

This Photo by Unknown Author is licensed under CC BY.

October 31, 2018

Shane W. Kraus, Ph.D.
Steven D. Shirk, Ph.D.
Tu A. Ngo, Ph.D. MPH.
Kendra Pugh, M.A.
Katarina Bernice, B.S.P.S,
Marc N. Potenza, M.D., Ph.D.





Table of Contents

Authorship	3
Acknowledgements	4
Executive Summary	5
Background	7
Methods	9
Key Findings	10
References	17
Appendices	19



Authorship

Shane W. Kraus, Ph.D., Principal Investigator. Dr. Kraus is the Director of the outpatient Behavioral Addictions Clinic at the Edith Nourse Rogers Memorial Veterans Hospital in Bedford, Massachusetts. He is also a Research Investigator with VISN 1 New England Mental Illness Research, Education, and Clinical Center (MIRECC) as well as an Assistant Professor of Psychiatry at the University of Massachusetts Medical School.

Steven D. Shirk, Ph.D., Co-Investigator. Dr. Shirk is a Research Investigator with VISN 1 New England MIRECC at the Edith Nourse Rogers Memorial Veterans Hospital and an Assistant Professor of Psychiatry at the University of Massachusetts Medical School.

Tu A. Ngo, Ph.D. MPH, Co-Investigator. Dr. Ngo is the Co-Director of the Primary Care Behavioral Health program in the primary care clinic at the Edith Nourse Rogers Memorial Veterans Hospital.

Kendra Pugh, **M.A.**, **Study Coordinator**. Ms. Kendra Pugh is a Health Science Specialist with VISN 1 New England MIRECC at the Edith Nourse Rogers Memorial Veterans Hospital.

Katarina Bernice, **B.S.P.S.**, **Research Coordinator**. Ms. Bernice is a Research Coordinator for VISN 1 New England MIRECC at the Edith Nourse Rogers Memorial Veterans Hospital.

Marc N. Potenza, M.D., Ph.D., Consultant. Dr. Potenza is a board-certified psychiatrist with sub-specialty training and certification in addiction psychiatry. He is a Professor of Psychiatry, Child Study and Neurobiology, as well as the Director of the Problem Gambling Clinic and the Center of Excellence in Gambling Research at Yale University in Connecticut.

About the VISN 1 New England Mental Illness Research, Education, and Clinical Center (VISN 1 New England MIRECC)

The VISN 1 New England Mental Illness Research, Education, and Clinical Center (VISN 1 New England MIRECC) was established in 1997 and has two locations: (1) VA Connecticut Healthcare System—West Haven Campus; and (2) Edith Nourse Rogers Memorial Veterans Hospital in Bedford, Massachusetts. The mission of the VISN 1 New England MIRECC is to improve mental health treatments and access to services for dually diagnosed Veterans who have mental health and addiction issues. The center's work focuses on Veterans with co-occurring addictions and mental illnesses as well as related issues such as VA-compensated disabilities, homelessness, criminal justice histories, and medical co-morbidities. We aim to: (1) better understand the prevalence and consequences of co-occurring addictions and mental illness; (2) improve the treatment of dually-diagnosed Veterans by developing innovative new treatments; (3) devise more effective ways to deliver established treatments; and (4) create more effective programs by training VA health care professionals in therapies with proven efficacy.

Acknowledgements

Support for this study came from the Massachusetts Gaming Commission under BD-17-1068-1068C-1068L-13699 establishing one-year funding for the Study of Gambling Behavior among Special Populations in Massachusetts. This project was competitively bid via the Massachusetts Gaming Commission Request for Response (MGC-RPG-2017) in April 2017. The project has the support of the VISN 1 New England MIRECC and Dr. Charles Drebing, PhD, the Mental Health Service Line Manager for the Edith Nourse Rogers Memorial Veterans Hospital. An additional thank you is expressed to Dr. Patricia Sweeney, PsyD, for her feedback on the drafting of this report. We are especially grateful to Mr. Mark Vander Linden, MSW, Director of Research and Responsible Gaming at the Massachusetts Gaming Commission, and Marlene Warner, Executive Director for the Massachusetts Council on Compulsive Gambling for their support of this project highlighting gambling disorder among U.S. Veterans.

Executive Summary

- This report summarizes findings from a pilot study initially designed to assess the
 utility and feasibility of using the Brief Biosocial Gambling Screen (BBGS) for
 detecting gambling disorder among Veteran patients seeking mental health
 treatment services in a primary care medical setting at the Edith Nourse Rogers
 Memorial Veterans Hospital (Bedford VAMC) in Bedford, Massachusetts.
- Two hundred-sixty Veterans were assessed for gambling behaviors between November 1, 2017 and September 15, 2018 in the Bedford VAMC Primary Care Behavioral Health clinic where Veterans were generally seen for depression and anxiety-related problems. Eighty-five Veterans (32.7%) reported gambling behaviors within the past 12 months. The most common gambling behaviors were traditional lottery (25%), instant lottery (scratch tickets) (31%), and playing cards (10%). No significant differences were found between Veteran gamblers and nongamblers on demographics, medical, or mental health co-morbidities collected in the study.
- Out of the 85 past-year gamblers, five Veterans (5.9%) screened positive on the Brief Biosocial Gambling Screen (BBGS) and endorsed problems associated with gambling. Three of the five Veterans met full DSM-5 criteria for gambling disorder. Across the 260 Veterans screened in this study, the estimated prevalence of problem gambling was 1.9%.
- The Veterans with gambling disorder were white men with reported histories of anxiety, depression, or post-traumatic stress disorder (PTSD). In addition, all three Veteran problem gamblers were experiencing issues with current suicidal ideation. These results suggest that problem gambling has profound negative effects on Veterans.
- Given the apparent association between gambling disorder and suicidality in this study, there is a need for further research to better understand this association and develop improved strategies for increasing self-disclosure of problem gambling among Veterans, particularly because they may also be at risk for suicide.
- We recommend that future research employ a mixed-method design that uses focus groups to identify barriers to Veterans seeking help, particularly among Veterans

and active duty personnel who are concerned about disclosure of problem gambling-related issues. Additionally, we recommend that future research use a focus group approach to interview VA health care providers, Veterans, and their family members to identify strategies for increasing Veterans' engagement with problem gambling treatment who need it. Specifically, results from this study suggest that self-disclosure of problem gambling among Veterans, as well as outreach efforts by VA health care providers, could serve to increase Veterans' participation in treatment services for problem gambling.

Additional research is required to determine how best to screen for gambling
problems among Veterans, particularly when screening in primary care settings.
The use of surveys and focus groups among Veterans and health care providers
could help elucidate gaps in current screening approaches, inform the development
of improved screening instruments, and promote better health care services for
Veterans.

Background

Gambling disorder is characterized by recurrent, maladaptive patterns of gambling behavior which frequently lead to significant distress and dysfunction in one's life [1]. The full diagnostic criteria for gambling disorder are listed in the 2013 Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) and the criteria are presented in the table in Appendix A. The estimated lifetime prevalence of gambling disorder among U.S. adults range from 0.4% to 1.6% [2-5], and between 1-4% for problem gambling (subthreshold form of gambling disorder) [6, 7]. One subset of problem gamblers often overlooked by researchers is U.S. military Veterans. Estimated rates suggest that the lifetime prevalence rate of gambling disorder in U.S. military Veterans is 2%, while the lifetime rate of problem gambling can be as high as 11% [8-10]. Data from several studies suggest that problem gambling is associated with a host of negative mental health and substance abuse problems, including suicidality and financial and legal problems [4, 11, 12]. Although many Veterans use VA health care services for assistance with their mental health and medical issues, few who are problem gamblers also seek professional help for their gambling issues despite experiencing significant problems attributed to gambling disorder. Additionally, few VA patients are screened for gambling-related issues during routine medical care appointments despite evidence that gambling disorder affects many U.S. military Veterans [13]. One strategy for potentially increasing Veterans' engagement into treatment for gambling disorder is to first identify Veterans with the problem by conducting more screening efforts across VA primary care settings since primary care often serves as the main gatekeeper for millions of Americans seeking mental health care services [14].

A recent study surveyed 3157 Veterans and examined associations between gambling behaviors and psychopathology. Results revealed that 35.1% of Veterans surveyed reported past-year recreational gambling and 2.2% (n=57) screened positive for atrisk/problem gambling. In addition, researchers found that at-risk/problem gambling was significantly associated with greater prevalence of substance use, anxiety and depressive disorders, physical and sexual trauma, history of receiving mental health treatment (particularly from VA health care services), and ethnic minority status [15]. Currently, there is a growing need to develop and refine screening practices across the VA health care system to identify and correctly diagnose Veterans with gambling-related problems and ensure that they obtain access to appropriate treatment services. A widely accepted screening tool for gambling disorder is the Brief Biosocial Gambling

Screen (BBGS), which is a three-item questionnaire that measures past 12-month features of problematic gambling and can be administered in less than one minute. The brevity makes the BBGS advantageous for use in a busy primary care setting.

The current study is the first to seek validation of the BBGS among a sample of treatment-seeking mental health VA patients. We selected the Bedford VAMC Primary Care Behavioral Health clinic because it serves over 900 Veterans per year and is a critical gatekeeper for many VA patients accessing mental health treatment services, often for the first time. We worked with the Primary Care Behavioral Health clinic to add the BBGS to the clinic's routine intake which is currently being used to detect problem gambling in Veterans being served by the clinic.

Primary Aims:

Aim 1: To determine the rate of Veterans who meet full or subthreshold DSM-5 criteria for gambling disorder and its co-occurrence with other medical and mental health problems.

Aim 2: To evaluate the reliability and validity of the Brief Biosocial Gambling Screen (BBGS) to detect gambling disorder among Veterans receiving services in a VA Primary Care Behavioral Health clinic.

Hypotheses:

H1: We expected that Veterans with gambling disorder (including subthreshold) would have higher rates of psychiatric disorders and medical conditions compared to Veterans without gambling disorder.

H2: We expected that the BBGS would have excellent psychometric properties as evidenced by high internal consistency (α >0.90) and high sensitivity and specificity (>95%) at detecting problem gambling among Veterans.

Identifying Problem Gambling

Given the negative consequences associated with problem gambling, multiple brief questionnaires (five items or less) have been developed to aid clinicians in detecting symptom severity and identifying individuals with, or at risk of developing, problem

gambling (e.g., the Lie/Bet Questionnaire [16]; the National Opinion Research Center DSM Screen for Gambling Problems Control, Lying and Preoccupation [6]; and the Brief Biosocial Gambling Screen [17]). Although there are several psychometrically sound brief screeners for problem gambling, we chose to assess the utility of the Brief Biosocial Gambling Screen (BBGS) for detecting problem gambling among Veterans due to its brevity and established psychometric properties.

1. Methods

Type of Study

Problem gambling is currently being assessed in the Bedford VAMC Primary Care Behavioral Health clinic as part of a one-hour clinical interview being completed with all Veterans referred for health care services. Variables were collected as part of the intake procedure. See Appendix B. Data for the current study was retrospectively pulled from the Veterans' electronic medical records.

Study-Related Procedures

We used the BBGS to assess for past 12-month problem gambling in Veterans being seen in the Bedford VAMC Primary Care Behavioral Health (PCBH) clinic for the first time. If a Veteran screened positive for problem gambling on the BBGS (endorsement of any of the three items), then the DSM-5 questionnaire was administered to assess for gambling disorder [1].

Although we had initially proposed to randomly screen 15-20% of Veterans who screened negative on the BBGS to determine the sensitivity and specificity of the BBGS, we were not able to do this as planned due to time constraints. Specifically, over the course of the grant, PCBH appointments were shifted from one hour to 30 minutes for most intakes which impacted the consistency to which providers screened Veterans for problem gambling. However, the current study was successfully able to screen 260 Veterans for problem gambling in primary care. All screening for problem gambling occurred in the Bedford VAMC PCBH clinic. This procedure ensured that Veterans were screened for problem gambling and could receive same-day access to care in PCBH or have an appointment made with the Bedford VAMC outpatient Behavioral Addictions Clinic for follow-up care.

Data Collection and Study Participants

From November 1, 2017 through September 15, 2018, we reviewed 260 electronic medical records for all Veterans seen in PCBH. Specifically, data were aggregated from the medical record's clinical notes that were pertinent to the PCBH intake appointment. Only notes specific to the PCBH intake screening appointment, including scored questionnaires, were reviewed and entered into a data set. Study data obtained from electronic medical record reviews were entered into a password-protected database and stored on a VA shared drive under VA security measures.

Analysis Plan

Using SPSS-23 [18], descriptive statistics were conducted to evaluate sociodemographic and clinical characteristics of the sample. We conducted Wald tests (for categorical variables) and mean comparisons (for continuous variables) to assess bivariate associations between problem gambling and sociodemographic and clinical characteristics of the sample. We employed two-tailed tests and set the overall alpha level to 0.05 for all primary hypotheses.

Inclusion/Exclusion Criteria

All participants were new VA patients attending their first initial appointment in the Bedford VAMC PCBH clinic. All PCBH intake appointments were reviewed during the 7-month retrospective chart review.

2. Key Findings

Results

Sample Characteristics

Over the course of the study, 260 Veterans were screened with the BBGS. Most were male (88.9%), Caucasian/white (84.6%), married (52.5%), working full or part-time (51.9%), middle-aged (mean age=53.7 years, SD=17.7), and from the Operation Iraqi Freedom/Operation Enduring Freedom (OIF/OEF) (51.4%) or Vietnam (33.6%) era conflicts. Many Veterans (60.6%) screened were service-connected for a physical and/or mental health disability. The majority attended the PCBH intake appointment for mental health reasons (96.5%).

Sample Gambling Behaviors

We first examined the frequency of past-year gambling among Veterans. Specifically, we found that 85 (32.7%) out of the 260 Veterans reported past-year gambling within the last 12 months. As shown in Table 1, we found that the most common gambling behaviors consisted of gambling on the traditional lottery (25.3%), instant lottery (scratch tickets) (31.3%), or card games (9.6%).

Table 1. Gambling Behavior among Vetera	<u>n Gamblers</u>
Gambling Type	N (%)
Traditional lottery	21 (25.3%)
Instant lottery (scratch tickets)	26 (31.3%)
Card gambling	8 (9.6%)
Slot machines	3 (3.6%)
Keno	4 (4.8%)
Casino	7 (8.4%)
Horse races	1 (1.2%)
Sports betting	1 (1.2%)
Online	2 (2.4%)
Unknown	10 (12.1%)
Note: Values based upon available data. N	=54 due to missing data

Past research of non-Veterans suggests that past-year gamblers may have higher rates of mental health problems compared to non-gamblers [19]. Thus, we examined differences between the Veteran past-year gamblers and the Veteran non-gamblers on sociodemographic characteristics (Table 2) and psychiatric, medical, and substance use diagnoses (Table 3). Overall, we found no significant differences among the Veterans between past-year gamblers and non-gamblers in terms of sociodemographic characteristics and medical and mental health conditions. Across the groups, we found that Veterans mostly sought treatment in PCBH for issues related to depression, generalized anxiety disorder, and PTSD.

Table 2. Compariso	n of Demographics: Nor	n-gamblers vs. Gambler	<u>s</u>
<u>Demographics</u>		$\frac{\text{Non-gamblers}}{(n=175)}$	<u>Gamblers</u> (<i>n</i> =85)
		N (%) / M (SD)	N (%) / M (SD)
Age		52.4 (18.3)	52.9 (16.8)
Gender	Female	22 (12.6%)	7 (8.2%)
	Male	153 (87.4%)	78 (91.8%)
Race	White	150 (85.7%)	70 (82.4%)
	Black	6 (3.43%)	5 (5.9%)
	Other	19 (10.9%)	10 (11.8%)
Employment	Currently Employed	84 (48.6%)	50 (58.8%)
Status	Retired	53 (30.6%)	19 (22.4%)
	Unemployed	22 (12.7%)	12 (14.1%)
Marital Status	Married	96 (55.2%)	40 (47.1%)
	Formerly Married	3 (1.7%)	2 (2.4%)
	Widowed	1 (0.6%)	4 (4.7%)
	Never Married	74 (42.5%)	39 (45.9%)
Homeless	Current	4 (2.3%)	1 (1.2%)
	Life-time	10 (5.8%)	3 (3.5%)
Combat Veteran	Yes	59 (33.9%)	28 (32.9%)
Service Era	Korean	4 (2.3%)	2 (2.4%)
	Post-Korean	5 (2.9%)	1 (1.2%)
	Vietnam	58 (33.1%)	29 (34.1%)
	Post-Vietnam	17 (9.7%)	10 (11.8%)
	Persian Gulf /OEF/OIF	90 (51.7%)	43 (50.6%)
Note: Values based	upon available data. So	me missing data.	

Table 3. Comparison of Psychiatric, Med	ical, and Substance Use I	Diagnosis: Non-
gamblers vs. Gamblers		
Diagnosis	Non-gamblers ($n=175$)	Gamblers $(n=85)$
	N (%) / M (SD)	N (%) / M (SD)
Major Depression	70 (40.2%)	31 (36.5%)
Mood Disorder	2 (1.1%)	1 (1.2%)
Generalized Anxiety Disorder	43 (24.7%)	31 (36.5%)
Panic Disorder	2 (1.2%)	0 (0.0%)
Bi-polar Disorder	1 (0.6%)	2 (2.4%)
Post-Traumatic Stress Disorder	59 (33.7%)	22 (25.9%)
Adjustment Disorder	8 (4.6%)	3 (3.5%)
Schizophrenia	1 (0.6%)	0 (0.0%)
Attention Deficit Hyperactivity Disorder	7 (4.0%)	1 (1.2%)
Military Sexual Trauma	12 (7.1%)	3 (3.5%)
Suicide Ideation		
Thoughts	19 (10.9%)	15 (17.7%)
Plan	3 (1.7%)	1 (1.2%)
Insomnia	8 (4.6%)	5 (5.9%)
Traumatic Brain Injury	11 (6.3%)	2 (2.4%)
Chronic Pain	1 (0.6%)	2 (2.4%)
Sexually Transmitted Disease	5 (2.9%)	3 (3.5%)
Polysubstance	0 (0.0%)	1 (1.2%)
Nicotine Dependence	1 (0.6%)	2 (2.4%)
Alcohol Use Disorder	9 (5.1%)	8 (9.4%)
Cocaine Abuse	0 (0.0%)	1 (1.2%)
Cannabis Abuse	3 (1.7%)	1 (1.2%)
Stimulant Abuse	1 (0.6%)	0 (0.0%)
Opioid Abuse	1 (0.6%)	1 (1.2%)
Note: Values based upon available data.		

We also assessed the amount of money spent on gambling behaviors in the past year. Although 15 Veterans reported spending \$100 or more a month on gambling, interestingly, 11 of them did not endorse any of the three BBGS items. Among the

remaining four Veterans who spent \$100 or more per month on gambling, two Veterans endorsed one BBGS question, and two Veterans were not administered the screening tool. Of the 11 Veterans who did not endorse any of the BBGS items, it was striking that three of them reported high spending on gambling per month (\$1,000, \$1,440, and \$2,000). For the two Veterans who were not screened with the BBGS, one reported spending \$450 and the other reported spending \$1,600 in the past month. It is noteworthy that the 15 Veterans spent a substantial amount of money each month on gambling activities but most apparently did not see this as a problem. Similarly, it is surprising that the PCBH providers did not use the BBGS screener for two Veterans who both disclosed spending hundreds of dollars per month on gambling. These findings strongly suggest the need to better understand how gambling behaviors are discussed between clients and providers in health care service settings. Given the Veterans' gambling spending habits, we suspect that there was underreporting of problem gambling in our study sample.

Sample BBGS Screening Results

Next, we examined Veterans' endorsement on the BBGS which would be indicative of at-risk/problem gambling (Table 4).

Table	4. Item Endorsement on the Brief Biosocial Gambling Screen (BBGS) (N= <u>5)</u>
Item 1	During the past 12 months, have you become restless, irritable, or anxious when trying to stop/cut down on gambling?	4 Veterans
Item 2	During the past 12 months, have you tried to keep your family or friends from knowing how much you gambled?	2 Veterans
Item 3	During the past 12 months, did you have such financial trouble as a result of your gambling that you had to get help with living expenses from family, friends, or welfare?	2 Veterans

Out of the 260 Veterans who participated in the PCBH intake during our study, there were 85 Veterans who gambled in the past year. Of those 85, five Veterans (5.9%) endorsed at least one item on the BBGS and three of these five Veterans were later diagnosed with gambling disorder after further screening [1]. All three of the Veterans diagnosed with gambling disorder endorsed Item 1 on the BBGS, "During the past 12 months, have you become restless, irritable, or anxious when trying to stop/cut down on gambling?" All three also endorsed current symptoms associated with suicidal ideation (see Table 5). The prevalence of at-risk/problem gambling for the full sample of 260 Veterans is 1.9%. Since a small number of Veterans endorsed issues with

problem gambling on the BBGS, we were unable to examine the sensitivity and specificity of the questionnaire which we had initially intended for the study.

Table 5. Char	racteristics of the Three Veterans Who Met DSM-5 Criteria for Gambling
<u>Disorder</u>	
Veteran 1	 White male in his mid-50s Single, unmarried Post-Vietnam, non-combat Employed Has a history of psychiatric treatment (non-gambling) Endorsed suicidal ideation Met criteria for major depressive disorder Gambling preference: lottery BBGS Score = 3 DSM-5 Gambling Disorder = 6 symptoms, moderate Denied referral for specialty care for gambling
Veteran 2	 White male in his early 30s Married OEF/OIF, combat Veteran Employed No prior mental health treatment Endorsed suicidal ideation Met criteria for chronic pain, alcohol use disorder, major depressive disorder and PTSD Gambling preference: keno BBGS=2 DSM-5 Gambling Disorder = 6 symptoms, moderate Denied referral for specialty care for gambling
Veteran 3	 White male in his early 70s Single, unmarried Vietnam era, non-combat Retired No prior mental health treatment Endorsed suicidal ideation Met criteria for generalized anxiety and major depressive disorder Gambling preference: no specific type reported BBGS = 1 DSM-5 Gambling Disorder = 4, mild Denied referral for specialty care for gambling

Summary

In conclusion, our results found that approximately one-third of Veterans seeking mental health services in the Bedford VAMC Primary Care Behavioral Health clinic reported past-year gambling. This finding is consistent with prior research [15]. Among the past-year gamblers in our study, 5.9% of Veterans were considered to exhibit atrisk/problem gambling which is consistent with prior research [6, 7]. Across all study participants, we found a prevalence estimate for at-risk/problem gambling to be less than 2% which mirrors a recent study that found an estimate of 2.2% at-risk/problem gambling in a national study of 3157 U.S. Veterans [15]. Regardless of gambling status, the Veterans screened in this study reported issues of anxiety, depression, and PTSD. Given the low endorsement of gambling behaviors, including at-risk/problem gambling, we were unable to assess the reliability, specificity, and sensitivity of the BBGS. Future research is needed to identify the most effective screening methods to detect problem gambling among Veterans, particularly in a busy treatment setting such as PCBH. The current study also identified possible gaps in screening by VA providers. Future work is needed to identify the barriers around consistent screening for problem gambling among Veterans seeking mental health services within primary care.

Recommendations

Veterans with problem gambling may not disclose this problem nor seek help. More research within Massachusetts is needed to identify barriers regarding self-disclosure and help-seeking for this population, particularly given recent changes in the environment such as expansion of casino gambling in Massachusetts and legalization of sports gambling in the U.S. More research is needed to expand and refine screening approaches for identifying problem gambling among Veterans. This includes evaluating whether the BBGS is effective or if another screening instrument would increase self-disclosure of gambling problems by Veterans to health care providers. Researchers could use focus groups with Veterans, VA health care providers, and community members to help identify implementation challenges and strategies for engaging Veterans into VA health care services. Given the striking finding that all three Veterans identified with gambling disorder in this study had active suicidal ideation, it underscores the crucial need for further research to understand the relationship between problem gambling and suicidality. Lastly, more research is needed to understand what forms of treatment delivery (web-based vs. face-to face psychotherapy, pharmacology) may be most appealing and effective to treat Veterans with gambling disorder and other co-occurring health conditions.

References

- 1. Association, A. P. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (*DSM-5*®): American Psychiatric Pub.
- 2. Anokhin, A. P., Grant, J. D., Mulligan, R. C., & Heath, A. C. (2015). The genetics of impulsivity: evidence for the heritability of delay discounting. *Biol Psychiatry*, 77(10), 887-894. doi:10.1016/j.biopsych.2014.10.022
- 3. Hodgins, D. C., Stea, J. N., & Grant, J. E. (2011). Gambling disorders. *The Lancet*, *378*(9806), 1874-1884.
- 4. Petry, N. M., Stinson, F. S., & Grant, B. F. (2005). Comorbidity of DSM-IV Pathological Gambling and Other Psychiatric Disorders: Results From the National Epidemiologic Survey on Alcohol and Related Conditions. [CME]. *The Journal of clinical psychiatry*, 66(5), 1,478-574.
- 5. Shaffer, H. J., Hall, M. N., & Vander Bilt, J. (1999). Estimating the prevalence of disordered gambling behavior in the United States and Canada: a research synthesis. *Am J Public Health*, 89(9), 1369-1376.
- 6. Toce-Gerstein, M., Gerstein, D. R., & Volberg, R. A. (2009). The NODS–CLiP: A Rapid Screen for Adult Pathological and Problem Gambling. *Journal of Gambling Studies*, *25*(4), 541-555.
- 7. Welte, J. W., Barnes, G. M., Tidwell, M.-C. O., Hoffman, J. H., & Wieczorek, W. F. (2015). Gambling and problem gambling in the United States: Changes between 1999 and 2013. *Journal of Gambling Studies*, *31*(3), 695-715.
- 8. Steenbergh, T. A., Whelan, J. P., Meyers, A. W., Klesges, R. C., & DeBon, M. (2008). Gambling and health risk-taking behavior in a military sample. *Mil Med*, 173(5), 452-459.
- 9. Westermeyer, J., Canive, J., Thuras, P., Oakes, M., & Spring, M. (2013). Pathological and Problem Gambling among Veterans in Clinical Care: Prevalence, Demography, and Clinical Correlates. *The American Journal on Addictions*, *22*(3), 218-225.
- 10. Whiting, S. W., Potenza, M. N., Park, C. L., McKee, S. A., Mazure, C. M., & Hoff, R. A. (2016). Investigating Veterans' Pre-, Peri-, and Post-Deployment Experiences as Potential Risk Factors for Problem Gambling. *Journal of Behavioral Addictions*, 5(1), 1-2.

- 11. Edens, E. L., & Rosenheck, R. A. (2012). Rates and correlates of pathological gambling among VA mental health service users. *Journal of Gambling Studies*, 28(1), 1-11.
- 12. Pilver, C. E., Libby, D. J., Hoff, R. A., & Potenza, M. N. (2013). Problem gambling severity and the incidence of Axis I psychopathology among older adults in the general population. *Journal of Psychiatric Research*, *47*(4), 534-541.
- 13. Drebing, C. E., Mello, A., Penk, W., Krebs, C., Van Ormer, E. A., Peterson, R. L., & Federman, E. J. (2001). Clinical care of gambling disorders: Training, experience, and competence among VHA psychologists. *Journal of Gambling Studies*, *17*(2), 117-136.
- 14. Pirl, W. F., Beck, B., Safren, S. A., & Kim, H. (2001). A descriptive study of psychiatric consultations in a community primary care center. *Prim Care Companion J Clin Psychiatry*, *3*(5), 190-194.
- 15. Stefanovics, E. A., Potenza, M. N., & Pietrzak, R. H. (2017). Gambling in a National US Veteran Population: Prevalence, Socio-demographics, and Psychiatric Comorbidities. *Journal of Gambling Studies*, 1-22.
- 16. Johnson, E. E., Hamer, R., Nora, R. M., Tan, B., Eisenstein, N., & Engelhart, C. (1997). The Lie/Bet Questionnaire for screening pathological gamblers. *Psychol Rep*, 80(1), 83-88. doi:10.2466/pro.1997.80.1.83.
- 17. Gebauer, L., LaBrie, R., & Shaffer, H. J. (2010). Optimizing DSM-IV-TR classification accuracy: A brief biosocial screen for detecting current gambling disorders among gamblers in the general household population. *The Canadian Journal of Psychiatry*, *55*(2), 82-90.
- 18. SPSS, I. (2011). IBM SPSS statistics base 20. Chicago, IL: SPSS Inc.
- 19. Okunna, N. C., Rodriguez-Monguio, R., Smelson, D. A., & Volberg, R. A. (2016). An evaluation of substance abuse, mental health disorders, and gambling correlations: An opportunity for early public health interventions. *International Journal of Mental Health and Addiction*, *14*(4), 618-633.

Appendices

Appendix A

	DSM-5 Diagnostic Criteria for Gambling Disorder
Criterion A	Persistent and recurrent problematic gambling behavior leading to clinically significant impairment or distress, as indicated by the individual exhibiting four (or more) of the following in a twelve-month period:
	1. Needs to gamble with increasing amounts of money in order to achieve the desired excitement.
	2. Is restless or irritable when attempting to cut down or stop gambling.
	3. Has made repeated unsuccessful efforts to control, cut back, or stop gambling.
	4. Is often preoccupied with gambling (e.g., having persistent thoughts of reliving past gambling experiences, handicapping or planning the next venture, thinking of ways to get money with which to gamble).
	5. Often gambles when feeling distressed (e.g., helpless, guilty, anxious, depressed).
	6. After losing money gambling, often returns another day to get even ("chasing" one's losses).
	7. Lies to conceal the extent of involvement with gambling.
	8. Has jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling.
	9. Relies on others to provide money to relieve desperate financial situations caused by gambling.
Criterion B	The gambling behavior is not better explained by a manic episode.
Specifiers	<u>Episodic</u> : Meeting diagnostic criteria at more than one time point, with symptoms subsiding between periods of gambling disorder for at least several months.
	<u>Persistent</u> : Experiencing continuous symptoms, to meet diagnostic criteria for multiple years.
	<u>In early remission</u> : After full criteria for gambling disorder were previously met, none of the criteria for gambling disorder have been met for at least 3 months but for less than 12 months.

<u>In sustained remission</u>: After full criteria for gambling disorder were previously met, none of the criteria for gambling disorder have been met during a period of 12 months or longer.

Current Severity:

Mild: 4-5 criteria met

Moderate: 6-7 criteria met Severe: 8-9 criteria met

Appendix B

Bedford VAMC Primary Care Behavioral Health Clinic Intake

Name: |PATIENT NAME|

Preferred Name: Age: |PATIENT AGE|

GENDER: Do you identify as male, female or transgender?:

SEX: |PATIENT SEX| RACE: |PATIENT RACE|

PARTNERSHIP/MARITAL STATUS:

PROBLEM ASSESSMENT

Presenting problem: Problem history: Past treatment: Better/worse: Other problems:

FUNCTIONAL ASSESSMENT

Sleep:

Work/School: Relationships:

Have you been sexually active within the past six months/ever? With Men, Women, or Both?

What sexual concerns do you (or your partner) have?

Have you ever been tested for HIV/Would you like to be? How do you protect yourself from HIV?

Do you use anything to prevent pregnancy? Are you satisfied with that method?

Recreation/Physical:

Alcohol:

Tobacco:

Substances (including prescription):

Caffeine:

GAMBLING SCREEN (SHORT VERSION)

1. During the past 12 months, have you become restless irritable or anxious when trying to stop/cut down on gambling?

I don't gamble (skip Qs) / no / Yes (+ screen, but continue)

2. During the past 12 months, have you tried to keep your family or friends from knowing how much you gambled?

No / Yes (+ screen, but continue)

3. During the past 12 months did you have such financial trouble as a result of your gambling that you had to get help with living expenses from family, friends or welfare? No / Yes (+ screen, continue with follow-up questions)

GAMBLING SCREEN (LONG follow-up to Positive Screen)

Gambling History:

- Age when first aged?
- Most common type of gambling:
- Frequency of gambling including w/ money spent in the past month (year):
- How long has gambling been a problem?

_____Not a problem

_____ Months/Years

DSM-5 GAMBLING DISORDER CRITERIA

Persistent and recurrent problematic gambling behavior leading to clinically significant impairment or distress, as indicated by the individual exhibiting four (or more) of the following in a 12-month period:

1. Over the last year do you need to gamble with increasing amounts of money in order to achieve the desired excitement?

Yes / NO

2. Over the last year are you restless or irritable when attempting to cut down or stop gambling?

Yes / NO

3. Over the last year have you made repeated unsuccessful efforts to control, cut back, or stop gambling?

Yes / NO

4. Over the last year are you often preoccupied with gambling (eg, having persistent thoughts of reliving past gambling experiences, handicapping or planning the next venture, thinking of ways to get money with which to gamble)?

Yes / NO

5. Over the last year do you often gamble when feeling distressed (eg, helpless, guilty, anxious, depressed)?

Yes / NO

6. Over the last year after losing money gambling, do you often return another day to get even (i.e., "chasing" losses)?

Yes / NO

- 7. Over the last year do you lie to conceal the extent of involvement with gambling? Yes / NO
- 8. Over the last year have you jeopardized or lost a significant relationship, job, or educational or career opportunity because of gambling?

Yes / NO 9. Over the last year do you rely on others to provide money to relieve desperate financial situations caused by gambling? Yes / NO
Specify current severity: Mild: 4–5 criteria met. Moderate: 6–7 criteria met. Severe: 8–9 criteria met.
MENTAL STATUS EXAM
ORIENTATION AND CONSCIOUSNESS: APPEARANCE AND BEHAVIOR: SPEECH: AFFECT: THOUGHT PROCESS AND ASSOCIATION: THOUGHT CONTENT (delusions, obsessions etc.): INSIGHT: JUDGMENT: MEMORY: Safety/Risk Issues (ideation/lethality):
Strengths:
ASSESSMENT Summary/formulation:
DIAGNOSIS:
TREATMENT PLAN Patient's ideas to help:
Γreatment Recommendations:
Consults/Meds:
Initial Treatment Plan: Veteran was oriented to treatment available through PCBH and consented to brief psychotherapy for treatment of Next session is scheduled with this writer for at