Speaker: The final presenter is Terri Pogoda who is an experimental phycologist investigator at the Boston Health Care System and research assistant professor at Boston University. Terri is going to presenting today on predicting employment status of OEF, OIF, OMD Veterans three years after evaluation for traumatic brain injury.

Terri Pogoda: Thank you. So, I am just going to skip ahead a few slides. The objectives today was to describe the VA’s definition of TBI but Lisa, that’s a thank you, and the co-occurring health conditions that are often seen in OEF, OIF and OMD Veterans who use VHA. I’m then going to discuss a study based on data from two HSR and DIIR’s that examine factors associated with employment status over a three-year period in OEF, OIF, OMD Veterans evaluated for a TBI and finally I am going to offer some thoughts on why VHA can help to do help bridge the gap between Veteran employment needs and access to vocational rehabilitation services.

Since 2000 more than three hundred and sixty thousand TBI’s have been documented for U. S. military service members and approximately 80 percent of the cases are categorized as mild TBI. Each year, VHA provides care to more than twenty thousand OEF, OIF, OMD Veterans with TBI history and typically these Veterans also have co-occurring health conditions such as PTSD, depression, anxiety and substance use disorders which can contribute to disability. These conditions can manifest as chronic affective, cognitive, somatosensory, and vestibular disorders such as problems with frustration and anxiety, difficulties with getting organized and with memory, problems with vision and headaches and disturbances with Down’s coronation and dizziness. These can impact readjustment to civilian life including problems with vocational functioning. So, briefly, just very briefly, literature has shown the following TBI regardless of TBI severity the return to work rate for different Veteran and civilian populations has varied widely between 12 and 87 1/2 percent. So, in our study we were interested in characterizing employment status at the time of the TBI evaluation and three years later in an OEF, OAR, OMD Veteran cohort and examining which factors were associated with employment status three years later.

The participants were pulled from two HSR&D IIR’s that sampled from the same population of OEF, OIF, OMD Veterans who completed a VHA comprehensive TBI evaluation. The study samples were independent so we could easily pull them together. The TBI evaluation was used as the gold standard for determining deployment related TBI history. We consulted VA administrative data to identify common comorbidities like PTSD, depression, anxiety and substance use disorders. As well as VHA service use with special attention to various VHA vocational rehabilitation programs such as support employment and transitional work in vocational assistance. We also identified demographic and military characteristics. Our final sample included almost fourteen thousand five hundred Veterans who after approximately three years following their TBI evaluation were mailed an invitation to complete either a web or paper based survey and the outcome of interest was employment status.

So now on to the results. Of the two thousand five hundred sixty-eight Veterans who responded to the survey, which is about 18 percent, two thousand one hundred eighty-eight had data from employment status at both time periods.

First, I want to present a primary venerable with interest. So, on the X axis is employment status at the time of the TBI evaluation and on the Y axis is employment status at the three-year survey. So, we can see with the blue bar that about 75 percent of those who were employed or were students at the TBI evaluation have that same employed or student status three years later. Seven-point eight percent became unemployed but were looking for work and 17.7 percent became unemployed and were not looking for work three years later. For those who were unemployed but looking for work at the time of the TBI evaluation, three years later looking at the blue bar, nearly half of them became employed or students, 14.8 percent have the same status of being unemployed and looking for work but 37.9 percent shifted into being unemployed and were no longer looking for work at that time.

Finally, for those who were unemployed and not looking for work at the time of the TBI evaluation, slightly more than 20 percent became employed or students, 7.9 percent were unemployed but now looking for work but the majority, 70 percent, had the same status as being unemployed and not looking for work three years later.

So, shifting to demographic health and other characteristics of the sample, we see that respondents were predominately male and nearly 90 percent, two-thirds were white and on average they were thirty-seven and a half years old. Notice they completed at least some college with one quarter completing four years. On average, they had separated from the military six point six years prior to completing the survey. And the time between their TBI evaluation and survey was three point one years. About 20 percent were determined to not have any deployment related TBI history while two thirds had mild TBI history and 15.1 percent had moderate or severe TBI history. Around 75 percent had a PTSD diagnosis, nearly one half had depression and about one quarter had anxiety, 15 percent and 7.6 percent had alcohol and drug abuse problems respectively documented in their medical records. The average service connection disability rating was 69.2 percent and combined VHA locational rehabilitation utilization averaged less than one visit across the sample during the three-year period.

So, I know this table is busy and I am not going to review all the data but I wanted to highlight that when stratified by employment status at the time of the three-year follow-up, we can see a number of difference between the employment status groups. So, those who were unemployed, either looking or not looking for work, were less likely to be white and those who were unemployed and not looking for work were generally older, had completed less education, had separated from the military longer ago, had completed their TBI evaluation slightly more recently. For both of the unemployed groups, those who were either looking or not looking for work, they had similar levels of TBI severity history and were more likely to have experienced moderate or severe TBI than those who were employed or students. The unemployed, not looking for work group, had a higher rate of PTSD and depression compared to the other groups. But both unemployed groups had similar levels of anxiety and substance abuse.

So, as would be expected, based on these health conditions, the unemployed not looking for work group had a higher service connected disability rating with an average of 82.7 percent and looking for work group, used VHA locational rehabilitation services the most even though there is an average of less than one visit during the three-year period. But as you can see these data had a lot of variability.

So, taking all of this into account, we used multi nonlinear regression to model employment status at the three-year follow-up. While simultaneously adjusting for Veteran characteristics of interest, the reference group was those who were employed or students. So, compared to those who were employed or students, those who were unemployed and looking for work had an increased odds of being non-white compared to white, of being unemployed looking or not looking for work, compared to being employed or students at the time of the TBI evaluation, and of having deployment related moderate or severe TBI or mild TBI history than no TBI history. Compared to those who were employed or students, those who were unemployed and not looking for work had increased odds of being older, being separated from the military longer, being unemployed looking or not looking for work at the time of the TBI evaluation, having deployment related moderate or severe or mild TBI compared to no TBI history. And here where we see differences compared to the other unemployed group, they also had higher odds of having PTSD, anxiety and alcohol abuse documented in their VA medical records.

In conclusion, the main takeaways are that employment status at the time of the TBI evaluation was strongly associated with employment status three years later. This was evident and especially concerning for those who were unemployed and not looking for work as 70 percent of those with that status at time one also had that status at time two. Older Veterans with lower education, TBI, PTSD, anxiety and alcohol abuse appeared to be at elevated risk of being unemployed and not looking for work. Despite the high rate of unemployment, the use of VHA vocational rehabilitation services was strikingly underutilized. Why this is the case, requires further investigation but some reasons may be that clinicians are not aware of VA vocational rehabilitation options and therefore are making referrals, Veterans just may not be interested in these types of service or there may not be enough vocational rehabilitation services available at a particular medical center and therefore this population may not be prioritized for referral. But, none the less, for those with these characteristics associated with unemployment, the TBI clinic may be an opportune time to discuss employment concerns and possible referral to vocational rehabilitation services, whether in the VA or to local or state agencies. These services have the potential to improve employment outcomes for these Veterans who are in their thirties who appear to be at risk for chronic unemployment. So, in terms of limitations, although we had more than twenty-five respondents, that only accounted for 18 percent of the response. In addition, participants were VHA users only and taken together our findings may not be representative of OEF, OIF, OMD Veterans with or without TBI. And finally, we only studied two points in time and since a lot can happen over a three-year period, we don’t know how stable employment status was during those two-time frames.

In terms of future directions, just briefly, we are currently in the just in time process for a HSR&D IIR that will identify Veterans with TBI that have employment struggles and enroll them in supported employment, which is in evidence based vocational rehabilitation program using VHA that focuses on integrating employment and clinical teams so that they can work together to develop strategies and provide support so that the Veteran can be successful in the work place. In other clinical populations, such as severe mental illness, PTSD, spinal cord injury so far employment has been effective in helping individuals with impairment find and maintain competitive employment and we are very much looking forward to seeing how well it works for Veterans with TBI.

Finally, thank you to my co-investigators some of who are here today and also many thanks to my Veterans who responded to our survey. Thanks

[Applause]

Speaker: Questions?

Unidentified Female: Great presentation. So, the folks of \_\_\_\_\_ [00:13:28] TBI have a consistent problem VA and non-VA about employment. I think an even bigger challenge is those who are service connected, you know, there may be challenges around not feeling like they need to go back to work or feeling if they do go back to work, they will lose their disability but not being employed also or not having meaning, those are also risk factors for lots of bad things. Thoughts about how we deal with that dilemma?

Terri Pogoda: So, I’ve had lots of thoughts about this, I don’t know how to deal with this dilemma. We’ve, separate from this research, brought Veterans in who were unemployed and had TBI, who have had employment struggles and at least with the Veterans who volunteered for that study, they want to work. We are finding that a lot of Veterans, not just Veterans, a lot of people want to work especially if they are in their twenties and thirties. They don’t want to be characterized as someone who has a disability, they want their role in society too as someone who makes a contribution. There is the issue that you are describing. If you are service connected, I think there is a risk of losing something if there is employment. I am not sure how to deal with that.

Unidentified Female: Me neither.

Terri Pogoda: If there are other people in the room who have dealt with this, I would love to hear it.

Brian Shiner: Terri, my name is Brian Shiner and I am from the VA in White River Junction, Vermont. I just wondered if you could specify for me a little bit more about this risk of loss of payment if you go back to work because I hear a lot about it and it is not quite clear to me. Everybody is always taking about it and it is not clear what the risk is and how is risk is operationalized and kind of how to fix is not clear because it is not quite clear on what we are dealing with.

Terri Pogoda: I wish I had a better handle on the VHA versus the VVA side of things. What I can say about this is the VHA vocational rehabilitation programs are covered under the compensated work therapy umbrella that includes supporting employment transitional work. Participation in those programs is basically risk free so if you are enrolled in supported employments which means that you are successful, support employment experiences that you work closely with your employment specialists. You find community based work that is consistent with your skills and what you want to do and your schedule and with help from your vocational rehabilitation specialist and your clinical team, with the support of employer, you eventually gain independence. You gain independence to the point that you no longer need to be enrolled and supported employments, that’s the point where, I am not sure what happens on the VVA side, my understanding is with SSDI that for every dollar that you make over certain amounts that counts against your SSDI payments but I am not 100 percent sure about that. And there may be a similar mechanism with the VVA side of things. But again, I just don’t have a handle on that.

Unidentified Female: I think there is both perceived and Veterans are concerned and then there are some Veterans who are reevaluated over time and at the reevaluation that is when someone could hypothetically be at risk but I think there is a lot of not knowing which creates even more challenges. Especially among Veterans.

Terri Pogoda: Yeah and also part of the support employment program is that they have a benefits councilor there to help to explain this.

Speaker: So, one last question.

Libby Dismuke: Libby Dismuke from the Charleston VA. I was wondering if you had looked at the use of GI Bill benefits and if not, if you think that might be useful to look at for any kind of retraining that might be useful.

Terri Pogoda: Yeah, so that gets onto the VVA side of things so for this particular study, we did not look into the GI bill. For another study that was headed by Kathline Carlson, I believe that there was a question in the survey that asked about use of the GI bill but I haven’t examined that data yet.