additional screening, but also , if we're noticing that it's significantly more elevated with firearms that lends itself towards clinicians being able to discuss lethal means safety. And in the rehab setting, we delve through return to life return to work. And actually, truthfully, personally, I've had patients bring up, I'm going to go back hunting. I'm going to go back other activities that would require a firearms. So that sometimes lends itself to the discussion.

And that this would just be another thing on the list of topics to discuss with them.

[00:15:35] **Brenner:** When somebody is on an inpatient rehab unit, sometimes people even go to people's houses, right? I mean, there's home visits around safety, looking at like carpeting and stairs. And lethal means safety, looking at medications or firearms and having those discussions about how things are locked or disposed of in terms of medications, that certainly could be part of home visits if there was a culture change.

[00:15:55] **Wyrwa:** Correct. Yeah. And I'm always educating the patient on [00:16:00] firearms in home. What's your plan as you do come home, what are your thoughts on addressing them in this way? And letting them know one of the reasons why we're discussing it is given the findings of this paper we worry about things like this and the future.

[00:16:13] **Brenner:** And I think family members too, right? Oftentimes family members are involved in those home visits too. And maybe unlike other settings, if somebody is on a inpatient rehabilitation unit, you often have a chance to work with them and their families over time, which I know can make the conversation about hard things like driving or firearms or alcohol a little bit easier. Cause it's not like you just met you, you were together in it.

[00:16:35] **Wyrwa:** Correct.

[00:16:37] **Brenner:** I want to go back to the firearm issue. Cause we found this in all three of the papers. With stroke with brain injury, particularly moderate, severe brain injury and with ALS. I think people know that Veterans know how to use guns. They learn how to use guns in the military. They generally feel more comfortable with firearms than folks who are not in the military. And we know that Veterans without these conditions have high rates of suicide using [00:17:00] firearms. But what we found in all three of these studies was that individuals with ALS who were Veterans, moderate to severe brain injury and stroke, all used firearms at a greater more significant rate then Veterans on whole. And so again, this idea that you are having these conversations with individuals in clinics, you know, having conversations in ALS and palliative care clinics, having conversations before people go home from rehab about, you know, guns. How can we help providers who may not think this is in their purview get a little more comfortable with these discussions?

[00:17:38] **Wyrwa:** That's definitely something, at least in physiatry that we kind of deal with, as you pointed out example that comes up all the time for us is driving since that is a like quintessential part of life, but then also carries great risks to the driver and then other ones around them, which then you can definitely say the same for [00:18:00] firearms as well, where it can be a big part of someone's life, but then also puts themselves at risk and those, they love that risk. One of the benefits of the rehab setting, kind of that timeline, where we're able to meet them early on, help them kind of adjust to things. And then end up developing relationships with the patients and more often than not their families and their loved ones and helping them get to the difficult discussion, which truthfully stuff like that. It's never something you just kind of drop it and say that like, even for driving your can't drive anymore, which would be earth shattering, hard to hear from someone, make them distrustful of others.

And it's not a conversation I ever take lightly and never jump straight into it in my mind. I almost treat it like a palliative care discussion almost because it's a big, big, deal.

You're talking about a good chunk of someone's life that medically you're going to recommend that they don't do, which is hard for people to hear. It's hard for clinicians to have that conversation sometimes, but sometimes [00:19:00] as these papers demonstrate, it's a conversation worth having.

[00:19:03] **Brenner:** Yeah. And I try not to be like forever with some stuff sometimes. Right? Like, people have had recovery and rehabilitation courses that have been surprising to me, for sure. Right. And so, you know, sometimes it's a little more palatable for people to just be like, we're gonna take it a chunk of time in a row, but right now we really want you to be safe and like, how can we create the safest environment?

We're checking everything. We're checking carpeting. We're taking stairs, we're checking, driving. Let's talk about guns and let's talk about medications in the house too.

[00:19:37] **Wyrwa:** Lisa, I appreciate your comment about making sure when you chat with the patient about lethal means safety it's not a forever thing because actually one of the articles I reviewed, in preparation for our paper, was talking about how long the risk of suicide is elevated for which we didn't touch on our work.

So maybe there is a period of time where it is heightened and then maybe it returns back to its baseline rate after that. So [00:20:00] then again, that would give patients and families kind of light at the end of the tunnel, knowing in this acute phase or this immediate time after the injury, be it stroke, brain injury or ALS. This is when we're going to be acutely aware and monitoring you for this. But as life gets back to the base rate of baseline, then we don't have to focus on it as much.

[00:20:22] **Brenner:** Yeah. Jordan, and I think that's a great point too. And it's been interesting, we've gotten a lot of feedback from providers and actually patients about the ALS paper. And one thing that has been kind of noted before, and we weren't necessarily able to look at, but the providers have been talking to us about, is that the period, for those with ALS, that's the hardest is like kind of waiting for the diagnosis and getting the diagnosis. And then when you get the diagnosis the VA has, lots of care teams that can kind of come in. But there is sometimes a break between like when people get the diagnosis and when their care team comes in. And that period when people are feeling kind of out there alone, or don't know all the [00:21:00] resources that are available to them can be super scary and they feel pretty helpless. , and so how do we kind of think about workflows? How do we think about giving, you know, hard news and making sure that we do a better job of having people in place so that when people do get rough news, whether it's ALS or other rough news, let's say, cancer rough news or any other rough news, that they have the supports in place.

And I just think that's a really important thing. All of these conditions can be super challenging, but it's all made easier if you're not in it by yourself. And that's one thing that we're trying to make sure is that patients know that we're in it with them. And

that families know what, that we're in it with them because it's just really hard. No one wants to deal with this by themselves.

[00:21:43] **Wyrwa:** Wholeheartedly agree. And you kind of touched on that, but to dive a little deeper, can you tell me a little bit more about how ALS is different from other groups?

[00:21:52] **Brenner:** Yeah, well certainly , the one thing that seems to be different is that that period of time, that feared period of time between finding out and the diagnosis.[00:22:00] You know, I think ALS is a little bit different on whole because people, their life course can be shortened with ALS, where we wouldn't think about that as much as these other conditions. And so one thing, and I alluded to this just a moment ago, I think is super important, is getting like care teams in place, getting adaptive equipment in place, getting families, and caregivers support right away and really trying to kind of bolster quickly around the patient and their family, so that they feel, the supports around them while they're trying to kind of figure out what things are going to happen next. And that we're consistently really checking on some very important things like feelings of hopelessness. There's been research with ALS there's been research with brain injury that hopelessness is, really not good for suicide risk and that people can fall into those kinds of hopeless places, pretty darn quick.

And so are we checking to make sure that we're really helping folks see that there is hope and that there is support.

Jordan, these studies are good. We've talked a [00:23:00] little bit about the limitations in terms of applying them to specific people. There's also some limitations, using medical record data, to do this kind of research.

Maybe you could talk a little bit about challenges with charting and also challenges in taking what's in the medical record. And I know you're working a little bit on kind of trying to find ways to, help both providers and researchers kind of have a more streamlined process.

[00:23:25] **Wyrwa:** Research like this, or more effectively or appropriately termed secondary use where a lot of this was generated for clinical use or for billing use, a lot of that is kind of trying to fit a square peg in a round hole where we find approximations for what we're looking for, kind of agree upon a group, then run through the data and see what we find.

For a lot of these [inaudible] groups that we looked at there's not just brain injury. There's one of the codes is like, ah, traumatic brain injury with loss of consciousness, less than 30 minutes or otherwise unspecified.[00:24:00]

And whether or not that's attached to a chart seems to be, kind of who's using the chart. If it's the clinician knows that code, if the biller that's going to be putting that code on there to generate the hospital bill.

There is quite a few papers out there that kind of talk about the validity. So if you're looking at a specific patient population, which codes actually seem to be reliable enough to be using. I know certain organizations, they even release, it's like sets of codes that say, if you're doing research in this area, this would be useful.

[00:24:28] **Brenner:** I was like to have a plea to the providers that are out there coding and remind myself when I'm coding that it matters for the patient. It probably matters for billing. But it could matter for research too, in the future. And you know, how do we help ourselves, and other clinicians, code correctly so that we can do these kinds of projects. And I don't know if you have any thoughts about that.

[00:24:47] **Wyrwa:** The farther I get into the medical world the more I realize that a lot of people go into it for treating the patient in front of them. But what ends up happening is besides knowing you [00:25:00] kind of have widespread effects in the patient's lives, the ripples that you have and the medical community in general, be it from, how the clinics running, how the hospitals running to the financial components, the quality and improvement, the safety assurances, and then research, often, unfortunately is kind of the last one left out. There is definitely a balancing act and I think it'll be still a long time coming and trying to figure out that balance between if documentation is done quickly and effective, that's one thing, if it's done thoroughly and has the most amount of data available that's helpful for the researcher, but then burdens the clinician.

One of my passions in the areas I'm trying to look into more is leveraging the health record systems more for the clinician. So with stuff like this, theoretically, if you're able to feed more data in and that it actually to give you data back to say, oh, I noticed that this patient's at risk, that this is the things that you might want to look more into. There are [00:26:00] features like that in electronic health records. It's got a way to go. Technology's kind of rapidly evolved in many other sectors and the medical field is the one that lags behind at the moment.

[00:26:12] **Brenner:** So there's maybe potential in the future for ways to help code that are easier, more streamlined. And also ways for providers to consume what's in the medical record in a more useful way in terms of medical decision-making and probably even shared decision-making, and offering patients ideas and strategies, in terms of, lots of different medical decisions and choices that they can make.

[00:26:34] **Wyrwa:** Putting it kind of in the hands of the patient too.

[00:26:37] **Brenner:** Yeah. So, I think Jordan, we've covered a lot of ground today. I think two things to highlight. one is that lethal means safety is a really important, concept and that lethal means safety counseling could be an intervention that could

happen in rehab settings. I know that our team will put links to, some trainings around lethal means safety counseling in the [00:27:00] notes for this podcast.

And we really want to encourage providers to go there and to look at that, they can get CEUs if they do that training also, whether they're VA or non VA. So that's an excellent starting point. The other thing I think we've really highlighted today is really working with patients and families to provide resource and then to provide intervention. And to really try to go after the things that are driving the suicide risks, whether that's helplessness, whether that's depression, whether that's lack of resources, in terms of caregiver support, whatever's driving the suicide risk for the patients is what we need to kind of come in full behind.

[00:27:35] **Wyrwa:** Other thoughts that you had Jordan, about things that we need to be doing?

No, I think he hit the nail right on the head by having these discussions, obviously they're sensitive topics, so not just jumping straight into it, but treating it with respect to the same way you would talk about someone had seizures and you were talking about taking away their driver's license. This would be kind of along those same lines.[00:28:00]

[00:28:00] **Brenner:** Yeah. And then what you remind me of Jordan is that like sometimes folks who are not in mental health think this isn't in my purview, I don't know how to do this. And what you have so nicely reminded all of us today is that we have these hard conversations all the time, and you can have hard conversations about different topics, and it's just using the same skills and switching out the topic.

[00:28:18] **Wyrwa:** Wholeheartedly agree.

[00:28:20] **Brenner:** All right. Thanks Jordan. Thanks for helping with this paper, helping with this podcast and being such a good colleague.

[00:28:25] **Wyrwa:** And thank you as well, Lisa, as always.

[00:28:32] **Announcer:** That's it for this episode. You can find more *Short-Takes* on your favorite podcasting app. And if you like what you hear, subscribe to the show and give us a review. Until next time, you can follow us on Twitter at RMIRECC. We'll see you then. Take care.