A New Screening Procedure to Identify Co-Occurring Psychiatric and Substance Use Disorders

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May 6, 2018

Abstract

It is estimated that 24% of persons served by community mental health agencies have a co-occurring psychiatric and substance use disorder (COPSD). Up to 50% of persons with substance abuse have co-occurring post-traumatic stress disorder (co/PTSD). A failure remains in objectively identifying this population in everyday practice. At a community mental health agency serving rural East Texas, a new Screening-Into-Intake Procedure (SIIP) for adults initiating services was implemented using the Iowa Model for Evidence-Based Practice. Implemented in four stages, this SIIP incorporated both self- and observer-rated screening instruments to assist in identifying and provisionally diagnosing post-traumatic stress disorder (PTSD), COPSDs, and co/PTSD. Using the Chi-square test, an average rate of 21% true positive PTSD diagnoses were identified between the screening and diagnostic stages of the intake process. However, for an average of 25.5% of persons, PTSD diagnosis remained inconclusive and unidentified. Due to the limited sample size of data collected, most results regarding the COPSD and co/PTSD diagnoses were statistically insignificant. While the SIIP intervention raised agency awareness about assessing PTSD and COPSDs within its population, their identification remains elusive. Screener competency in SIIP use was identified as a primary factor in both SIIP effectiveness and disorder identification.

Keywords: co-occurring psychiatric and substance use disorder (COPSD), post-traumatic stress disorder (PTSD), measurement-based care, screening

Table of Contents

Co-Occurring Psychiatric and Substance Use Disorders 7

Literature Review 8

Project Framework 10

Project Purpose 12

PICO(T) Question 12

Objectives 13

Methods 13

Project Design, Setting 13

Target Population 14

Measurement Methods 15

Procedure 22

Statistical Analysis 25

Data collection 25

Data collection tools 29

Results 31

Sample Demographics 31

PTSD Identification Between Stages 32

COPSD and co/PTSD Identification Between Stages 35

Retrospective Comparison of PTSD New Diagnosis 37

Discussion 38

PTSD Identification 38

COPSD and co/PTSD Identification 43

Retrospective Comparison of PTSD New Diagnosis 45

Strengths, Opportunities 46

Limitations 47

Implications 50

Future Project Opportunities 50

Future Research Opportunities 54

Conclusion 54

References 56

Appendix A (regarding Preparation for SIIP Intervention) 65

Appendix A1, The Iowa Model of EBP 65

Appendix A2, Provisional Screening/Triage Form 66

Appendix B (regarding the Client Self-Assessment) 68

Appendix B1, Scoring of the Client Self-Assessment (CSA) 68

Appendix B2, Client Self-Assessment (CSA) 71

Appendix B3, Composition Breakdown of the CSA 75

Appendix B4, ACCESS Screening Tool 78

Appendix B5, URICA-M 79

Appendix C (regarding the Needs Assessment Screening) 81

Appendix C1, Needs Assessment Screening (NAS) 81

Appendix C2, Evaluating the Domains I-V of the Client Self-Assessment (CSA) 82

Appendix C3, Determination for Intake Assessment Referral 83

Appendix C4, Patient Health Questionnaire, 9-Question (PHQ-9) 84

Appendix C5, Mood Disorder Questionnaire (MDQ) 85

Appendix C6, PRIME Screening Tool 86

Appendix C7, PTSD Checklist, 6-Item (PCL-6)……..……....87

Appendix C8, Texas Christian University Drug Screen DSM-5 (TCUDS-5) 89

Appendix D (regarding Project Approval) 90

Appendix D1, GNRC Project Approval Letter 90

Appendix D2, ACCESS Project Approval Letter 92

Appendix E (regarding the Intake Process and Data Collection Tools)……..…….93

Appendix E1, Intake Process Flowsheet 93

Appendix E2, Worksheet Two: Screening 95

Appendix E3, Worksheet Three: Diagnosis..……..…….....97

Appendix E4, Worksheet One: ANALYTICAL DATA SET, Sociodemographic Data

…….,....99

Table(s) (regarding Data Analysis)……..……....101

Table 1, Psychometric Properties of the Client Self-Assessment Screening Tools..... 101

Table 2, Psychometric Properties of the Needs Assessment Screening Tools 102

Table 3, Demographics of Adults Entering the ACCESS Open Intake Process 103

Table 4, Chi-Squire Crosstabulation for PTSD Disorder 104

Table 5, Chi-Squire Crosstabulation for COPSD Disorder 105

Table 6, Chi-Squire Crosstabulation for co/PTSD Disorder 106

Table 7, Retrospective Chart Review for New PTSD Diagnosis 107

Table 8, Chi-Squire Crosstabulation of Retrospective New PTSD Diagnosis Data, 2016 and 2017……....107

Co-Occurring Psychiatric and Substance Use Disorders

One of the most vulnerable populations within the mental health care system are those with co-occurring post-traumatic stress disorder (PTSD) and substance use disorder: The co/PTSD population. It is estimated that just over three percent of the US population meets criteria for co-occurring psychiatric and substance use disorders (COPSDs) each year, approximately eight and a half million Americans (Guerrero, Padwa, Lengnick-Hall, Kong, & Perrigo, 2015; SAMSHA, 2008). The prevalence rate of substance use disorder in the US adult population ranges from nine to 16 percent, or 22 to 42 million people a year. Of these, it is estimated that 90 percent have had trauma exposure, and 20 to 50 percent of persons meet criteria for co-occurring post-traumatic stress disorder (co/PTSD): four and a half to 21 million people (Atkins, 2014; Berenz & Coffey, 2012; Guerrero et al., 2015; Hazelden, 2013; Nash et al., 2011).

Those with COPSD have a vulnerability towards self-harm and self-destruction, including higher hospitalization rates and suicide attempts (Atkins, 2014; Bryant-Davis, Ullman, Tsong, Tillman, & Smith, 2010; Najt, Fusar-Poli, & Brambilla, 2011; SAMSHA, 2008 and 2014). Persons with co-occurring disorder have a lower quality of life, worse physical health, and poorer treatment outcomes (Atkins, 2014; Berenz & Coffey, 2012; Nash et al., 2011; Prodromou, Kyritsi, & Evmorfia, 2014).

Confounding social health determinants for the COPSD population include: living in a rural community (rurality), having a low socioeconomic status (SES), and access-to-care barriers (USDHHS, 2011; McDonald, Curtis-Schaeffer, Thelier, & Howard, 2014; NAMI, 2011). Substance abuse and trauma exposure, combined with limitations to care caused by geographic

and socioeconomic factors, are mediating risk factors (Browne et al., 2015; McDonald et al., 2014; Patitz, Anderson, & Najavits, 2015; Walsh-Dotson et al., 2014).

The result is that individuals with COPSD experience significant health disparity and inequity. Public and government-funded safety-net agencies providing mental health care and substance abuse treatment must recognize COPSD, particularly co/PTSD, as an issue. Recognition begins with identification.

Literature Review

Co-occurring psychiatric and substance use disorders (COPSD) are prevalent, difficult to treat, and often unrecognized in community-based mental health care (Gotham, 2014; SAMHSA, 2011) The co/PTSD population is especially vulnerable (Hazelden, 2013; Nash et al., 2011), with PTSD often serving to mediate ongoing substance abuse (Subica et al., 2012). Although available, treatment options are often unaffordable and inaccessible for the COPSD population (Mancini & Wyrick-Waugh, 2013; SAMSHA, 2008), especially to those living in rural areas and having low socioeconomic status (Brown et al., 2015; Clark, Sprang, Freer, Whitt-Woosley, 2012; Walsh-Dotson et al., 2014). Improved recognition of co-occurring PTSD is needed.

Multiple challenges limit the identification of COPSDs in community mental health care.

- COPSD is more prevalent in populations seeking community mental health services (Gotham, 2014), especially in rural areas (McDonald et al., 2014).
- PTSD is prevalent, but often under-reported, under-treated, and unnoticed by community mental health centers (CMHCs) (Greene et al., 2016; SAMHSA, 2008; Tiet, Schutte, & Leyva, 2013; van Dam, Ehring, Vedel, & Emmelkamp, 2013).
- State-mandated requirements of public CMHCs do not recognize COPSD, PTSD, or substance abuse as priority diagnoses (SAMHSA, 2008).

- CMHCs often fail to recognize the prevalence of COPSDs, trauma exposure, and trauma responses within its service population (Bolin et al., 2015; Dillard, 2015; McDonald et al., 2014). Trauma exposure is high in the substance abuse population, particularly for adverse childhood events (ACEs) (DSHS, 2014; SAMHSA, 2014). As such, contact with and service to the COPSD population perpetuates an attitude of exception when encountered, as opposed to an attitude of expectation (Minkoff & Cline, 2004; SAMHSA, 2008).
- Rural CMHCs are financially constrained to offer integrated treatment services (HRSA, 2005; Larrison et al., 2011; SAMHSA 2008 and 2011).
- A division of mental health services and substance abuse services as separate entities remains. This results in a treatment network that is predominately fragmented, uncoordinated, and non-integrated (Guerrero et al., 2015; HRSA, 2005; Minkoff & Cline, 2004; SAMHSA, 2008).
- The overlapping nature of COPSDs makes differential diagnosis and specificity difficult (Hazelden Foundation, 2008). The entwined symptoms of COPSD may augment and/or resemble each other, while predisposing the development of one disorder by the other (SAMHSA, 2015).
- Because of the diversity and extent of inter-related issues represented by COPSDs, use of "effective and comprehensive screening and assessment procedures are of paramount importance" (SAMHSA, 2015, p. 18). This presents a challenge if an understanding of integrative COPSD identification and treatment is not in place.

Screening tools can improve COPSD identification through measurement-based care, using evidence-based practice. Within the context of brief intervention and treatment, screening

tools must be valid, standardized, and efficient to be effective for clinical practice (Wood & Gupta, 2017). Screening of the COPSD population must be comprehensive, multimodal, and pan-diagnostic to facilitate early identification, appropriate treatment matching, and timely care coordination (Boscarino et al., 2012; SAMHSA, 2011; SAMHSA, 2015; van Dam et al., 2013). There are many brief and efficient screening tools that can identify both COPSD and PTSD when utilized in clinical practice. Their efficacy is maximized within the context of treatment protocols and procedures (SAMHSA, 2015).

Project Framework

The Iowa Model of Evidence-Based Practice (IM) served as this project's framework (see Appendix A1 to view *The Iowa Model of EBP*). Evidence-based practice (EBP) incorporates critically appraised research, clinical expertise, and patient preferences for the purpose of improving patient care and outcomes in clinical practice (Doody & Doody, 2011). Described by Titler et al. (2001), the IM implements EBP by defining the problem, identifying agency priorities, unifying stakeholders to address the problem, developing a process for synthesizing evidence, executing a pilot study to implement change, and evaluating change effectiveness. It is an algorithm utilizing sequential process steps facilitated by three critical decision points. These evaluative decision points are strategic in their ability to stop the change process at crucial times, determining the feasibility of the next step in the process. A primary strength of the IM is that it provides practical application of EBP for those providing direct patient care (i.e. nurse practitioners).

The IM began by identifying a problem-focused trigger. In 2015, a primary issue arose affecting a local CMHC's care provision. There was a three-month waiting period between initial screening/triage of new clients and their diagnosis/intake assessment (B. Kennedy, personal

communication, October 26, 2015). The combination of treatment delay and a desire to better appropriate valued diagnosis/intake assessment slots necessitated the need for an intake procedural change and revision. In August 2015, the CMHC's licensed professional counselor (LPC) developed a pilot screening/triage form (see Appendix A2 to view the *Provisional Screening/Triage Form*). However, it was limited in scope and not used consistently, causing frustration to both staff and clients.

Using the IM, the first critical decision point is encountered (see Appendix A1). Is this problem-focused trigger an organizational priority? The answer determines if the change process proceeds. It is a necessary step serving as the catalyst for evaluating and gaining buy-in from agency stakeholders.

Revising and developing a new intake screening procedure for the COPSD population is currently an organizational priority. As of FY17, the CMHC is contractually obligated to "develop and implement written procedures to identify clients with COPSD" (System Agency Contract, 2016, p. 33). To address the delay in care access between initial screening and intake assessment, a new intake process was implemented in July 2017.

The next IM process step involves organizing a team. Three procedural needs served to organize a team under a common purpose: a) Implementing a Doctor of Nursing Practice (DNP) scholarly project, b) developing a COPSD procedure and c) revising the intake screening procedure. Therefore, the psychiatric nurse practitioner (PMHNP) assisted the Mobile Crisis Outreach Team (MCOT) Supervisor (in charge of developing the COPSD procedure) and the LPC (in charge of revising the intake procedure) by incorporating EBP and developing a screening procedure for the COPSD population. These three persons head the implementation and evaluation of this new procedure(s).

The third process step within the IM involves identifying and critically appraising evidence relevant to the clinical problem: Screening of the COPSD population. The PMHNP utilized three courses within her DNP program to identify research relevant to the needs of the COPSD population. An evidence appraisal course taught the PMHNP to critically appraise evidence pertaining to measurement-based screening and assessment of this population.

The second critical decision point within the IM involves determining if sufficient research exists to develop an EBP standard (see Appendix A1). In conjunction with DNP courses, four SAMHSA clinical practice guidelines were identified as relevant to COPSD population screening (SAMHSA, 2008; SAMHSA, 2011; SAMHSA, 2014; SAMHSA, 2015).

The Screening-Into-Intake-Procedure (SIIP), with details further discussed in the *Methods* section, represents the EBP change. A one-month pilot study conducted in July 2017 determined the SIIP's feasibility. A pilot study is viewed as an essential pre-requisite in the IM before implementing a practice change. After conducting and evaluating the piloted proposed change, the third (and final) IM decision point assessed if the change was appropriate for practice adoption. The SIIP was implemented, i.e. "went live," August 1, 2017. Data collection of SIIP objectives occurred from September 2017 through January 2018. Analysis of SIIP outcomes was evaluated in February 2018. Results obtained from the SIIP intervention will be disseminated beginning in May 2018.

Project Purpose

PICO(T) Question

In new adult clients initiating outpatient mental health services (P), does implementing a new open intake screening procedure (I), compared to the current screening process (C), affect the identification and provisional diagnosis of persons with PTSD and/or co-occurring disorders (COPSD) (O)?

Objective(s)

Within the context of instituting a new open intake screening procedure (the SIIP) to identify individuals with PTSD, COPSD, and/or Co-Occurring PTSD (co/PTSD), project objectives are to:

1) Evaluate the relationship between self-screening results obtained via the Client Self-Assessment (CSA) and validated screening results obtained via the Needs Assessment Screening (NAS).
2) To evaluate the relationship between self-screening results obtained via the Client Self-Assessment (CSA) and provisional diagnoses made in the intake assessment (IA) and psychiatric evaluation (PE).
3) To evaluate the relationship between validated screening results obtained via the Needs Assessment Screening (NAS) and provisional diagnosis made in the intake assessment (IA) and the psychiatric evaluation (PE).

Methods

Project Design

This scholarly project is a hybrid of both an EBP and a quality improvement (QI) project. Its effectiveness will be evaluated in two parts: (a) effectiveness of the new screening intake procedure to identify and diagnose clients with PTSD, COPSD, and/or co/PTSD, and (b) a retrospective chart review to compare interventional efficacy to the previous standard of care regarding diagnosis.

Setting

This SIIP intervention was conducted at a rural CMHC in East Texas. This CMHC is composed of two outpatient clinics that serve the Anderson and Cherokee Counties of Texas. Approximately 20 intake screenings were completed per week, ten (10) intake screenings per county, composed of potential child, adolescent, and adult clients.

Target Population

The new intake screening process was specific to adult clients seeking mental health services via open intake screenings at two CMHCs within the service area.

Sampling.

Selection of adult participants in this intervention occurred through non-probability sampling methods utilizing a convenience sample.

Inclusion/exclusion criteria.

Inclusion.

Adult clients, aged 18 or older, entering mental health services via the open intake process at either community clinic (Anderson or Cherokee County).

Exclusion.

- Persons initiating services while receiving long-term care.
- Persons already diagnosed with an intellectual developmental disability (IDD) with the expectation of receiving transitional care services.
- Persons with direct referral into the supportive outpatient treatment program for substance use.

Sample size.

One-hundred, fifty-one (n = 151) persons met inclusion criteria for SIIP data analysis. All adult persons completed an open intake screening between August 1 and December 1, 2017 and met inclusion criteria.

Power analysis.

Chi-square was the statistical test used for data analysis. As described by Keller and Kelvin (2012), Chi-square utilizes a four-cell, 2 x 2 design. For the purposes of this intervention,

the probability level was set at 0.05 using a two-sided test. Utilizing cross-tabulation by Chi-square, each cell should have an expected frequency of at least five (5) for results to be deemed statistically significant, therefore the sample size must be adequate. A sample size of at least 90 persons yields a power of 0.81. A power of 80% is generally accepted as adequate. Although this intervention's total sample size was 151 persons, the sample size available per variable assessed changed categorically (See *Results of Project Outcome* section for more information).

Response and attrition rate(s).

Per intake day, the number of adult open intake screenings completed during the 14-week data collection period varied according to the number of adult versus child/adolescent persons screened. Intake screenings were conducted on a first come, first-serve basis, and were limited to the arrival and sign-in of the first 10 persons for an intake day. The response rate of intake screenings consistently met (at least) 10 persons/per intake day. For a limited number of persons, the intake screening could not be completed the same day and the person returned at a subsequent intake screening day. If the person was deemed qualified for services after completing the intake screening portion of the intake process, the Intake Assessment was usually completed later that same day. Therefore, attrition between the intake screening portion and Intake Assessment portion was minimal.

Measurement Methods

Variables.

The purpose of instituting a new intake screening procedure was to (a) identify and categorize psychiatric symptoms of specific diagnoses, (b) recommend additional assessment to, (c) detect a specific diagnosis, and (d) determine qualification for treatment services. Depression, bipolar disorder, and schizophrenia are target diagnoses for our client population. Although the

presence of target diagnoses was assessed, the focus of this intervention remained on identifying and diagnosing PTSD, substance use, and/or the combination (COPSD).

The following is a description of the operational definitions of symptoms screened. The purpose of the SIIP was to identify the presence of:

- Depressive mood symptoms, that may be indicative of major depressive disorder (MDD);
- Mania symptoms, that may be indicative of bipolar disorder (BIP);
- Psychotic symptoms, that may be indicative of schizophrenia (SCHIZ);
- Traumatic stress response symptoms, that may be indicative of PTSD;
- Substance use, and the current level of use (SUD);
- Change motivation and treatment readiness (CMTR).

The sociodemographic variables of age, race/ethnicity, gender, health insurance status, and the city of residence were also gathered.

Measurement tools.

This SIIP intervention utilized multiple screening instruments applied in a staged process. The first stage involved the person's self-assessment of mental health service needs, disorder symptoms, and change motivation/treatment readiness using the Client Self-Assessment (CSA). The second stage involved additional screening by a Qualified Mental Health Professional (QMHP) for provisional identification of mental health disorders and substance use via the Needs Assessment Screening (NAS).

For each domain of the CSA regarding mental health symptoms, cut-off scores determined if further screening by the QMHP was needed. Each domain aligned with DSM-5 diagnostic criteria:

- Domain I screened for depression. A cut-off score of '2' or above indicates a positive screen that necessitates further QMHP screening via the Patient Health Questionnaire (PHQ-9).
- Domain II screened for bipolar disorder. A cut-off score of '9'or above indicates a positive screen that necessitates further QMHP screening via the Mood Disorder Questionnaire (MDQ).
- Domain III screened for schizophrenia. A cut-off score of '9' (each item answered at a 'moderate' level) indicates a positive screen that necessitates further QMHP screening via the Prevention through Risk Identification, Management, and Education early psychosis screening (PRIME).
- Domain IV screened for PTSD. A cut-off score of '9' (each item answered at a 'moderate' level) indicates a positive screen that necessitates further QMHP screening via the abbreviated version of the PTSD Checklist (PCL-6).
- Domain V screened for substance use. A cut-off score of '1' or above on any item indicates a positive screen that necessitates further QMHP screening via the Texas Christian University Drug Screen for DSM-5 (TCUDS-V).

A person not meeting cut-off score requirements for any domain could still be given consideration for QMHP screening of the disorder, at screener discretion. See Appendix B1 to view the *Scoring of Client Self-Assessment* for a visual representation of this process. The following is a discussion on the development of the Client Self-Assessment (CSA) screening tool.

Stage one: Client self-assessment tool.

The CSA tool was developed by the DNP psychiatric nurse practitioner student (DNPST) using the 'clinical expertise' and 'external evidence' elements of EBP. Inclusion of the CSA as a

self-report screening within the SIIP served two purposes: (a) early engagement of the person in his/her initial stages of treatment, and (b) early identification of client preferences. Considering typical symptomology for mental disorders, the DNPST was intentional in including screening questions on the CSA not used on the NAS. This was done to improve sensitivity and specificity of disorder identification based on observations made in clinical practice. The DNPST had extensive knowledge of commonly reported, but non-specific, symptoms that could be attributed to multiple disorders. This aspect contributes to disparate diagnosing between clinicians.

The CSA is a hybrid of the (a) ACCESS Screening tool, and modified versions of the (b) the PHQ, (c) the Mental Health Screening Form-III (MHSF-III), the (d) DSM-5 Adult Level-one Cross-Cutting Symptom Measure (L1CCM), (e) the Primary Care PTSD (PC-PTSD), and (f) the University of Rhode Island Change Assessment for Substance Abuse and Mental Health (URICA-M). See Appendix B2 to view a copy of the *Client Self-Assessment (CSA).* See Appendix B3 to view a copy of its composition breakdown of screening tool utilized per question. Utilizing Flesh-Kincaid grade level parameters, the CSA tool has about a sixth-grade reading level. See Table 1 to view the *Psychometric Properties of the Client Self-Assessment (CSA) Screening Tools.*

- The ACCESS Screening tool is a questionnaire that utilizes open-ended questions via a QMHP interview. It determines the presenting problem, current symptoms, and precipitating stressors or events. For the purposes of this intervention, the questions taken from the ACCESS Screening tool were included on page one of the CSA as a self-report. See Appendix B4 to view the current *ACCESS Screening Tool*.
- The PHQ-9 is a nine-item screening tool that assesses the diagnostic criteria for major depressive disorder and the presence of suicidal ideation. To fit the purposes of this

intervention, questions one, two, and nine were included on the CSA; the remaining questions were assessed via the NAS. The PHQ-9 was integrated into the SIIP to assist in meeting the state-mandated Behavioral Health Center Quality Measurement (BHCQM) metric, required as of July 1, 2017, for depression screening in CMHCs.

- The MHSF-III is an 18-item screening tool using yes/no questions to assess 13 psychiatric domains. The MHSF-III was modified to fit the purposes of this screening intervention. Only questions assessing previous mental health treatment (the first page of the Client Self-Assessment, questions ‘a’ to ‘d’), mania (domain II, question ‘a’), and psychosis (domain III, questions ‘a’ and ‘b’) were used.
- The L1CCM is 23-item screening instrument examining 13 psychiatric domains using a five-point Likert scale. The L1CCM was modified to fit the purposes of this screening intervention. Only questions assessing mania (domain II, questions ‘b’ and ‘c’), psychosis (domain III, question ‘c’), and substance use (domain V, questions ‘a’ through ‘c’) were used.
- The PC-PTSD is a four-item screening tool examining the traumatic stress symptoms of PTSD using a four-point Likert scale. The three-items included in this self-screen align with the adapted version of the PC-PTSD created by van Dam et al. (2010).
- The URICA-M is a 24-item, Likert scale questionnaire that assesses change motivation/ treatment readiness (CMTR). It was adapted from the full, 32-item version (URICA) for the COPSD population (SAMHSA, 2015). The URICA determines a ‘readiness score’ that can serve to predict treatment outcomes during the initial stages of treatment while monitoring progress throughout treatment (UMBC-HABITS, 2017). Discussed by SAMHSA (2015), the URICA-M utilizes Prochaska and DiClemente’s Stages of Change

model within four domains: Pre-contemplation, contemplation, preparation/ action, and maintenance. See Appendix B5 to view the *URICA-M*.

Stage two: Needs assessment screening tool.

The QMHP Needs Assessment Screening tool (NAS) is a hybrid of the (a) PHQ-9, (b) MDQ, (c) PRIME, (d) PCL-6, (e) TCUDS-5, and (f) URICA-M (for scoring). See Appendix C1 to view the *Needs Assessment Screening (NAS)* tool. The NAS was utilized by QMHPs to further assess the presence of symptoms related to depression, bipolar disorder, schizophrenia, PTSD, and substance use disorder, with the scoring of change motivation/treatment readiness (CMTR). Each specific disorder was further screened by the QMHP if there was an indication of the possibility of the disorder, i.e. a positive screening for the disorder via the Client Self-Assessment (see the above section describing scoring of the CSA tool). See Appendix C2 to view *Evaluating Domains I-V of the Client Self-Assessment (CSA).* See Appendix C3 *Determination for Intake Referral* for more information about how a QMHP determined if further, specific screening is warranted. See Table 2 to view the *Psychometric Properties of the Needs Assessment Screening (NAS) Screening Tools*.

- As previously described, the PHQ-9 is a nine-item screening tool that assesses the diagnostic criteria for major depressive disorder and the presence of suicidal ideation. See Appendix C4 to view the *PHQ-9*.
- The MDQ is a 13-item, yes/no questionnaire that assesses bipolar symptoms, symptom clusters, and functional impairment. See Appendix C5 to view the *MDQ*.
- The PRIME early psychosis screening test is a 12-item, Likert scale instrument based on the Structured Interview of Prodromal Symptoms (SIPS). The SIPS is used to diagnose schizophrenia and other psychotic disorders, identifying persons at clinically high risk for

psychosis development and first episode psychosis. See Appendix C6 to view the *PRIME Screening Tool*.

- The PCL is a six-item, Likert scale questionnaire (PCL-6) screening for the presence of PTSD. It was developed from recommendations made via Tiet et al. (2013) as an abbreviated screening tool based on the full-version PCL and adapted to new DSM-5 criteria (US Department of Veterans Affairs National Center for PTSD, 2016). A section inquiring about trauma exposure begins the PCL screening, as recommended by van Dam et al. (2013), to improve sensitivity. See Appendix C7 to view the *PCL-6*.
- The TCUDS-5 is a 17-item screening tool which assists in identifying the presence and severity of substance use disorder according to DSM-5 criteria. It was created for use in incarcerated populations and those seeking community mental health services in Texas (SAMHSA, 2015). For purposes of this intervention, and upon recommendations from the TCU Institute of Behavioral Research (2014a), the adapted, 11-item, yes/no screening portion of the tool was used. The TCUDS-V has good convergent validity with the Addiction Severity Index (ASI). The ASI is currently used by Chemical Dependency Counselors (LCDCs) to screen persons into substance abuse services. See Appendix C8 to view the *TCUDS-V*.
- As previously discussed, CMTR domains of the URICA correlate with Prochaska and DiClemente's Stages of Change model. The URICA is scored by the QMHP during screening by the NAS. See Appendix B5 to view the *URICA-M*.

Procedure

Pre-implementation phase: Initial project approval.

This DNP SIIP project proposal was reviewed and determined by the University of Texas at Arlington College of Nursing and Health Innovation Graduate Nursing Department Review Committee (GNRC) as not subject to the Health and Human Services regulations for the protection of human subjects in research (45 CFR part 46, 2009), nor required Institutional Review Board (IRB) approval. See Appendix D1 view the *GNRC Project Approval Letter*. See Appendix D2 to view the *ACCESS Project Approval Letter*.

Pilot phase, with staff education and SIIP training.

During Pilot Phase One, conducted from June until July 2017, those persons most directly involved in implementing the SIIP were trained to use the new SIIP. This included: LPCs conducting all intake assessments, QMHP screeners (two to four per clinic), the MCOT director, the medical records director, the clinic manager, and front desk personnel from both clinics (four persons in both clinics). Training was conducted via an electronic file format made available on an intranet public training drive. SIIP training consisted of a PowerPoint presentation with voiceover, approximately 25 minutes in length, available for viewing (and reviewing as needed) by stakeholders at their discretion. The focus of Piloting Phase One was to introduce and familiarize staff with the use of both SIIP screenings and the new intake process. SIIP screenings in this phase remained entirely paper-based.

Pilot Phase Two was conducted August 2017 through September 2017. This phase included conversion of QMHP paper-based screenings (the NAS, the additional NAS screening tools [PHQ-9, MDQ, PRIME, PCL-6, TCUDS-V], and the URICA-M) into an electronic file format compatible with the Anasazi EHR. The CSA remained paper-based for ease of

administration. The QMHP conducting the NAS inputted CSA client responses into each respective EHR screening. Electronic/EHR screenings have the ability to complete automatic scoring calculations to reduce calculation errors. The SIIP intervention went "live" upon completion of Pilot Phase One. This occurred on August 1, 2017.

New screening-into-intake procedure.

A person requested entrance into services by presenting for an open intake at one of two clinics. On two designated intake days, the first 10 persons requesting an open intake were allowed to participate in an intake screening. This determination was made on a first-come, first-served basis. Informed consent to participate in the SIIP intervention was implied by the person's willingness to participate in the intake screening process.

To be further outlined below, the SIIP intervention (by itself) is a two-phase, three-stage process. Please view Appendix E1 to view the *Intake Process Flowsheet*, a flowsheet outlining the complete intake process, including the SIIP intervention and referral for treatment, through a person's first-appointment attendance. From the a) self-assessment, to b) QMHP screening, to the c) LPC provisional diagnosis during the Intake Assessment, to the d) psychiatric nurse practitioner/psychiatrist provisional diagnosis during the psychiatric evaluation, initiation of services is a four-stage process.

Stage One: Client Self-Assessment.

The Screening Phase of the SIIP involved two stages. In Stage One, the person requesting services completed the CSA form, describing their reasons for wanting services and self-reporting symptomology (see *Client Self-Assessment* section for further discussion). Stage One is completed when the QMHP evaluated and scored the CSA form according to cut-off score criteria. The QMHP determined if the person met initial criteria for at least one of five diagnoses

and if further screening was needed to determine service eligibility. A person could be disqualified for services on the basis of his/her CSA answers. If the person did not meet initial criteria for services, he/she was referred to appropriate community resources according to intake process standards.

Stage Two: Needs Assessment Screening.

If further screening was warranted as prompted by the CSA, the person entered Stage Two: Completing the NAS (see *Needs Assessment Screening* section for further discussion). In Stage Two, the NAS was completed by a QMHP, usually a non-licensed staff member. The NAS was initiated based on the information provided via the CSA. If the person met cut-off score criteria for any of the five domains—depression, bipolar disorder, schizophrenia, PTSD, or substance use—the corresponding NAS domain was completed. If the client did not meet cut-off score criteria for a particular domain, and at the discretion of the QMHP, this domain was not further assessed.

Please see Appendix C2 to view the flowchart detailing the process for *Evaluating Domains I-V of Client Self-Assessment (CSA).* Recommendations were made by the QMHP as to whether or not the client should be referred for an Intake Assessment (IA) for provisional diagnosis and to initiate services. If screened out of services, he/she was referred to appropriate community resources. See Appendix C3 to view the flowchart detailing the process for completing the *Determination for Intake Assessment*.

Stage Three: Intake Assessment.

The Diagnosis Phase involved provisional diagnosis and referral for treatment services. If screened in for services, the person was then scheduled for an Intake Assessment (IA) with the Licensed Professional Counselor (LPC). The IA is Stage Three of the intake process. Licensed

personnel only conduct the IA, i.e. LPCs. There were 14 available IA slots per week, seven per county/per clinic. During the IA, the LPC completed the psychosocial needs assessment, verified and recorded the provisional diagnosis, initiated a treatment plan, and made treatment referrals to respective services based on client needs and preferences.

Statistical Analysis

Data collection.

The data collected align with the objectives of this SIIP intervention. The first objective was to evaluate the relationship between self-screening results obtained via the CSA and validated screening results obtained via the NAS regarding the diagnoses of PTSD, co-occurring disorders (COPSD), and co-occurring PTSD (CO/PTSD). See Appendix E2 to view *Worksheet Two: Screening* and how data was collected within the Excel *Spreadsheet for SIIP Data Collection*. Data needed to evaluate the impact of this stage of the SIIP intervention include:

1a. Recording the scores obtained, per respective disorder, via the a) client self-assessment determination (via the CSA) and b) QMHP assessment determination (via the NAS).

1b. On the basis of the recorded score, detecting and recording the number of positively and negatively identified screenings per each respective disorder, for the a) client self-assessment determination (via the CSA) and b) QMHP assessment determination (via the NAS).

1c. Comparing, to find agreement or disagreement with, the number of positively and negatively identified screenings, per respective disorder, between the a) client self-assessment determination (via the CSA) and b) QMHP assessment determination (via the NAS).

The second objective was to evaluate the relationship between self-screening results obtained via the Client Self-Assessment (CSA) and provisional diagnoses made in the intake assessment (IA) and psychiatric evaluation (PE) regarding the diagnoses of PTSD, co-occurring disorders (COPSD), and co-occurring PTSD (CO/PTSD). See Appendix E2 to view *Worksheet Two: Screening.* See Appendix E3 to view *Worksheet Three: Diagnosis* to view how data was collected within the Excel *Spreadsheet for SIIP Data Collection*. Data needed to evaluate the impact of this stage of the SIIP intervention include:

2a. Recording the scores obtained, per respective disorder, during the client self-assessment determination (via the CSA). Recording whether or not the person was provisionally diagnosed with the same respective disorder during the IA and/or PE.

2b. On the basis of the recorded CSA score, detecting and recording the number of positively and negatively identified screenings, per respective disorder. On the basis of provisional diagnosis during the IA and/or PE, detecting and recording the number of positively and negatively identified disorders.

2c. Comparing, to find agreement or disagreement with, the number of positively and negatively identified disorders between the a) client self-assessment determination (via the CSA) and b) the IA, or the c) PE.

The third objective was to evaluate the relationship between validated screening results obtained via the Needs Assessment Screening (NAS) and provisional diagnosis made in the intake assessment (IA) and the psychiatric evaluation (PE) regarding the diagnoses of PTSD, co-occurring disorders (COPSD), and co-occurring PTSD (CO/PTSD). See Appendix E2 to view *Worksheet Two: Screening.* See Appendix E3 to view *Worksheet Three: Diagnosis*, and how

data was collected within the Excel *Spreadsheet for SIIP Data Collection*. Data needed to evaluate the impact of this stage of the SIIP intervention include:

3a. Recording the scores obtained, per respective disorder, during the validated screening determination (via the NAS). Recording whether or not the person was provisionally diagnosed with the same respective disorder during the IA and/or PE.

3b. On the basis of the recorded NAS score, detecting and recording the number of positively and negatively identified screenings, per respective disorder. On the basis of provisional diagnosis during the IA and/or PE, detecting and recording the number of positively and negatively identified disorders.

3c. Comparing, to find agreement or disagreement with, the number of positively and negatively identified disorders between the a) validated screening determination (via the NAS) and b) the IA, or the c) PE.

Other data collected included sociodemographic variables for each potential client specific to a person's age, race, gender, health insurance status, the city of residence, and diagnosis. See Appendix E4 to view *Worksheet One: ANALYTICAL DATA SET, Sociodemographic Data*.

A retrospective chart review was conducted to compare August to December 2016 (pre-SIIP intervention) and August to December 2017 (post-SIIP intervention) data regarding new diagnosis of PTSD and COPSD. Unfortunately, the only available diagnostic data identified within the specified time period pertained to new diagnosis of PTSD. In 2016, COPSD data were not collected. Therefore, comparison of COPSD data between 2016 and 2017 is unattainable.

Data collection procedure.

The DNP psychiatric nurse practitioner student (DNPST) served as the sole data collector for this SIIP intervention. A data dictionary, defining and designating terms for all data collection fields, was included within the Excel *Spreadsheet for SIIP Data Collection* for explanation and classification purposes. For the purposes of this manuscript, definitions of data collected and recorded are included on each respective worksheet discussed in the appendix.

Initially (from August 2017 until October 2017), the SIIP utilized a paper-based screening tool for both the CSA and NAS. Therefore, every SIIP screening tool, in conjunction with the handwritten weekly list, was collected and compiled on a weekly basis by the Chief Programs Officer. The weekly list was scanned in and sent via intraoffice email to the DNPST. These paper-based SIIP assessments (CSA and NAS) were scanned into the Anasazi EHR and made available for viewing. The paper-based additional screening tools utilized in the NAS (PHQ, MDQ, etc.) were also scanned into the Anasazi EHR, until being converted into electronic format and made available through the EHR as of October 15, 2017. The NAS was converted into electronic file format as of October 15, 2017. The CSA remained paper-based. Cross-checking the complied paper-based CSAs and weekly lists with the Anasazi EHR medical record per each person served to safeguard against missing any SIIP screening open intakes needing evaluation by the DNPST.

A data-set was made of all clients entering the SIIP process (Appendix E4 to view *Worksheet One: ANALYTICAL DATA SET, Sociodemographic Data*). Compiling and recording the data-set was the first step directing the data collection process. The DNPST input each potential client's identifying information (name, date of birth, and client ID number) into the Anasazi EHR to a) locate the client and determine b) if a CSA and NAS was completed, c) if an

Intake Assessment was completed, d) whether he/she received a provisional diagnosis, and e) if he/she qualified for services and f) was scheduled for a first appointment. If the potential client's profile did not include an Intake Assessment, although the person was identified on the handwritten weekly list as being considered for an intake screening, the person was considered to have been disqualified from services at some point during the intake process. Where in the intake process disqualification occurred was determined during the data collection process.

This data collection process continued (at least) bi-monthly for four months after SIIP 'live' implementation. Data collection began in September 2017 and ended in January 2018. Data integrity, for the purposes of input into SPSS, was reviewed with a biostatistician (at least) monthly. For the purposes of evaluating this SIIP intervention, the designated end-date for intake screenings assessed was set at the 120-day mark, or December 1, 2017. The initial evaluation of data, utilizing SPSS analysis via biostatistician consultation, occurred at the 180-day mark, or February 1, 2018.

Data collection tools.

The SIIP intervention utilized one data collection tool in Excel format, composed of three data collection worksheets entitled *Spreadsheet for SIIP Data Collection*. For the purposes of narrative explanation, the headings of each worksheet were placed in a table format within Word (software) and are included in the appendix. The Word (software-based) versions of all data collection worksheets serve as a reference/guide for compiled client data.

Each Word (software-based) data collection worksheet (Worksheets One through Three) co-insides to its designated worksheet within the *Spreadsheet for SIIP Data Collection*. Each person is organized in numeric order utilizing a unique de-identified number under the heading "ROW_ID" (e.g. PAT_1, PAT_2, PAT_3, etc.). Definitions of all worksheet headings are

included within each Word version of the worksheet, as well as coding determinations and definitions. See Appendix E2 through E4 to view each worksheet in table form, with definitions of headings and acronyms provided.

Worksheet One recorded a weekly list of people completing an intake screening via the SIIP intervention (See Appendix E4 to view *Worksheet One: ANALYTICAL DATA SET, Sociodemographic Data*). Worksheet Two recorded disorders identified through a positive screening, either via the CSA or NAS. Worksheet Three recorded disorders that received a provisional diagnosis, either via the Intake Assessment or Psychiatric Evaluation. Congruency in agreement determinations was made between screening stage(s) and diagnosing stage(s) congruency (See Appendix E2 to view *Worksheet Two: Screening.* See Appendix E3 to view *Worksheet Three: Diagnosis*). Worksheet One recorded participant sociodemographic variables, as outlined in the *Data Collected* section (See Appendix E4 to view *Worksheet One: ANALYTICAL DATA SET, Sociodemographic Data*).

Securing and storing collected data.

The *Spreadsheet for SIIP Data Collection* was encrypted and stored on the DNPST's password-protected personal laptop. A backup copy of the *Spreadsheet for SIIP Data Collection* was also uploaded to the DNPST's password protected Dropbox account. Encryption included two levels of security via password protection. Most collected PHI data was de-identified when stored electronically. The only PHI information collected was recorded on the *Analytical Data Set_SPSS* Worksheet of the *Spreadsheet for SIIP Data Collection* only. It included a person's initials (excluding his/her full name), date of birth, and provided a client-identification number. Subsequently, the person was assigned a participant number (e.g. PAT_1, PAT_2, etc.) for all other information-recording purposes and worksheets.

An electronic copy of each original, hand-copied list was scanned and distributed to the DNPST via intraoffice encrypted email. Each list was compiled on each intake screening day per each clinic. If the paper version of the weekly intake screening list was made available to the DNPST, it was securely stored in a key-locked filing cabinet only the DNPST had access to. The paper version was made available only until all information was recorded within the electronic *Analytical Data Set_SPSS* Worksheet within the *Spreadsheet for SIIP Data Collection*, then was returned to Chief Programs Officer.

Paper forms involved in this intervention—the SIIP screening form(s) and the hand copied, weekly list of potential clients—did not leave CMHC premises. Data was collected and recorded into the *Spreadsheet for SIIP Data Collection* electronic worksheets in a closed office using the DNPST's personal laptop. Paper forms were secured in a key-locked file cabinet located in the DNPST's office when left unattended.

Statistical test(s) used for data analysis.

Outcome data were collected in a binary/nominal form. Therefore, Chi-square statistical analysis was used to evaluate the outcomes of the SIIP intervention. Although initially proposed, a logistical regression model could not be utilized for data analysis due to the limited sample size obtained. Descriptive statistics were used to evaluate demographic information.

Results

Sample Demographics

There were characteristic demographics of persons presenting for an open intake assessment. See Table 3 to view the *Demographics of Adults Entering the Open Intake Process.* Persons seeking new services were predominately previous clients (those who had already had

some contact with the CMHC in the past), female, between the ages of 20 and 39, White, non-Hispano/Latino, living in Palestine or Jacksonville, and without health insurance.

PTSD Identification Between Stages

The following results comparing Part I, the screening stages of the SIIP intervention, to Part II, the diagnostic stages, were statistically significant regarding assessment and provisional diagnosis of PTSD. There was a portion of alignment in PTSD symptom identification in the CSA and NAS screening stages with provisional diagnosis in the IA and PE diagnosing stages. There was a portion of alignment in PTSD symptom non-identification in the CSA and NAS screening stages that corresponded to its non-diagnosis in the IA and PE diagnosing stages. However, there was also a significant portion of discrepancy between screening and diagnosing stages for PTSD, whereby PTSD symptomology was present, but PTSD remained undiagnosed. See Table 4 to view the *Chi-Square Crosstabulation for PTSD Disorder*.

Objectives one and two: PTSD identification and the Client Self-Assessment.

Agreement.

There was a portion of alignment between the CSA screening stage and the (a) NAS screening stage, (b) IA diagnosing stage, and (c) PE diagnosing stage regarding congruent positive results in identifying PTSD. That is, there was the similar identification of PTSD between stages, suggesting a true positive rate of PTSD identification. The CSA screening result (Stage One) aligned with the NAS screening result (Stage Two) for 29.7% of persons completing both stages ($p \leq 0.00$). The CSA screening result aligned with the IA provisional diagnosis (Stage Three) for 22.5% of persons completing both stages ($p \leq 0.00$). The CSA screening result aligned with the PE provisional diagnosis (Stage Four) for 19.5% of persons completing both stages ($p \leq 0.011$). Compared to diagnosing stages, the CSA positive screening result aligned with a congruent IA or PE diagnosis of PTSD, on average, 24% of the time ($p \leq 0.011$).

There was also a portion of alignment between the CSA screening stage and the (a) NAS screening stage, (b) IA diagnosing stage, and (c) PE diagnosing stage regarding congruent negative results in PTSD non-identification. That is, there was the similar absence of PTSD identification between stages, suggesting a true negative rate of PTSD non-identification. The CSA screening result (Stage One) aligned with the NAS screening result (Stage Two) for 58.1% of persons completing both stages ($p \leq 0.00$). The CSA screening result aligned with the IA provisional diagnosis (Stage Three) for 50% of persons completing both stages ($p \leq 0.00$). The CSA screening result aligned with the PE provisional diagnosis (Stage Four) for 48.7% of persons completing both stages ($p \leq 0.011$). Compared to diagnostic stages, the CSA screening result aligned with the absence of IA or PE PTSD diagnosis, on average, 52.3% of the time ($p \leq 0.011$). See Table 4 to view the *Chi-Square Crosstabulation for PTSD Disorder*.

Disagreement.

A portion of discrepancy/incongruency was identified between the CSA screening stage result and other stage results. The percentages noted below compose an inconclusive category of persons that may have PTSD but were undiagnosed. Between the CSA and NAS screening stages, incongruency/disagreement in screening results identifying PTSD accounted for 12.2% of persons ($p \leq 0.000$). Between the CSA screening and IA diagnosing stages, this number increased to 27.5% of all screened persons ($p \leq 0.000$). Between the CSA screening and the PE diagnosing stages, the number of incongruent results accounted for 31.6% of persons completing both stages ($p \leq 0.011$). Compared to diagnostic stages, the CSA screening result was misaligned/incongruent with IA or PE PTSD diagnosis, on average, 28.3% of the time ($p \leq 0.011$). See Table 4 to view the *Chi-Square Crosstabulation for PTSD Disorder*.

Objective three: PTSD identification and the Needs Assessment Screening.

Agreement.

There was a portion of alignment between the NAS screening stage and the (a) IA and (b) PE diagnosing stages regarding congruent positive results in identifying PTSD. This is suggestive of a true positive rate of PTSD identification. The NAS screening result (Stage Two) aligned with the IA provisional diagnosis (Stage Three) for 22.2% of persons completing both stages ($p \leq 0.00$). The NAS screening result aligned with the PE provisional diagnosis (Stage Four) for 20% of persons completing both stages ($p \leq 0.001$). Comparing stages, the NAS positive screening result aligned with a congruent provisional diagnosis of PTSD, on average, 21.2% of the time ($p \leq 0.001$).

There was also a portion of alignment between the NAS screening stage and the (a) IA and (b) PE diagnosing stages regarding congruent negative results. This is suggestive of a true negative rate of PTSD non-identification. The NAS screening result (Stage Two) aligned with the IA provisional diagnosis (Stage Three) for 52.2% of persons completing both stages ($p \leq 0.00$). The NAS screening result aligned with the PE provisional diagnosis (Stage Four) for 55.4% of persons completing both stages ($p \leq 0.001$). Comparing stages, the NAS screening result aligned with a congruent absence of PTSD diagnosis, on average, 53.8% of the time ($p \leq 0.001$). See Table 4 to view the *Chi-Square Crosstabulation for PTSD Disorder*.

Disagreement.

A portion of discrepancy was identified between the NAS screening stage result and provisional diagnosis stage results. Between the NAS screening and IA diagnosing stages, incongruency/disagreement in screening results identifying PTSD versus diagnosis of PTSD accounted for 25.5% of persons completing both stages ($p \leq 0.000$). Between the NAS screening

and the PE diagnosing stages, the number of incongruent results accounted for 24.6% of all persons completing both stages ($p \leq 0.001$). Comparing stages, the NAS screening result misaligned/was incongruent with PTSD diagnosis results, on average, 25.1% of the time ($p \leq 0.001$). See Table 4 to view the *Chi-Square Crosstabulation for PTSD Disorder*.

PTSD identification between diagnostic stages.

There was a portion of alignment between the two diagnostic stages regarding congruent positive results identifying PTSD. The IA provisional diagnosis result (Stage Three) aligned with the PE provisional diagnosis result (Stage Four) for 18.3% of persons completing both stages ($p \leq 0.001$). There was also alignment between stages regarding congruent negative results in the absence of PTSD diagnosis. The IA provisional diagnosis result (Stage Three) aligned with the PE provisional diagnosis (Stage Four) for 56.1% of persons completing both stages ($p \leq 0.001$). Between the IA and PE diagnosing stages, incongruency/disagreement in confirming the PTSD diagnosis accounted for 25.6% of persons completing both stages ($p \leq 0.001$). See Table 4 to view the *Chi-Square Crosstabulation for PTSD Disorder*.

COPSD and co/PTSD Identification Between Stages

The statistical significance comparing screening to diagnosis results for both COPSD and co/PTSD were predominately inconclusive due to the small sample size obtained. The only data with statistical significance compared the CSA screening results to the a) NAS screening results and b) the IA diagnostic results. See Table 5 to view the *Chi-Square Crosstabulation for COPSD Disorder.* See Table 6 to view the *Chi-Square Crosstabulation for co/PTSD Disorder*.

Objectives one and two: COPSD identification and the Client Self-Assessment.

Agreement.

There was a portion of alignment between the CSA screening stage and the (a) NAS screening stage and (b) IA diagnosing stage regarding congruent positive results identifying COPSD. This is suggestive of a true positive rate of COPSD identification. The CSA screening result (Stage One) aligned with the NAS screening result (Stage Two) for 27.2% of persons completing both stages ($p \leq 0.000$). The CSA screening result aligned with the IA provisional diagnosis (Stage Three) for 20.6% of persons completing both stages ($p \leq 0.000$). The CSA screening results compared to the PE provisional diagnosis results were statistically insignificant.

There was also a portion of alignment between the CSA screening stage and the (a) NAS screening stage and (b) IA diagnosing stage regarding congruent negative screening results. This is suggestive of a true negative rate of COPSD non-identification. The CSA negative screening result (Stage One) aligned with the negative NAS screening result (Stage Two) for 63% of persons completing both stages ($p \leq 0.000$). The CSA negative screening result aligned with the IA absence of provisional COPSD diagnosis (Stage Three) for 50% of persons completing both stages ($p \leq 0.000$). The CSA screening results compared to the PE provisional diagnosis results were insignificant. Results from further comparisons between any stage were statistically insignificant for the COPSD and co/PTSD diagnoses due to not meeting Chi-square minimum frequency requirements for either disorder. See Table 5 to view the *Chi-Square Crosstabulation for COPSD Disorder.* See Table 6 to view the *Chi-Square Crosstabulation for co/PTSD Disorder*.

Disagreement.

A was a portion of discrepancy/misalignment in identifying COPSD between the CSA screening stage result and other stage results. Between the CSA and NAS screening stages, incongruency/disagreement in screening results identifying COPSD accounted for 9.8% of persons ($p \leq 0.000$). Between the CSA screening and IA diagnosing stages, this rate increased to 29.4% of all screened persons ($p \leq 0.000$). The CSA screening results compared to the PE provisional diagnosis results were insignificant. See Table 5 to view the *Chi-Square Crosstabulation for COPSD Disorder.*

Retrospective Comparison of PTSD New Diagnosis

Only data specific to the PTSD diagnosis was available for retrospective comparison. The available data reported the number of new diagnoses made between August to December 2016 (pre-SIIP intervention) and August to December 2017 (post-SIIP intervention). While data were collected to identify new substance use disorders diagnosed, no data were collected in 2016 to specifically identify a COPSD diagnosis. Therefore, a retrospective comparison of the COPSD and co/PTSD diagnosis cannot be completed. See Table 7 to view the *Retrospective Chart Review for New PTSD Diagnosis*.

Utilizing Chi-square crosstabulation, no statistical significance was identified between 2016 and 2017 data in diagnosing PTSD. The number of new diagnoses for all diagnostic categories—Depression, Bipolar Disorder, Schizophrenia, PTSD, and Substance Use Disorders—did not change, remaining at 458 persons each year. The number of new PTSD diagnoses made decreased from 53 persons (11.6% of new diagnoses made) in 2016 to 41 persons (9.0% of new diagnoses made) in 2017, averaging a 10.3% rate of new PTSD diagnosing

between 2016 and 2017. See Table 8 to view the *Chi-square Crosstabulation of Retrospective New PTSD Diagnosis Data, 2016 and 2017*.

Discussion

Upon data analysis, the identification of symptomology representative of PTSD, COPSDs, and co/PTSD through the SIIP did not lead to increased diagnosis of any respective disorder. Significant discrepancy of reported and identified symptoms occurred between the screening and diagnostic stages. Typically, this discrepancy increased through the intake process' stage progression, leading to an overall absence in disorder diagnosis. The following discussion will detail this phenomenon. Particular to the objectives of this DNP project, a focus will be on quantifying the discrepancy between screening and diagnostic stages and evaluating its impact on the recognition of PTSD, COPSD, and co/PTSD within the client population.

PTSD Identification

Objectives one and two: Identifying PTSD using the Client Self-Assessment.

Clinical significance: Agreement between the CSA, and the NAS, IA, and PE.

A person's self-assessment of PTSD symptoms (through the CSA) was more likely to agree with the QMHP's identification of PTSD symptoms in the screening stage (the NAS) than the diagnostic stages (the IA and PE). Therefore, the most identification and agreement of PTSD symptoms occurred between the screening stages of the CSA and NAS. There was about a 30% statistically significant agreement in matching PTSD symptoms between the CSA and NAS screening stages. This level of agreement may have occurred because the screening stages, both the CSA and the NAS screenings, were completed by non-licensed personnel, either the person presenting for services and QMHPs.

Self-identification of PTSD symptoms by the person seeking services in the CSA screening stage did not lead to increased provisional diagnosis of PTSD in the IA and PE stages. This is suggestive of increasing misalignment between a person's self-reported PTSD symptoms and the clinician's determination of PTSD as a diagnosis. Licensed clinicians completed the diagnostic stages—LPCs, PMHNPs, or a Psychiatrist. These persons are trained in diagnosing PTSD, not only in identifying symptomology. This may account for the decreasing agreement in PTSD identification between screening and diagnostic stages.

There was about a 21% statistically significant agreement in matching PTSD symptoms identified in the screening stages (CSA and NAS) to PTSD diagnosis in the diagnosing stages (the IA and PE). However, the level of agreement noticeably dropped between stages. There was decreasing PTSD identification from 29.7% (in NAS screening) to 22.5% (in IA diagnosis) and 19.5% (in PE diagnosis). This trend also held true for the increasing absence of PTSD identification through stages.

Anecdotally, diagnosing PTSD using either the 22.5% (IA stage) or 19.5% (PE stage) rate occurred at a higher rate than the national average of 8%. However comparatively, PTSD diagnosis occurred at a lower rate than PTSD prevalence in special populations typically served by CMHCs, which approaches 60% of persons served. This suggests that intervention CMHC (ICMHC) staff and clinicians are failing to identify a portion of its clients with PTSD.

Clinical significance: Disagreement between the CSA, and the NAS, IA, and PE.

There was statistically significant discrepancy/incongruency in identifying PTSD as persons progressed through the screening and diagnosis stages. This phenomenon of inconclusive PTSD identification may account for the unexpected decrease in provisional diagnosis of PTSD previously noted. Because of an identified reciprocal relationship, there was an expectation that more, not less, PTSD would have been identified in the diagnostic stages.

However, this was not the case. This suggests that a large portion of PTSD remains unrecognized and undiagnosed through the intake process, although further screening for its presence has been initiated.

The least discrepancy occurred between the screening stages (the CSA and NAS) at a 12% rate. This lower discrepancy rate was expected since NAS screening utilized the CSA as a basis for further screening of PTSD symptoms. There was about a 26% rate of discrepancy in aligning PTSD symptoms identified in the screening stages (CSA and NAS) to PTSD diagnosis in the diagnostic stages (the IA and PE). It is undeterminable what proportion of persons in the IA stage (27.5%) or in the PE stage (31.6%) of discrepancy/non-confirmation of PTSD diagnosis may actually have PTSD.

Notably, there were more persons identified in this inconclusive category in the diagnostic stages (28 and 24 persons, respectively) than were actually diagnosed with PTSD (23 and 15 persons, respectively). The amount of inconclusive identification leading to a lack of PTSD diagnosis (26%) was larger than the amount of agreement in identifying PTSD between the screening and diagnostic stages (21%). There are possible reasons for this discrepancy, as was observed through data collection. These possible reasons will be further elaborated upon in the *Limitations* section.

Objective three: PTSD identification and the Needs Assessment Screening.

Clinical significance: Agreement between the NAS, and the IA and PE.

As already identified, the QMHP's assessment of PTSD symptoms (through the NAS) was more likely to agree with the person's self-identification of PTSD symptoms (through the CSA) than with the diagnostic stages (the IA and PE). However, identification of PTSD symptoms in the NAS screening stage did not lead to increased provisional diagnosis of PTSD.

There was decreasing PTSD identification from 22.2% (IA diagnosis) to 20% (PE diagnosis). This is suggestive of an increasing misalignment between a QMHP's identification of PTSD symptoms through validated screening and the clinician's determination of PTSD as a diagnosis.

The rate of PTSD diagnosis was comparable whether using the CSA (22.5% when compared to IA diagnosis and 19.5% when compared to PE diagnosis) or the NAS (22.2% when compared to IA diagnosis and 20% when compared to PE diagnosis). This is surprising considering that the QMHP conducting the NAS screening, although likely unlicensed, has more training in identifying mental disorders than would be expected to be self-reported by a potential client. There remained more absence of PTSD diagnosis in the IA and PE stages (52.2% and 55.4%, respectively) than PTSD diagnosis. The diagnosing of PTSD, whether using either rate of 22.2% (IA stage) or 20% (PE stage), continued to occur at a higher rate than the national average, but at a lower rate than anticipated for the special population served. This suggests that ICMHC staff and clinicians are failing to identify a portion of its clients with PTSD.

Clinical significance: Disagreement between the NAS, and the IA and PE.

Again, there was increasing discrepancy/incongruency in identifying PTSD as persons progressed through the screening and diagnosis stages. This phenomenon may account for the lower than expected rate of PTSD provisional diagnosis for the special population served by the ICMHC, as noted above. It is undeterminable what proportion of persons in the IA stage (25.5%) or in the PE stage (24.6%) of discrepancy/non-confirmation of PTSD diagnosis may actually have PTSD. Notably, there were again more persons identified in this inconclusive category in the diagnostic stages (24 and 16 persons, respectively; 25.1%) than were actually diagnosed with PTSD (21 and 13 persons, respectively; 21.2%). This suggests that ICMHC staff and clinicians are failing to identify a portion of its clients with PTSD.

Clinical significance between diagnostic stages.

Similar trends were identified when comparing the diagnostic stages themselves as were identified comparing the screening stages to the diagnostic stages. Unexpectedly, the diagnostic stages (between the IA and PE) were not more aligned with each other, especially considering that licensed personnel completed these two stages. There was the congruent identification and diagnosing of PTSD in 18.3% of persons between the IA and PE stages, compared to an average of 24% of CSA screening and diagnostic stage agreement, and an average of 21.2% of NAS screening and diagnostic stage agreement, respectively.

Nor was there decreased incongruent/inconclusive results of diagnosing PTSD. The rate of inconclusive diagnosing between the IA and PE stages accounted for 25.6% of persons. This rate is lower than the average agreement rate of 28.3% of persons between the CSA screening stage, and the IA and PE diagnosing stages. The rate is also lower than the average agreement rate of 25.1% of persons between the NAS screening stage, and the IA and PE diagnosing stages, respectively. This suggests that ICMHC staff and clinicians are failing to identify a portion of its clients with PTSD.

Clinical significance compared to the literature.

From a US national representative sample, individual lifetime PTSD diagnosis is estimated at about 8% (SAMHSA, 2008; Tiet et al., 2013). Comparatively, PTSD prevalence in special populations served by CMHCs approaches 60% (SAMHSA, 2008). PTSD in special populations is mediated by a high probability of trauma exposure (Boscarino et al., 2012; Lu et al., 2013**)**, co-occurring substance use (SAMHSA, 2008; Tiet et al., 2013; van Dam et al., 2013), and co-occurring mental health disorders (Tiet et al., 2013), particularly severe and persistent mental disorders (Chessen et al., 2011; Minsky et al., 2015).

The interventional ICMHC client population meets all the above characteristics. The assumption was that this population would have a high prevalence of PTSD diagnosis. A primary objective of this DNP project was to determine if use of a self-report (the CSA) and validated screening measures (the NAS) in the initial stages of treatment (the intake process) would increase identification of PTSD-related symptoms leading to its diagnosis. They did not.

COPSD and co/PTSD Identification

Objectives one and two: Identifying COPSD using the Client Self-Assessment.

When assessing the agreement between PTSD symptomology in screening to the congruent diagnosis of COPSD and co/PTSD, the data collected were limited. The failure to identify substance use by persons in the early screening stages (the CSA and NAS) was observed during DNPST data collection. This likely led to the inadequate identification of substance use in the diagnostic stages. Therefore, the Chi-square assumption of having an adequate sample size with minimum expected frequencies of five per square was not met, leading to predominantly statistically insignificant results. The discussion below focuses on results whereby statistical significance was achieved, with elucidation about the clinical significance of results.

Clinical significance: Agreement between the CSA, and the NAS and IA.

Of statistically significant results, there was agreement/identification of COPSD between screening stages (the CSA and NAS) for about 27% of persons completing both stages. There was agreement/identification of COPSD between the CSA screening results and IA diagnosis for about 21% of persons completing both stages. All other results were deemed statistically insignificant. This included (a) comparisons of the CSA to PE results, (b) all NAS results to other stage results, (c) the IA to PE results for COPSD, and (d) all staged results for co/PTSD. Although statistically insignificant, the clinical significance of results will be further elaborated upon in the *Limitations* section. The identification of COPSD occurred at the anticipated rate of

about 20% to 50% of clients with high levels of trauma exposure (Atkins, 2014; Hazelden, 2013; Nash et al., 2011), but at the lower end of this range. This suggests that ICMHC staff and clinicians may be failing to identify a portion of its clients with COPSD.

Clinical significance: Disagreement between the CSA, and the NAS and IA.

Incongruency between the CSA and NAS screening stages was limited to 9.8% of persons. However, there was a high rate of incongruency between the CSA screening and IA diagnosing stages for COPSD identification (29.4%). The clinical significance of this occurrence suggests that non-identification of COPSD or co/PTSD continues within its client population, even after implementing a screening procedure to improve their identification. See Table 5 to view the *Chi-Square Crosstabulation for COPSD Disorder.* See Table 6 to view the *Chi-Square Crosstabulation for co/PTSD Disorder*.

For example, only five out of 82 persons (about 6%) were provisionally diagnosed with COPSD in both the IA and PE stages. Only one out of 81 persons (about 1%) was provisionally diagnosed with co/PTSD in both the IA and the PE stages. Although statistically insignificant, both rates are significantly lower than the national prevalence of COPSD in US adults of nine to 17% (Atkins, 2014), let alone for the rural CMHC population served by the ICMHC.

Clinical significance compared to the literature.

Characteristically, the client population served was anticipated to have a high prevalence of COPSD. Similar determinants affecting COPSD prevalence include (a) seeking community (public) mental health services, (b) residing in a rural area, and (c) having a low socioeconomic status. “The prevalence of co-occurring disorder (is) higher in (individuals) seeking mental health or substance abuse treatment (than in the general population)” (SAMHSA, 2011, p. 3). An estimated 24% of persons receiving community mental health services have COPSDs (Gotham,

2014). The characteristics of being rural and poor contribute to higher rates of substance abuse and untreated mental illness (McDonald et al., 2014). All these above characteristics exemplify the ICMHC client population. There was an expectation of encountering and identifying substantial COPSD and/or co/PTSD through the intake process. This did not occur.

Retrospective Comparison of PTSD New Diagnosis

The purpose of instituting the SIIP intervention was to increase recognition and diagnosis of PTSD, COPSD, and co/PTSD through use of increased measurement-based care. Regarding PTSD diagnosis, the number of new PTSD diagnosis in 2017 (after the SIIP intervention), decreased from 53 to 41 persons when compared to the number of new PTSD diagnosis made for the same time-period in 2016. These results were statistically insignificant, suggesting that the difference in change could be accounted for by chance.

Using this initial data analysis period, it appears the SIIP intervention made no statistically significant difference in increasing PTSD diagnosis as was presupposed. The reasons for this are likely multifaceted. There is the potential that, although PTSD was not diagnosed comparatively more, the sensitivity and specificity in PTSD diagnosing may have improved since the introduction and use of validated screening measures. Meaning, a person provisionally diagnosed with PTSD in the IA or PE is likely to have the disorder. Also, the data collection and analysis about SIIP use for this DNP project was predicated on the initial stages of SIIP use. The SIIP is a new process; time is required for staff to become familiar and comfortable with its purpose and use. Measuring the full impact of the SIIP using more recent data collection and analysis may lead to different results.

Diffusion with Sustainability of Change

Since the revamping of the open intake process in July 2017, the SIIP has been fully integrated into this process. The SIIP is considered the first step of the intake process. It is used to identify potential qualifying diagnoses and determine one's initial eligibility for services. All QHMP staff completing intake screenings are trained on the use of the NAS, which is currently in electronic form and integrated into the Anasazi EHR.

Strengths

The primary strength of using the SIIP is that once staff is trained in the process, it is time efficient. It is estimated that it takes, on average, five or fewer minutes to complete SIIP screenings once staff is proficient in its use. The SIIP screenings facilitate measurement-based care using validated screening instruments—the PHQ-9, MDQ, PRIME, PCL-6, and TCUDS—that can justify and support a provisional diagnosis. Scoring of each screening is automatic once data are input, with results made easily assessable and available through the EHR. Screening scores are available electronically to both the LPC (for the Intake Assessment) and the PMHNP or Psychiatrist (for the Psychiatric Evaluation) to assist in making a diagnostic determination. These additional screening instruments—the PHQ-9, MDQ, PRIME, PCL-6, and TCUDS—have also been made available separately (for use outside of the intake process and "Intake Packet") for use in every day clinical practice.

Opportunities

When used as designed, the SIIP has fundamentally changed the open intake process. The SIIP addresses and modifies initial subjectivity in determining whether a person should be referred for Intake Assessment. It also allows for the opportunity of early identification of disorders like PTSD and COPSD that have traditionally gone unrecognized in the ICMHC client

population in the early stages of treatment. However, its consistent, standardized use, regardless of licensing of the person using the SIIP, has not yet been established. This represents an opportunity for a) offering more education and training about SIIP use, b) identifying common areas for improvement in SIIP use, and c) providing correction when inconsistency and deficiencies are identified through supportive reminders to staff.

Limitations

A primary weakness when assessing the impact of the SIIP in approving identification of PTSD and COPSD was the small sample size collected (n = 151). Due to limitations in the timeframe for data collection, a sample size sufficient to complete statistical analysis for all three diagnoses—PTSD, COPSD, and co/PTSD—was not collected. This prevented the use of a logistical regression model for further data analysis. The limited amount of data collected on substance use, and the resultant small sample size collected to determine COPSD, also prevented statistically significant determination of results obtained. Using Chi-square cross tabulation, one cell had frequencies less than five for COPSD data, while one to three cells had frequencies less than five for co/PTSD data. It is suspected that the lack of substance use identification in the early screening stages may have led to the lack of identification of COPSD and co/PTSD in the later diagnostic stages. Therefore, sample size became the mediating factor in determining statistical significance.

Another weakness occurred in the delay of data collection and analysis relative to when the SIIP was implemented and being utilized. For the purpose of facilitating data import into SPSS for statistical analysis, time spent updating the Excel spreadsheet data collection tool for this project caused a delay between the date the screening occurred, and the time data were collected. For example, screenings completed on or after August 1, 2017, were used for data analysis. However, the actual first data collection date by the DNPST for screenings completed

on the August 1st did not occur until September 16, 2017, or later, a one-and-one-half month delay in collection. Initially, data collection was also a slow, tedious process due to the entire screening process being paper-based. Therefore, there was a time-delay in identifying and addressing deficiencies in how the SIIP was being conducted. This time-delay made analyzing and evaluating data *after* deficiencies were addressed, to identify if improvement had occurred, unattainable due to the short window of data collection time for the purposes of this project.

The primary threat to SIIP effectiveness in PTSD and COPSD early recognition was incomplete data collection on the NAS. Observed by the DNPST through data collection, there were many instances when the NAS (Stage Two) was not completed for an unidentifiable reason. The NAS was not completed, although the person would complete an Intake Assessment (Stage Three) and be referred for a Psychiatric Evaluation (Stage Four). The DNPST is unsure if familiarity and/or subjectivity on the part of the QMHP screener took precedence over SIIP use in these instances. But, because the NAS was not completed, this limited available data for statistical analysis, thus limiting the determination of SIIP effectiveness.

The continued incomplete data collection by QMHPs within the NAS (Stage Two) continued to occur (and was not readily corrected) despite repeated prompts to QMHPs about specific identified deficiencies. To facilitate the correct use and standardization of the SIIP procedure, persons were re-directed to the SIIP PowerPoint training (available at any time via Intranet), and to the specific slides pertaining to the area of deficiency. Identified, universal areas of confusion of SIIP use were addressed during treatment team meetings and a quarterly staff training. The DNPST made herself available via email or telephone to address questions or concerns about SIIP use and encouraged persons to do so when needed. Reminder emails detailing common deficiencies were sent to all intake staff periodically.

Unfortunately, once deficiencies were corrected with certain personnel, new staff were often hired or moved into the intake process, requiring new training about the SIIP. Therefore, this training process repeated itself frequently. The varying degrees of training and competency on SIIP use likely affected the integrity of information collected within the NAS.

Another threat to SIPP effectiveness in PTSD and COPSD early recognition was the cut-off score level of the CSA. Although the cut-off score was lowered for the PCL from '12' to '9,' clinical judgment as to whether a person's score necessitated additional screening via the PCL was not routinely utilized. Observed by the DNPST when collecting data, a score of '6-9' was frequently reported by the person on his/her CSA (Stage One) without additional screening using the PCL by the QMHP within the NAS (Stage Two). It appeared that, although the QMHP had the opportunity to further assess for PTSD if cut-off score criteria were not met, this rarely occurred by non-licensed QMHPs. Without completing the PCL, additional information regarding trauma exposure and symptoms was not available to the LPC during the Intake Assessment. Therefore, it is suspected that a portion of PTSD diagnoses was unaccounted for. This may also explain the number of statistically significant incongruencies/discrepancies for PTSD diagnosis that were identified through data analysis.

Also, it was noted that when a person confirmed substance use on the CSA (Stage One) with a low cut-off score (usually '1'), substance use may not have been further assessed by the QMHP using the TCUDS (in Stage Two). Without completing the TCUDS, additional information regarding substance use was not available to the LPC during the Intake Assessment. Therefore, it is suspected that a portion of substance use, and resulting COPSD diagnoses, were unaccounted for.

Implications

The SIIP is now an intrinsic portion of the intake screening process. Once QMHP screeners became proficient and familiar with the CSA, NAS, and using the additional screening measures (PHQ-9, MDQ, PRIME, PCL-6, TCUDS, URICA), completing the SIIP was an efficient process. The electronic version of the NAS within the Anasazi EHR allows for automatic scoring of each screening instrument and their easy accessibility, increasing intake process and assessment efficiency. However, (a) small sample size, (b) the time delay between screening completion and data analysis of the screening process, (c) the incompletion of the NAS stage for unidentifiable reasons, (d) the need for continual, comprehensive training of staff about the SIIP process, (e) a strict reliance on cut-off scores to determine if additional screening was needed, (f) and the failure to further screen for substance use although scored positive on the CSA, served as primary limitations of the SIIP.

Future Project Opportunities

As described above, the primary barrier to SIIP efficacy in early identification of PTSD and COPSD is the training and competency of staff persons in standardizing NAS use. As of now, a person new to the intake process is directed to view the SIIP PowerPoint training (which may or may not occur before being asked to be a screener), with any questions or concerns they may have in using the NAS and additional screenings addressed before serving as an intake screener. A protocol for training new persons as intake screeners could be developed. The protocol could be in a checklist format, with the staff person/QMHP having to complete a series of steps before being deemed competent to serve as an intake screener. The completion of this protocol could be monitored by both the primary LPC (who is familiar with and manages intake staff) and the DNPST (who would provide education about training resources and the purpose of

the SIIP intervention). Screener competency could be enhanced through a more formal training protocol.

To expand the analysis of SIIP effectiveness, the DNPST also recommends exploring concerns identified in day-to-day practice which have remained unaddressed. This project was developed with data collection in the following specified areas in mind, as they carry clinical significance to SIIP use for the ICMHC. These areas for further exploration represent opportunities towards transforming care to the ICMHC's client population, especially those with PTSD and COPSD. These areas of opportunity are discussed below.

Change motivation and treatment readiness.

The URICA was an included self-reported screening on the CSA. The URICA is a screening developed to assess motivational level for treatment according to the Trans-Theoretical Model and Stages of Change. The NAS scored the person's URICA and determined the person's Stage of Change—Pre-Contemplation, Contemplation, Preparation/Action, Maintenance—when entering services. Analyzing this data could provide additional information about the role of motivation in accessing and remaining consistent in receiving services. CMHC mental health services are a valuable resource, whereby there is more demand than available services. A primary question asked would determine if a person's Change Motivation/Treatment Readiness (CMTR) score correlates to his/her service use. Another area for motivational assessment is predicated on referral. Determining how much of a motivating factor are referrals from Child Protective Services (CPS), the legal system, and/or one's primary care provider (PCP) in accessing services may identify additional motivations for consistent utilization of services. One's desire for assistance in applying for disability benefits may be another prominent motivational factor to be analyzed.

Determining factors implicit in qualification for services.

Data collected from the SIIP identified the number of persons completing an open intake screening who were qualified or disqualified for services. Data documenting possible or actual reasons for disqualification were also collected. Using retrospective data, a comparison examining the number of persons who qualified and disqualified for services could be made between this SIIP intervention and the prior screening process. Was there a statistically significant difference? Is there a statistically significant difference in the number of persons being referred for an Intake Assessment after the SIIP intervention compared to the prior screening process?

Determining the impact of licensing on SIIP effectiveness.

It is supposed that the licensure status of the QMHP/staff person completing the NAS has an impact on (a) how the CSA is scored, (b) which additional NAS screenings are completed, and (c) whether PTSD and COPSD are identified and ultimately diagnosed. Therefore, potential research questions addressing the impact of licensing should be explored. Does the licensing status (licensed/unlicensed) of the staff person completing the NAS screening have an impact on access to services? Using the SIIP, is there a difference in disorder determination made between non-licensed and licensed staff in the intake process? What is the relationship between the person completing the assessment (QMHP v. LPC) and his/her clinical judgment used to complete an additional NAS assessment if cut-off score criteria are not met on the CSA? Further investigation that controls for the effect of licensure, and whether licensure is a determining factor in the statistical significance of data collected for SIIP results, should be a future consideration.

Determining which diagnoses are more likely to co-occur with PTSD.

In clinical practice, major depressive disorder (MDD) and PTSD are likely to co-occur. Determining the effect of being diagnosed with MDD and the likelihood of a PTSD diagnosis can be explored. Having any mental disorder can make a person vulnerable to trauma exposure through violence, increase the likelihood of re-traumatization, and reinforce traumatic stress symptoms (Patitz et al., 2015; SAMSHA, 2008). Comparing the rate of PTSD diagnosis to bipolar disorder and/or schizophrenia diagnosis is another potential area of exploration.

Developing an integrative care model for PTSD and COPSD.

A primary goal of developing and integrating the SIIP intervention into the intake process was to increase recognition of disorders—PTSD and COPSD—that are frequently seen in the client population but not readily identified. PTSD and substance abuse co-occur at high rates. The ICMHC provides both mental health and substance use outpatient treatment services.

There is an opportunity to develop a more integrative care treatment model to serve this co-occurring population that begins with early identification through screening. Guidelines from the Dual Diagnosis Capability in Mental Health Treatment (DDCMHT) could serve as a model for care (Gotham, 2014; SAMHSA, 2011). It recognizes that treatment of psychiatric and substance use disorders must occur concurrently to be effective. It assists agencies in evaluating, transforming, and increasing their dual diagnosis treatment capacity, with assessment serving as a primary focus and starting point. Completing the DDCMHT Index could serve as a self-evaluative tool of its *Section III, Clinical Process: Assessment*. The goal of change is to move the ICMHC from providing predominant mental health only services and towards more dual diagnosis capable services and designation.

Future Research Opportunities

Additional data collection about the SIIP intervention should achieve a higher sample size for further data analysis. If a data set is collected for at least 200 persons, a logical regression model can be done (R. Gilder, personal communication, November 2, 2017). Perhaps a logistical regression model using the total CSA and/or NSA scores could be used to predict identification, diagnosis, and service utilization of persons seeking ICMHC services.

Conclusion

Summary of Project Impact

The SIIP intervention served as a substantial aspect in overhauling the open intake process. Although initially met with the confusion, frustration, and resistance inherent in change, the new intake process has efficiently met both client and clinician needs in connecting persons to services. The SIIP has served in assisting in the early recognition of PTSD and COPSDs at the initial stage of treatment: the intake process. By providing validated screening results that can be reviewed prior to provisional diagnosis, the SIIP has also served to raise awareness in QMHPs, LPCs, PMHNPs, and psychiatrists about the need to identify and assess for the presence of PTSD and COPSDs.

However, room for improvement remains. A large portion of persons screened through the SIIP with either PTSD and/or COPSD symptoms remain non-identified, with results categorized as ‘inconclusive.’ Although PTSD and/or substance use may be given consideration as a rule-out or differential diagnosis in the intake process, they usually do not receive a definitive diagnosis in the Intake Assessment or Psychiatric Evaluation. Screening of PTSD and/or COPSDs can be an integral aspect to foster a treatment-matching approach to care coordination in the early stages of treatment (SAMHSA, 2015; Schnurr et al., 2012; Zatzick et

al., 2016). Raising more awareness about SIIP availability while providing more education on its use can serve to facilitate this goal.

How the SIIP Intervention Addressed the PICO(T) Question

The PICO(T) question sought to determine if implementing the SIIP intervention would affect the identification and provisional diagnosis of persons with PTSD and/or co-occurring disorders (COPSDs). The answer is yes and no. Yes, the SIIP has raised awareness about assessing for PTSD and COPSDs. It has provided concrete data in the form of validated screening results to assist in justifying a provisional diagnosis of either PTSD and/or COPSD. And, per data collected and analyzed, it has determined that a certain portion of the client population likely experiences symptoms of PTSD and/or COPSDs.

However, the rates of identification and diagnosis were lower than expected, especially considering the special population served by the ICMHC (a community mental health center, serving a low-income population, in a rural area). The answer is ‘no’ in the fact that further training to establish screener competency is needed to adequately determine the extent of SIIP impact once its use is better standardized. Based on the retrospective data analysis of new PTSD diagnosis only, the ICMHC is not identifying more PTSD after SIIP implementation. However, the ICMHC may have improved its sensitivity and specificity when identifying and provisionally diagnosing PTSD through its open intake process.

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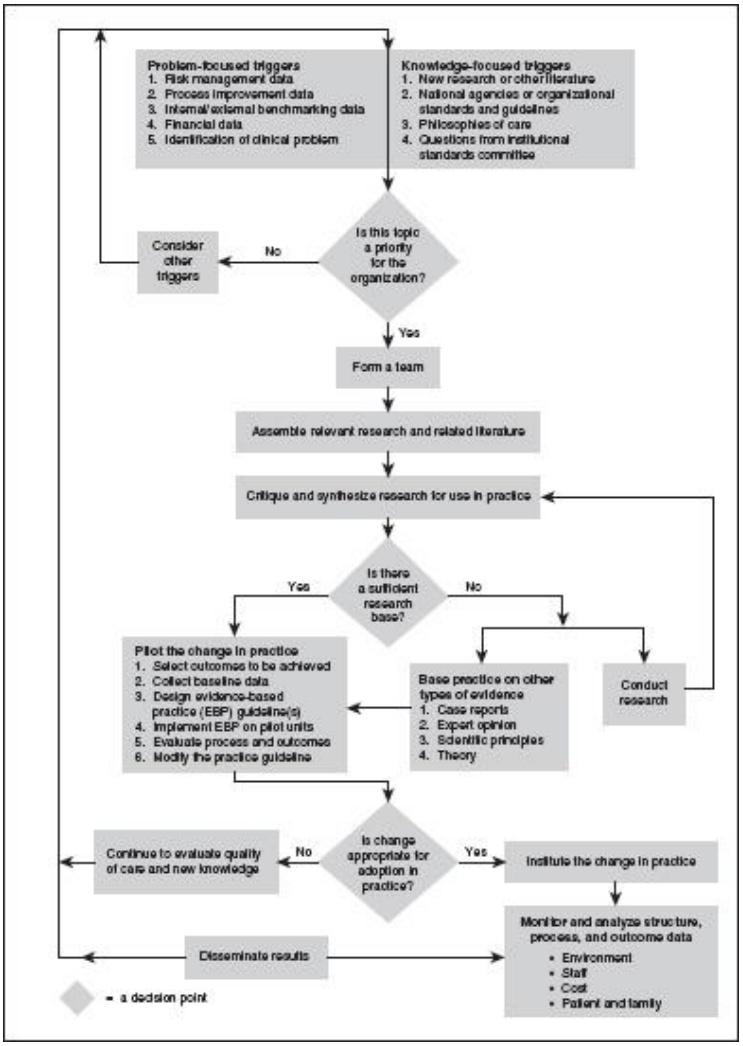


Titler et al. (2001)

Decision Points:

1) **Organizational Priority**?

2) **Sufficient Research Base**? (Piloting of program)

3) **Change Appropriate for Practice**?

4) SIIP Intervention **Implementation and Evaluation**

ACCESS Phone Triage/Screening – Adult

CONSUMER INFORMATION

Consumer Name/ID:	**Date/Time:**
Caretaker (if applicable)**:**	
Previous Mental Health Treatment?:	**Drug/Alcohol History?:**
Pertinent Events/Stressors?:	**Behavioral Observations** (e.g., mood, tone of voice)**:**

DEPRESSIVE SYMPTOMS (at least 5 symptoms over 2 week period; must include depressed mood or decreased interest)

☐ Are you currently thinking about hurting yourself or anyone else? (***if yes, client needs to be assessed for crisis***)

☐ Have you ever had a sad mood for most of the day, every day for two weeks or longer?

☐ Have you ever had a decreased interest or pleasure in most activities for two weeks or longer?

☐ During these times have you had a weight change or change in appetite?

☐ During these times do you have a change in sleep (sleeping more or sleeping less)?

☐ During these times have you noticed any changes in how you move (slower or restless)?

☐ During these times have you been more tired than usual?

☐ During these times have you had feelings of guilt or worthlessness?

☐ During these times do you have trouble concentrating?

MANIC/HYPOMANIC SYMPTOMS (3 or more of the following for at least 4 days or if hospitalized can be any length of time, *must have an elevated, expansive, or irritable mood present for most of day)

☐ Are there times when you are full of energy?

☐ During these times have you felt so good or high that other people thought that you were not your normal self?

☐ During these times have you felt extremely irritable?

☐ During these times do you sleep?

☐ During these times do others tell you that you are talking very fast during these times or talking too much?

☐ During these times do you become distracted easily?

☐ During these times do you start many projects or setting many new goals (or become restless)?

☐ During these times does your mind have a lot of thoughts racing through it?

☐ During these times do you do more things that are risky (e.g., spending money you don't have)?

☐ During these times have you ever been hospitalized?

☐ How long do these times typically last for you (if hasn't been hospitalized time 4 days or longer meets criteria)?

PSYCHOTIC SYMPTOMS (if hallucinations or delusions are present should be scheduled for a full intake)

☐ Assess for hallucinations. (For example: Have you been seen/heard/smelled/felt/tasted anything that cannot see/hear/smell/felt/taste (e.g., voices)?

☐ If so, do the hallucinations occur during waking hours (outside of when falling asleep or first waking u

☐ (*Observation)*- Does the person's speech seem to be abnormal (e.g., disorganized speech or abnorma

☐ (*Observation)*- Does the person seem to be expressing any delusions (e.g., believing someone is after

Scoring of the Client Self-Assessment (CSA)

INSTRUCTIONS: To begin the assessment process, please answer the following questions. All information provided is CONFIDENTIAL.

1) What brings you to ACCESS today?		
2) When did this problem start? 3) How long has this problem lasted? 4) How often do you feel symptoms related to this problem?		
5) What happened to cause or add to this problem?		
a) Have you ever talked to a psychiatrist, psychologist, nurse practitioner, therapist, social worker, or counselor about an emotional problem?	YES / NO	WHEN?_____ _____
b) Have you ever felt you needed help with your emotional problems, or have you had people tell you that you should get help for your emotional problems?	YES / NO	
c) Have you ever been advised to take medication for anxiety, depression, hearing voices, or for any other emotional problem?	YES / NO	WHAT?_____ _____
d) Have you ever been seen in a psychiatric emergency room or been hospitalized for psychiatric reasons?	YES / NO	WHEN?_____ _____
What services would you like to receive from ACCESS? (Please circle all that apply)	Medication for my Mental Health Help with Managing Stress Help with Finding: a Place to Live Finding a Job Counseling	
Are there any services NOT listed that you are in need of?		

*Unless QMHP suspects person may have disorder; continue assessment.

INSTRUCTIONS: The questions below ask about things related to the problem that might have bothered you. For each question, CIRCLE the number that best describes how much (or how often) you have been bothered by each problem during the past TWO (2) WEEKS.

	During **THE PAST TWO WEEKS**, how often have the following problems bothered you?	**NONE**; Not at all	**SLIGHT**; Less than 2 days	**MILD**; Between 3 and 6 days	**MODERATE**; At least 7 days/ one week	**SEVERE**; Nearly every day	
Ia	Felt down, depressed, or hopeless?	0	0	1	2	3	≥2 OR
b	Had little interest or pleasure in doing things?	0	0	1	2	3	≥2
c	Had thoughts that you would be better off dead or of hurting yourself in some way?	0	0	1	2	3	≥0
IIa	Had an episode when you were so full of energy, your ideas came very rapidly, you talked nearly nonstop, you moved quickly from one activity to another, and you believed you could do almost anything?	0	1	2	3	4	≥3
b	Slept less than usual, but still had a lot of energy?	0	1	2	3	4	≥3
c	Started lots more projects than usual or did more risky things than usual?	0	1	2	3	4	≥3
IIIa	Felt someone or some group may be trying to influence your thoughts or behavior?	0	1	2	3	4	≥3
b	Could see objects or things others could not see?	0	1	2	3	4	≥3
c	Felt that someone could hear your thoughts, or that you could hear what another person was thinking?	0	1	2	3	4	≥3
IVa	Had bad nightmares about a traumatic or terrible event, or thought about it when you did not want to?	0	1	2	3	4	≥3
b	Tried hard not to think about this terrible event, or went out of your way to avoid situations that reminded you of it?	0	1	2	3	4	≥3
c	Felt that your future plans or hopes will not come true as a consequence of this experience?	0	1	2	3	4	≥3
Va	Drinking at least 4 drinks of any kind of alcohol in a single day?	0	1	2	3	4	≥1
b	Using any of the following medicines without a prescription OR in greater amounts or longer than prescribed: Painkillers (like Norco), stimulants (like Adderall or Ritalin), sedatives (like sleeping pills or Xanax)?	0	1	2	3	4	≥1
c	Used drugs like marijuana, cocaine or crack, ecstasy, hallucinogens (like LSD), heroin, inhalants or solvents (like glue), or methamphetamine (like speed)?	0	1	2	3	4	≥1

URICA Scoring:

Question Type	Question
PC	1) I'm not the problem one. It doesn't make much sense for me to consider changing.
PA	2) I am finally doing some work on my problem.
C	3) I've been thinking that I might want to change something about myself.
PA	4) At times my problem is difficult, but I'm working on it.
PC	5) Trying to change is pretty much a waste of time for me because the problem doesn't have to do with me.
C	6) I'm hoping that I will be able to understand myself better.
PC	7) I guess I have faults, but there's nothing that I really need to change.
PA	8) I am really working hard to change.
C	9) I have a problem and I really think I should work on it.
M	10) I'm not following through with what I had already changed as well as I had hoped, and I want to prevent a relapse of the problem.
PA	11) Even though I'm not always successful in changing, I am at least working on my problem.
M	12) I thought once I had resolved the problem I would be free of it, but sometimes I still find myself struggling with it.
C	13) I wish I had more ideas on how to solve my problem.
C	14) Maybe someone or something will be able to help me.
M	15) I may need a boost right now to help me maintain the changes I've already made.
PC	16) I may be part of the problem, but I don't really think I am.
C	17) I hope that someone will have some good advice for me.
PA	18) Anyone can talk about changing; I'm actually doing something about it.
PC	19) All this talk about psychology is boring. Why can't people just forget about their problems?
M	20) I'm struggling to prevent myself from having a relapse of my problem.
M	21) It is frustrating, but I feel I might be having a recurrence of a problem I thought I had resolved.
PC	22) I have worries but so does the next guy. Why spend time thinking about them?
PA	23) I am actively working on my problem.
M	24) After all I had done to try and change my problem, every now and then it comes back to haunt me.

Scoring:

Each question is scored either '1' (Strongly Disagree), '2' (Disagree), '3' (Undecided), '4' (Agree), or '5 (Strongly Agree).
Add all scores for each respective stage (Pre-Contemplation [PC], Contemplation [C], Preparation/Action [PA], Maintenance [M]);
Divide this score by 6 to obtain a score for each respective stage;
4) Then, add the 'Preparation/Action' + 'Contemplation' + 'Maintenance' stage scores to obtain a 'Total Group' score;
5) Subtract the 'Pre-Contemplation 'score from this Total Group' score = this is the Change Readiness score

+ (C) + (M) = (TOTAL GROUP) – (PC) = CHANGE READINESS SCORE
8 or Less = Pre-Contemplation Stage
9-11 = Contemplation Stage
12-14 = Preparation/Action Stage

Client Self-Assessment (CSA)

INSTRUCTIONS: To begin the assessment process, please answer the following questions. All information provided is CONFIDENTIAL.

1) What brings you to ACCESS today?		
2) When did this problem start? 3) How long has this problem lasted? 4) How often do you feel symptoms related to this problem?		
5) What happened to cause or add to this problem?		
a) Have you ever talked to a psychiatrist, psychologist, nurse practitioner, therapist, social worker, case manager or counselor about an emotional problem?	YES / NO	WHEN?_____ _____
b) Have you ever felt you needed help with your emotional problems, or have you had people tell you that you should get help for your emotional problems?	YES / NO	
c) Have you ever been advised to take medication for anxiety, depression, hearing voices, or for any other emotional problem?	YES / NO	WHAT?_____ _____
d) Have you ever been seen in a psychiatric emergency room or been hospitalized for psychiatric reasons?	YES / NO	WHEN?_____ _____
What services would you like to receive from ACCESS? (Please circle all that apply)	Medication for my Mental Health Help with Managing Stress Help with Finding: a Place to Live Finding a Job Counseling	
Are there any services NOT listed that you are in need of?		

*Unless QMHP suspects person may have disorder; continue assessment.

INSTRUCTIONS: The questions below ask about things related to the problem that might have bothered you.

For each question, CIRCLE the number that best describes how much (or how often) you have been bothered by each problem during the past TWO (2) WEEKS.

	During **THE PAST TWO WEEKS**, how often have the following problems bothered you?	**NONE**; Not at all	**SLIGHT**; Less than 2 days	**MILD**; Between 3 and 6 days	**MODERATE**; At least 7 days/ one week	**SEVERE**; Nearly every day	
Ia	Felt down, depressed, or hopeless?	0	0	1	2	3	
b	Had little interest or pleasure in doing things?	0	0	1	2	3	
c	Had thoughts that you would be better off dead or of hurting yourself in some way?	0	0	1	2	3	
IIa	Had an episode when you were so full of energy, your ideas came very rapidly, you talked nearly nonstop, you moved quickly from one activity to another, and you believed you could do almost anything?	0	1	2	3	4	
b	Slept less than usual, but still had a lot of energy?	0	1	2	3	4	
c	Started lots more projects than usual or did more risky things than usual?	0	1	2	3	4	
IIIa	Felt someone or some group may be trying to influence your thoughts or behavior?	0	1	2	3	4	
b	Could see objects or things others could not see?	0	1	2	3	4	
c	Felt that someone could hear your thoughts, or that you could hear what another person was thinking?	0	1	2	3	4	
IVa	Had bad nightmares about a traumatic or terrible event, or thought about it when you did not want to?	0	1	2	3	4	
b	Tried hard not to think about this terrible event, or went out of your way to avoid situations that reminded you of it?	0	1	2	3	4	
c	Felt that your future plans or hopes will not come true as a consequence of this experience?	0	1	2	3	4	
Va	Drinking at least 4 drinks of any kind of alcohol in a single day?	0	1	2	3	4	
b	Using any of the following medicines without a prescription OR in greater amounts or longer than prescribed: Painkillers (like Norco), stimulants (like Adderall or Ritalin), sedatives (like sleeping pills or Xanax)?	0	1	2	3	4	
c	Used drugs like marijuana, cocaine or crack, ecstasy, hallucinogens (like LSD), heroin, inhalants or solvents (like glue), or methamphetamine (like speed)?	0	1	2	3	4	

Circle the number that best describes how much you agree or disagree with each statement.	**Strongly Disagree**	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**
1) I'm not the problem one. It doesn't make much sense for me to consider changing.	1	2	3	4	5
2) I am finally doing some work on my problem.	1	2	3	4	5
3) I've been thinking that I might want to change something about myself.	1	2	3	4	5
4) At times my problem is difficult, but I'm working on it.	1	2	3	4	5
5) Trying to change is pretty much a waste of time for me because the problem doesn't have to do with me.	1	2	3	4	5
6) I'm hoping that I will be able to understand myself better.	1	2	3	4	5
7) I guess I have faults, but there's nothing that I really need to change.	1	2	3	4	5
8) I am really working hard to change.	1	2	3	4	5
9) I have a problem and I really think I should work on it.	1	2	3	4	5
10) I'm not following through with what I had already changed as well as I had hoped, and I want to prevent a relapse of the problem.	1	2	3	4	5
11) Even though I'm not always successful in changing, I am at least working on my problem.	1	2	3	4	5
12) I thought once I had resolved the problem I would be free of it, but sometimes I still find myself struggling with it.	1	2	3	4	5
13) I wish I had more ideas on how to solve my problem.	1	2	3	4	5
14) Maybe someone or something will be able to help me.	1	2	3	4	5
15) I may need a boost right now to help me maintain the changes I've already made.	1	2	3	4	5
16) I may be part of the problem, but I don't really think I am.	1	2	3	4	5
17) I hope that someone will have some good advice for me.	1	2	3	4	5

CONT.

Circle the number that best describes how much you agree or disagree with each statement.	**Strongly Disagree**	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**
18) Anyone can talk about changing; I'm actually doing something about it.	1	2	3	4	5
19) All this talk about psychology is boring. Why can't people just forget about their problems?	1	2	3	4	5
20) I'm struggling to prevent myself from having a relapse of my problem.	1	2	3	4	5
21) It is frustrating, but I feel I might be having a recurrence of a problem I thought I had resolved.	1	2	3	4	5
22) I have worries but so does the next guy. Why spend time thinking about them?	1	2	3	4	5
23) I am actively working on my problem.	1	2	3	4	5
24) After all I had done to try and change my problem, every now and then it comes back to haunt me.	1	2	3	4	5

Appendix B3

Composition Breakdown of the CSA

INSTRUCTIONS: To begin the assessment process, please answer the following questions. All information provided is CONFIDENTIAL.

1) What brings you to ACCESS today?	Adapted from the ACCESS Screening form (Presenting Problem)	
2) When did this problem start? 3) How long has this problem lasted? 4) How often do you feel symptoms related to this problem?	Adapted from the ACCESS Screening form (Current Symptoms)	
5) What happened to cause or contribute to this problem?	Adapted from the ACCESS Screening form (Current Stressors/ Precipitating Events)	
a) Have you ever talked to a psychiatrist, psychologist, nurse practitioner, therapist, social worker, or counselor about an emotional problem?	MHSF-III #1	
b) Have you ever felt you needed help with your emotional problems, or have you had people tell you that you should get help for your emotional problems?	MHSF-III #2	
c) Have you ever been advised to take medication for anxiety, depression, hearing voices, or for any other emotional problem?	MHSF-III #3	
d) Have you ever been seen in a psychiatric emergency room or been hospitalized for psychiatric reasons?	MHSF-III #4	
What services would you like to receive from ACCESS? (Please circle all that apply)	Psychiatric Medication Management Counseling Housing Assistance Employment Assistance Case management	
Are there any services NOT listed that you are in need of?		

INSTRUCTIONS: The questions below ask about things related to the problem that might have bothered you. For each question, CIRCLE the number that best describes how much (or how often) you have been bothered by each problem during the past TWO (2) WEEKS.

	During **THE PAST TWO WEEKS**, how often have the following problems bothered you?	**NONE**; Not at all	**SLIGHT**; Less than 2 days	**MILD**; Between 3 and 6 days	**MODERATE**; At least 7 days/ one week	**SEVERE**; Nearly every day	(DSM-5 A1CCM)
Ia	Felt down, depressed, or hopeless?	PHQ-9, Question #1					
b	Had little interest or pleasure in doing things?	PHQ-9, Question #2					
c	Had thoughts that you would be better off dead or of hurting yourself in some way?	PHQ-9, Question #9					
IIa	Had an episode when you were so full of energy, your ideas came very rapidly, you talked nearly nonstop, you moved quickly from one activity to another, and you believed you could do almost anything?	MHSF-III #13					
b	Slept less than usual, but still had a lot of energy?	DSM-5 A1CCM #4					
c	Started lots more projects than usual or did more risky things than usual?	DSM-5 A1CCM #5					
IIIa	Felt someone or some group may be trying to influence your thoughts or behavior?	MHSF-III #10					
b	Could see objects or things others could not see?	MHSF-III #5					
c	Felt that someone could hear your thoughts, or that you could hear what another person was thinking?	DSM-5 A1CCM #13					
IV a	Had bad nightmares about a traumatic/terrible event, or thought about it when you did not want to?	PC-PTSD #1					
b	Tried hard not to think about this terrible event, or went out of your way to avoid situations that reminded you of it?	PC-PTSD #2					
c	Felt that your future plans or hopes will not come true as a consequence of this experience?	J-PC-PTSD #4 (van Dam)					
Va	Drinking at least 4 drinks of any kind of alcohol in a single day?	DSM-5 A1CCM #21					
b	Using any of the following medicines without a prescription OR in greater amounts or longer than prescribed: Painkillers (like Norco), stimulants (like Adderall or Ritalin), sedatives (like sleeping pills or Xanax)?	DSM-5 A1CCM #23					
c	Used drugs like marijuana, cocaine or crack, ecstasy, hallucinogens (like LSD), heroin, inhalants or solvents (like glue), or methamphetamine (like speed)?	DSM-5 A1CCM #23					

University of Rhode Island Change Assessment (URICA), 24-Item Version

Question Type	**Question Position**
PC	1) I'm not the problem one. It doesn't make much sense for me to consider changing.
PA	2) I am finally doing some work on my problem.
C	3) I've been thinking that I might want to change something about myself.
PA	4) At times my problem is difficult, but I'm working on it.
PC	5) Trying to change is pretty much a waste of time for me because the problem doesn't have to do with me.
C	6) I'm hoping that I will be able to understand myself better.
PC	7) I guess I have faults, but there's nothing that I really need to change.
PA	8) I am really working hard to change.
C	9) I have a problem and I really think I should work on it.
M	10) I'm not following through with what I had already changed as well as I had hoped, and I want to prevent a relapse of the problem.
PA	11) Even though I'm not always successful in changing, I am at least working on my problem.
M	12) I thought once I had resolved the problem I would be free of it, but sometimes I still find myself struggling with it.
C	13) I wish I had more ideas on how to solve my problem.
C	14) Maybe someone or something will be able to help me.
M	15) I may need a boost right now to help me maintain the changes I've already made.
PC	16) I may be part of the problem, but I don't really think I am.
C	17) I hope that someone will have some good advice for me.
PA	18) Anyone can talk about changing; I'm actually doing something about it.
PC	19) All this talk about psychology is boring. Why can't people just forget about their problems?
M	20) I'm struggling to prevent myself from having a relapse of my problem.
M	21) It is frustrating, but I feel I might be having a recurrence of a problem I thought I had resolved.
P	22) I have worries but so does the next guy. Why spend time thinking about them?
PA	23) I am actively working on my problem.
M	24) After all I had done to try and change my problem, every now and then it comes back to haunt me.

Change Motivation/Treatment Readiness (CMTR) stages: Pre-Contemplation [PC], Contemplation [C], Preparation/ Action [A], Maintenance [M])

Name: [redacted] Case#: [redacted] Page: 1 of 3
Type: Screening Adult and Child Date: 02/07/2017
Printed on 02/07/2017 at 08:49 AM (Draft)

ACCESS

SCREENING

Limits of Confidentiality explained before beginning? O Yes O No

Source(s) of Information: ☐ Client ☐ Family ☐ Caretaker ☐ Friend ☐ Medical Record

Presenting Problem (include impact on social, work, and/or academic functioning):

Current Symptoms (describe symptoms, their onset, severity, frequency, duration):

Describe Any Current Stressors and/or Precipitating Events:

Behavioral Observations:

Signature of Clinician Performing Assessment:

Name: Date: Time: Pending

Appendix B5

University of Rhode Island Change Assessment for Substance Abuse and Mental Health

Question Position	**Circle the number that best describes how much you agree or disagree with each statement.**	**Strongly Disagree**	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**	
1	I'm not the problem one. It doesn't make much sense for me to consider changing.	1	2	3	4	5	
5	Trying to change is pretty much a waste of time for me because the problem doesn't have to do with me.	1	2	3	4	5	
7	I guess I have faults, but there's nothing that I really need to change.	1	2	3	4	5	
16	I may be part of the problem, but I don't really think I am.	1	2	3	4	5	
19	All this talk about psychology is boring. Why can't people just forget about their problems?	1	2	3	4	5	
22	I have worries but so does the next guy. Why spend time thinking about them?	1	2	3	4	5	
	TOTAL **PRE-CONTEMPLATION** SCORE (PC):					/6	
2	I am finally doing some work on my problem.	1	2	3	4	5	
4	At times my problem is difficult, but I'm working on it.	1	2	3	4	5	
8	I am really working hard to change.	1	2	3	4	5	
11	Even though I'm not always successful in changing, I am at least working on my problem.	1	2	3	4	5	
18	Anyone can talk about changing; I'm actually doing something about it.	1	2	3	4	5	
23	I am actively working on my problem.	1	2	3	4	5	
	TOTAL **ACTION** SCORE (A):					/6	
3	I've been thinking that I might want to change something about myself.	1	2	3	4	5	
6	I'm hoping that I will be able to understand myself better.	1	2	3	4	5	
9	I have a problem and I really think I should work on it.	1	2	3	4	5	
13	I wish I had more ideas on how to solve my problem.	1	2	3	4	5	
14	Maybe someone or something will be able to help me.	1	2	3	4	5	
17	I hope that someone will have some good advice for me.	1	2	3	4	5	
	TOTAL **CONTEMPLATION** SCORE (C):					/6	

URICA-M (cont.)

	Circle the number that best describes how much you agree or disagree with each statement.	**Strongly Disagree**	**Disagree**	**Undecided**	**Agree**	**Strongly Agree**	
10	I'm not following through with what I had already changed as well as I had hoped, and I want to prevent a relapse of the problem.	1	2	3	4	5	
12	I thought once I had resolved the problem I would be free of it, but sometimes I still find myself struggling with it.	1	2	3	4	5	
15	I may need a boost right now to help me maintain the changes I've already made.	1	2	3	4	5	
20	I'm struggling to prevent myself from having a relapse of my problem.	1	2	3	4	5	
21	It is frustrating, but I feel I might be having a recurrence of a problem I thought I had resolved.	1	2	3	4	5	
24	After all I had done to try and change my problem, every now and then it comes back to haunt me.	1	2	3	4	5	
				TOTAL **MAINTENANCE** SCORE (M):		/6	

(A)	+	(C)	+	(M)	=	TOTAL	- (PC)	= CHANGE READINESS

SCORING:

8 or LESS = <u>PRE-CONTEMPLATION</u> STAGE

8 - 11 = <u>CONTEMPLATION</u> STAGE

11 - 14 = <u>PREPARATION</u> OR <u>ACTION</u>

ACCESSED FROM the University of Maryland, Baltimore County
http://habitslab.umbc.edu/urica/ (OVERVIEW) *AND* http://habitslab.umbc.edu/urica-readiness-score/ *(READINESS SCORE)*

Appendix C1

Needs Assessment Screening (NAS) 81

PAGE 1 (of Client Self-Assessment)

1) PRIMARY CONCERN/COMPLAINT:_____

_____

2) HAS A HISTORY OF MENTAL HEALTH TREATMENT? YES / NO

3) SEEKING WHAT TYPE OF SERVICES? Medication Counseling SE SH CM

OTHER:_____

PAGE 2 (of Client Self-Assessment)

I—DEPRESSION YES / NO MAYBE **PHQ TOTAL SCORE:_____/ 27**
(≥ 10)

SCORE:_____/9 (≥ 2 on Question 1 and/or 2) (MILD 10-14; MODERATE 15-19; SEVERE >20)

II—BIPOLAR DISORDER YES / NO MAYBE **MDQ SCORE:_____/ 13**
(≥ 7)

SCORE:_____/12 (≥ 9)

III—SCHIZOPHRENIA YES / NO MAYBE **PRIME SCORE:_____/60**
(≥ 14)

SCORE:_____/12 (≥ 9)

IV—PTSD YES / NO MAYBE **PCL-6 SCORE:_____/24**
(≥ 14)

SCORE:_____/12 (≥ 9)

V—SUBSTANCE USE YES / NO MAYBE **TCUDS-V SCORE:_____/11**
(MILD 2-3; MODERATE 4-5; SEVERE **(≥** 6)

SCORE:_____/12 (≥ 1)

CHANGE READINESS **URICA SCORE:_____/_**PRE-CON CON PREP/ACT
PRE-CON (≤8); CON (9-11); PREP/ACT ≥12

☐ I RECOMMEND THAT THIS CLIENT COMPLETE AN INTAKE ASSESSMENT FOR:

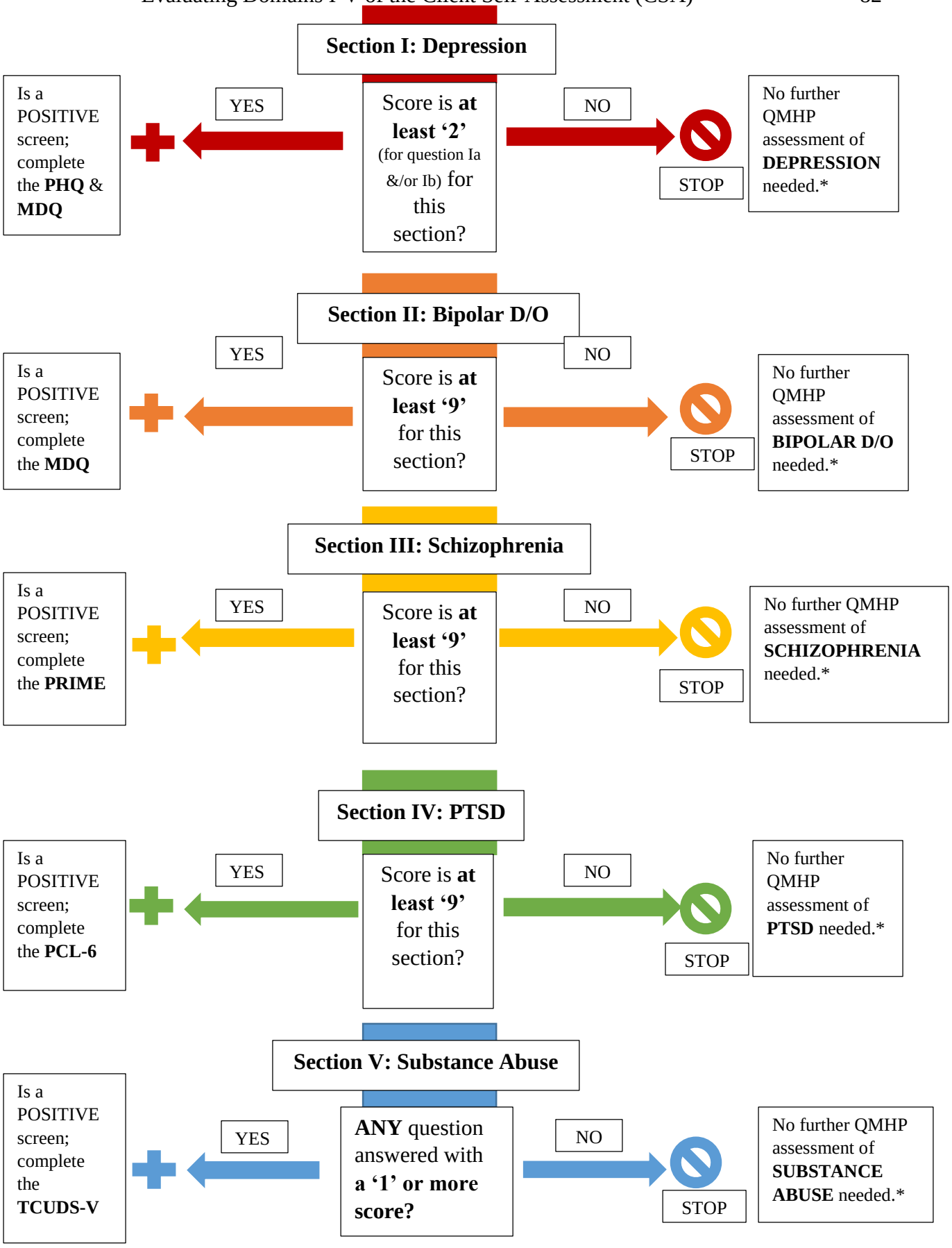
Depression Bipolar DO Schizophrenia PTSD (+1) Substance use (+1)

OR

☐ I RECOMMEND THIS CLIENT BE CONNECTED TO COMMUNITY SERVICES FOR:

_____

SCREENER NAME:_____ DATE_____


Section I: Depression
Score is at least '2' (for question Ia &/or Ib) for this section?
YES
NO
Is a POSITIVE screen; complete the PHQ & MDQ
STOP
No further QMHP assessment of DEPRESSION needed.*
Section II: Bipolar D/O
Score is at least '9' for this section?
YES
NO
Is a POSITIVE screen; complete the MDQ
STOP
No further QMHP assessment of BIPOLAR D/O needed.*
Section III: Schizophrenia
Score is at least '9' for this section?
YES
NO
Is a POSITIVE screen; complete the PRIME
STOP
No further QMHP assessment of SCHIZOPHRENIA needed.*
Section IV: PTSD
Score is at least '9' for this section?
YES
NO
Is a POSITIVE screen; complete the PCL-6
STOP
No further QMHP assessment of PTSD needed.*
Section V: Substance Abuse
ANY question answered with a '1' or more score?
YES
NO
Is a POSITIVE screen; complete the TCUDS-V
STOP
No further QMHP assessment of SUBSTANCE ABUSE needed.*

PAGE 1: CLIENT SELF-ASSESSMENT (CSA), NARRATIVE INFORMATION

1) Does the **PRIMARY CONCERN/COMPLAINT** suggest presence of a mental disorder?
- YES → CONTINUE assessment
- NO → STOP assessment; REFER to community supports

2) Is there a **HISTORY OF MENTAL HEALTH TREATMENT** suggesting presence of a mental disorder?
- YES → CONTINUE assessment
- NO → CONTINUE assessment

3) Is the person **SEEKING** a **SERVICE** that is provided?
- YES → CONTINUE assessment
- NO → STOP assessment; REFER to community supports

PAGE 2: CLIENT SELF-ASSESSMENT (CSA), NEED FOR ADDITIONAL SCREENING (SECTION I-V)

ANY section scored **YES (Y)** (a **POSITIVE** screen) → COMPLETE additional screening for that section; If screening positive, REFER FOR INTAKE ASSESSMENT.

ANY section answered **NO (N)** (a **NEGATIVE** screen) → STOP; no additional screening for this section needed.

ANY section answered **MAYBE** (did not meet cut-off point of screen, but **STILL SUSPECTED**) → COMPLETE additional screening for that section. If screening positive, REFER FOR INTAKE ASSESSMENT.

CHANGE READINESS SCORE (URICA-M) *ALWAYS COMPLETE AND SCORE*

ANSWER the QUESTION: (CIRCLE answer)
- Client **IS** + Contemplation, Action, or Maintenance (score ≥ 9)
- (OR) **IS NOT** MOTIVATED for services → Pre-Contemplation ONLY; (score ≤ 8) → STOP; do not refer?

FINAL QMHP REFERRAL RECOMMENDATION(s)

RECOMMEND INTAKE (CHECK box) → CIRCLE suspected diagnosis; IF primary diagnosis is PTSD or SUBSTANCE ABUSE, must have a qualifying diagnosis too.

(OR)

RECOMMEND COMMUNITY SERVICES REFERAL (CHECK box) → Write in referral recommendation for the community.

Over the past 2 weeks, how often have you been bothered by any of the following problems?	**Not at All**	**Several Days**	**More than half the days**	**Nearly Every Day**
1) Felt down, depressed, or hopeless?	0	1	2	3
2) Had little interest or pleasure in doing things?	0	1	2	3
3) Trouble falling asleep, staying asleep, or sleeping too much	0	1	2	3
4) Feeling tired or having little energy	0	1	2	3
5) Poor appetite or overeating	0	1	2	3
6) Feeling bad about yourself - or that you're a failure or have let yourself or your family down	0	1	2	3
7) Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8) Moving or speaking so slowly that other people could have noticed. **Or, the opposite** - Being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9) Had thoughts that you would be better off dead or of hurting yourself in some way?	0	1	2	3
COLUMN TOTALS:		+	+	
			PHQ SCORE:	

10) If you circled any problems, how difficult have those problems made it for you to do your work, take care of things at home, or get along with other people?

Not Difficult at all **Somewhat Difficult** **Very Difficult** **Extremely Difficult**

Score from CSA Questions Ia-c		+	PHQ SCORE		=		**(PHQ TOTAL SCORE)**

SCREEN IS CONSIDERED POSITIVE IF all three parts of the following criteria ARE MET:

- To Questions 1 and 2, one or both answered "2" or "3" AND
- To Questions 1 through 9, five (5) or more boxes endorsed in the shaded area (Questions 1-8, answered "2" or more; Question 9, answered "1" or more) AND
- Question 10 answered at least "Somewhat Difficult"

PHQ TOTAL SCORE = SYMPTOM SEVERITY:

- 10-14 = Persistent Depressive Disorder (PDD) or Major Depressive Disorder (MDD), mild
- 15-19 = MDD, moderate
- >20 = MDD, severe

Appendix C5

Mood Disorder Questionnaire (MDQ) 85

Has there ever been a period of time when you were not your usual self and...	**YES**	**NO**
... you felt so good or so hyper that other people thought you were not your normal self or you were so hyper that you got into trouble?		
...you were so irritable that you shouted at people or started fights or arguments?		
...you felt much more self-confident than usual?		
...you got much less sleep than usual and found that you didn't really miss it?		
...you were more talkative or spoke much faster than usual?		
...thoughts raced through your head or you couldn't slow your mind down?		
... you were so easily distracted by things around you that you had trouble concentrating or staying on track?		
...you had more energy than usual?		
...you were much more active or did many more things than usual?		
... you were much more social or outgoing than usual, for example, you telephoned friends in the middle of the night?		
...you were much more interested in sex than usual?		
... you did things that were unusual for you or that other people might have thought were excessive, foolish, or risky?		
...spending money got you or your family in trouble?		
TOTAL		/13
If you checked YES to more than one of the above, have several of these ever happened during the same period of time?	**YES**	NO

How much of a problem did any of these cause you - like being unable to work; having family, money or legal troubles; getting into arguments or fights?				
No problems	Minor problem	**Moderate problem**	**Serious problem**	

SCREEN IS CONSIDERED POSITIVE IF all three parts of the following criteria ARE MET:

■ "YES" to 7 or more of the 13 items in Question 1 AND

■ "Yes" to Question number 2 AND

■ "Moderate Problem" or "Serious Problem" to Question 3

Appendix C6

	DO YOU…	**Not at all**	**Sometimes (3 or less days/week)**		**Most of the Time (4 to 6 days /week)**	**All the Time (Everyday)**
1	…feel that others control what you think and feel?	0	2		4	5
2	…hear or see things that others do not hear or see?	0	2		4	5
3	…feel it is very difficult for you to express yourself in words that others can understand?	0	2		4	5
4	…feel that you share absolutely nothing in common with others, including your friends and family?	0	2		4	5
5	…believe in more than one thing about reality and the world around you that nobody else seems to believe in?	0	2		4	5
6	…think others do not believe you when you tell them the things you see or hear?	0	2		4	5
7	…not trust what you are thinking because you don't know if it's real or not?	0	2		4	5
8	…have magical powers that nobody else has or can explain?	0	2		4	5
9	…think others are plotting to get you?	0	2		4	5
10	…find it difficult to get a hold of your thoughts?	0	2		4	5
11	…think you am treated unfairly because others are jealous of your special abilities?	0	2		4	5
12	…talk to another person or other people inside your head that nobody else can hear?	0	2		4	5
					TOTAL SCORE	/60

SCORING:

≥ 14… Likely schizophrenia

10 – 13…Possible early schizophrenia

0 – 9…Unlikely

Developed by the PRIME group at Yale University Medical Schoo1

Via CHEO

Assessing **Trauma Exposure**:

READ: During childhood or adulthood, people can experience or witness threatening, horrible, or shocking events. This can for example be physical intimidation, sexual violence, sexual abuse, physical violence, a serious accident, or a disaster. Have you ever experienced such a trauma yourself or have you ever witnessed such a traumatic event?

If the answer is YES, CONTINUE TO THE PCL-6 below.
If the answer is NO, STOP PTSD screening.

PCL-5, 6-ITEM (PTSD-CHECKLIST for DSM-5, 6-ITEM VERSION)

READ INSTRUCTIONS: Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem **IN THE PAST MONTH.**

	In the past month, how much were you bothered by:	**Not at all**	**A Little Bit**	**Moderately**	**Quite a Bit**	**Extremely**
1 OR	Repeated, disturbing, and unwanted memories of the stressful experience?	0	1	2	3	4
5	Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing, sweating)?	0	1	2	3	4
7	Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?	0	1	2	3	4
13	Feeling distant or cut off from other people?	0	1	2	3	4
15	Irritable behavior, angry outbursts, or acting aggressively?	0	1	2	3	4
19	Having difficulty concentrating?	0	1	2	3	4
					TOTAL SCORE	/24

SCORING:
TOTAL SCORE ≥ 14… Is considered positive screen

(on basis of full, 20-item version, with total score being 80 [and cut off of 33 = 41%];
Per Tiet et al. [2013] recommendations citing 14 as the cut-off score to maintain convergent validity)

AND

Question #1 *OR* #5 is scored ≥2, **AND**

Question #7 *AND* #13 is scored ≥2, **AND**

Question #15 *AND* #19 is scored ≥2.

Weathers, F.W., Litz, B.T., Keane, T.M., Palmieri, P.A., Marx, B.P., & Schnurr, P.P. (2013). The PTSD Checklist for DSM-5 (PCL-5). Scale available from the National Center for PTSD http://www.ptsd.va.gov/professional/assessment/adult-sr/ptsd-checklist.asp

(Abbreviated version ADAPTED on the basis of guidelines developed by Tiet, Q. Q., Schutte, K. K., & Leyva, Y. E. [2013].

During the last 12 months:	**YES**	**NO**
1) Did you use larger amounts of alcohol or drugs, or use them for a longer time than you planned or intended?		
2) Did you try to control or cut down on your alcohol or drug use but were unable to do it?		
3) Did you spend a lot of time getting alcohol or drugs, using them, or recovering from their use?		
4) Did you have a strong desire or urge to drink alcohol or use drugs?		
5) Did you get so high or sick from using alcohol or drugs that it kept you from working, going to school, or caring for children?		
6) Did you continue using alcohol or drugs even when it led to social or interpersonal problems?		
7) Did you spend less time at work, school, or with friends because of your alcohol or drug use?		
8) Did you use alcohol or drugs that put you or others in physical danger?		
9) Did you continue using alcohol or drugs even when it was causing you physical or psychological problems?		
10a) Did you need to increase the amount of a drug or alcohol you were taking so that you could get the same effects as before?		
OR		
10b) Did using the same amount of a drug or alcohol lead to it having less of an effect as it did before?		
11a) Did you get sick or have withdrawal symptoms when you quit or missed taking a drug or using alcohol?		
OR		
11b) Did you ever keep taking a drug or drinking alcohol to relieve or avoid getting sick or having withdrawal symptoms?		
TOTAL		/11

SCORING:

Assign 1 point for each "yes" response to items 1 through 9.
For items 10 and 11, assign 1 point if respondent answers "yes" to either 10a or 10b, and 11a or 11b.
Sum 1-point "yes" responses for items 1 through 11, yielding a total **score ranging between 0 and 11.**
INTEREPRETING SCORES:

Mild disorder: Score of 2-3 points (presence of 2-3 symptoms)
Moderate disorder: Score of 4-5 points (presence of 4-5 symptoms)
Severe disorder: Score of 6 or more points (presence of 6 or more symptoms)

DNP Project Approval Template for the Graduate Nursing Department Review Committee

Student completes the top portion only

Student ID number: 1001317201 (Carrie Deer)

Project Title: A New Screening Procedure to Identify Co-Occurring Psychiatric and Substance Use Disorders

Project Summary (Brief): The failure to objectively identify the co-occurring psychiatric and substance use disorder (COPSD) population in every day clinical practice necessitates a new screening-into-intake procedure (SIIP) for adults initiating services at a community mental health agency serving rural East Texas. Using the Iowa Model for Evidence-Based Practice, this SIIP will incorporate both self- and observer-rated scales to determine one's initial eligibility, and motivation, for treatment and services. The impact of SIIP implementation will serve to evaluate agency-change towards becoming more dual diagnosis capable in serving the COPSD population.

Setting: Anderson Cherokee Community Enrichment ServiceS (ACCESS)—an outpatient, community mental health agency.

Population: Adults seeking initial mental health services with ACCESS.

The project will use the following model: Iowa Model for Evidence-Based Practice

Committee Use Only

The results will be disseminated, but they are not generalizable knowledge. The results will include use of the most current research to translate the knowledge into practice, thus it is not new generalizable knowledge. ✓Agree ___Disagree

This project is a quality improvement _____ or evidence-based project ✓ and will translate the knowledge into the clinical setting. It is not generalizable because it is not generated from a research study that is being conducted.

✓Yes ____No This project is not considered Human Subjects Research and does not require IRB HSR review.

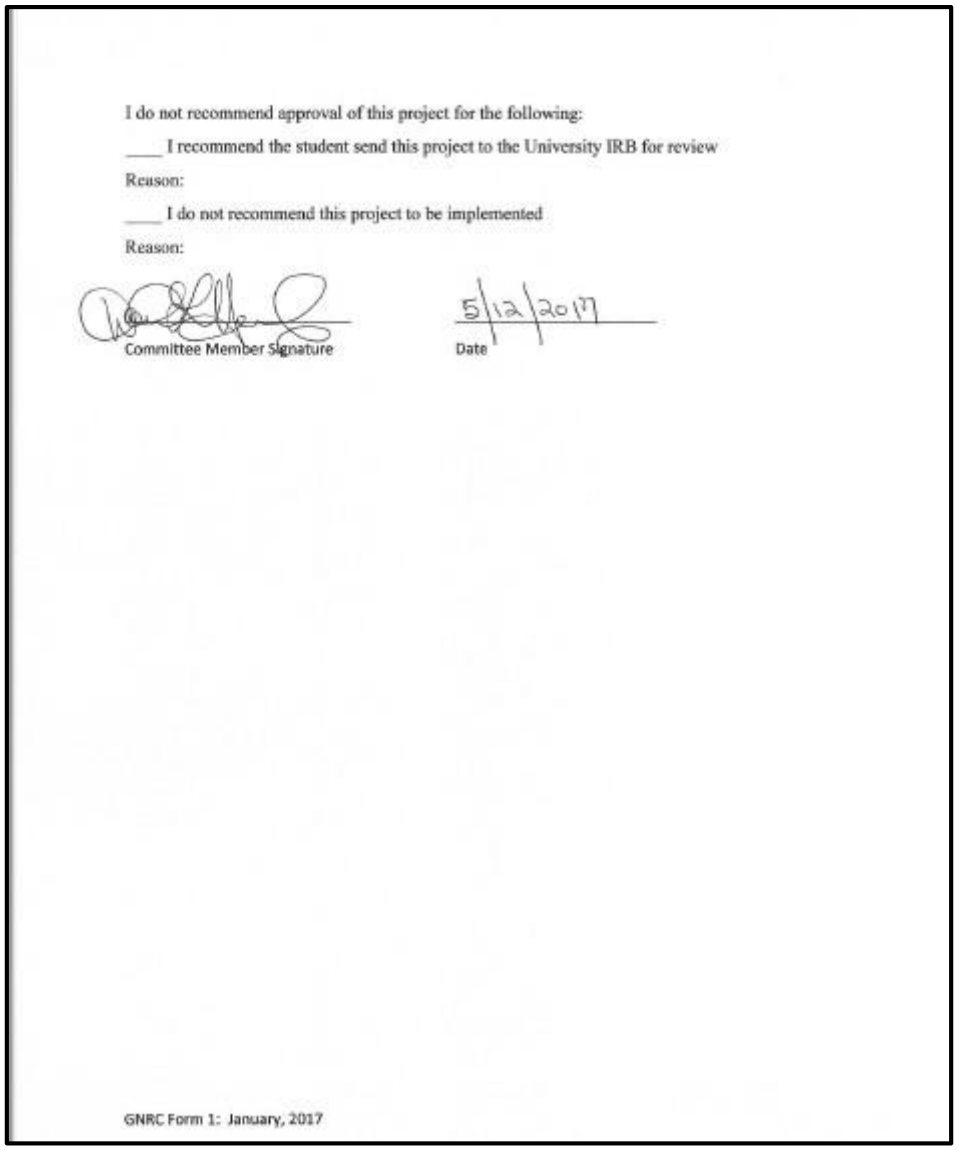
This quality improvement project did not satisfy the *definition of research* under 45 CFR 46.102(d). Therefore, it was not subject to the Health and Human Services regulations for the protection of human subjects in research (45 CFR part 46, 2009) or require Institutional Review Board approval.

____I recommend approval of this QI project

✓ I recommend approval of this EBP project

or

GNRC Form 1: January, 2017



I do not recommend approval of this project for the following:

____ I recommend the student send this project to the University IRB for review

Reason:

____ I do not recommend this project to be implemented

Reason:

Committee Member Signature

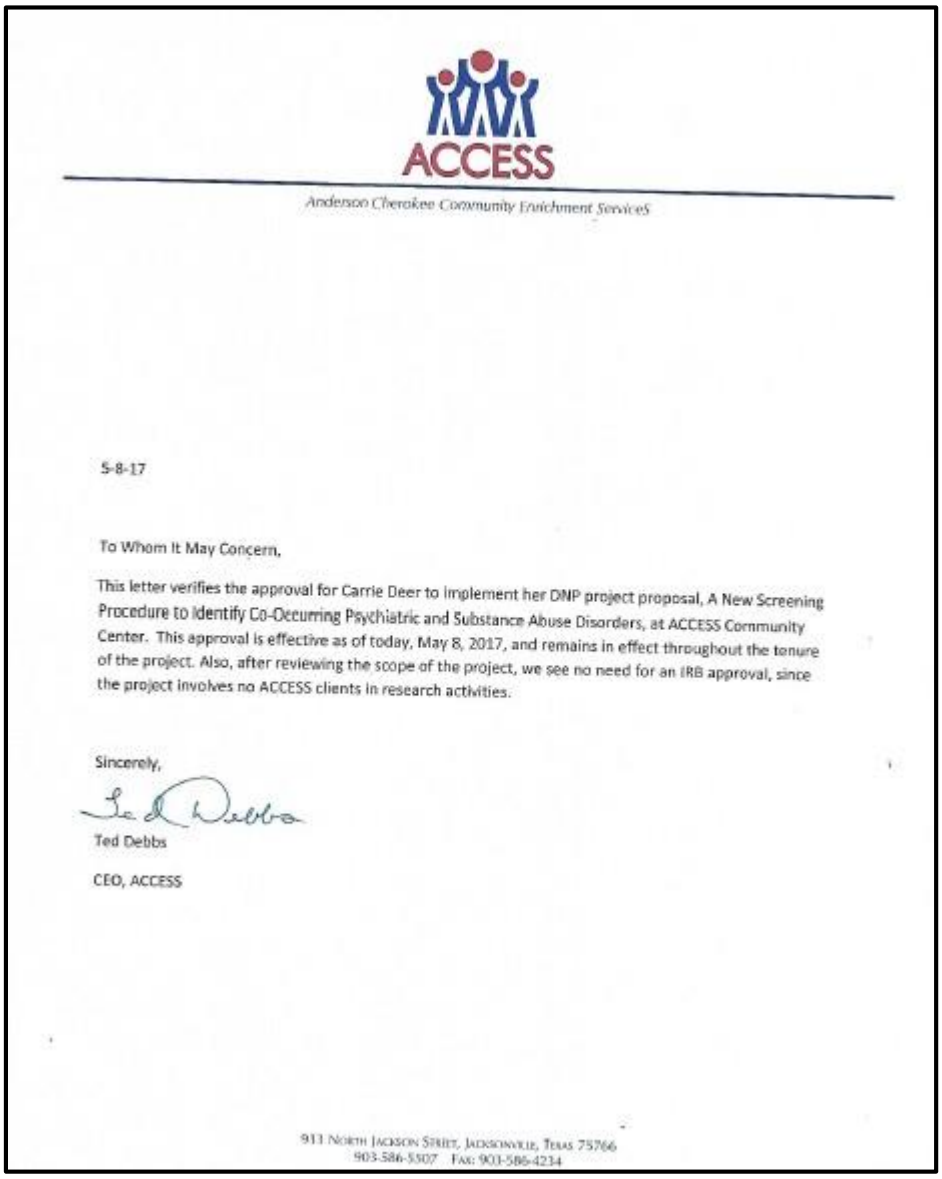
5/12/2017

Date

GNRC Form 1: January, 2017

Appendix D2

ACCESS Project Approval Letter



ACCESS

Anderson Cherokee Community Enrichment Services

5-8-17

To Whom It May Concern,

This letter verifies the approval for Carrie Deer to implement her DNP project proposal, A New Screening Procedure to Identify Co-Occurring Psychiatric and Substance Abuse Disorders, at ACCESS Community Center. This approval is effective as of today, May 8, 2017, and remains in effect throughout the tenure of the project. Also, after reviewing the scope of the project, we see no need for an IRB approval, since the project involves no ACCESS clients in research activities.

Sincerely,

Ted Debbs

CEO, ACCESS

911 North Jackson Street, Jacksonville, Texas 75766
903-586-5507 Fax: 903-586-4234

THE INTERVENTION | **PART ONE: SCREENING INTO INTAKE PROCEEDURE (SIIP)**

STAGE ONE: SELF-ASSESSMENT BY POTENTIAL CLIENT

Task(s):

-Complete the **CLIENT SELF ASSESSMENT (CSA). See Appendix A2.**

-A paper-based form completed by the person before the screening process starts.

Domains Assessed:

-Depression

-Bipolar Disorder

-Schizophrenia

-PTSD

-Substance Use

-Change Motivation

Paper-Based Screening tools used: **(See Appendix A3: Composition Breakdown of the CSA)**

3-Questions from the Patient Health Questionnaire (PHQ-9).

3-Questions: One from the Mental Health Screening Form (MHSF-III), Two from the DSM-5 Adult Level 1 Cross Cutting Measure (A1CCM).

3-Questions: Two from the MHSF-III, One from the DSM-5 A1CCM.

3-Questions: Two from the Primary Care PTSD Screen (PC-PTSD), One from the Jellinek adapted version of the PC-PTSD (J-PC-PTSD).

3-Questions from the DSM-5 A1CCM.

24-Questions from the University of Rhode Island Change Assessment (URICA).

Move to STAGE TWO

STAGE TWO: NEEDS ASSESSMENT SCREENING BY QMHP

Task(s):

-Score the CSA

-Complete the **NEEDS ASSESSMENT SCREENING (NAS)** electronically. **See Appendix B1**.

-Determine if Additional Screenings should be administered to rule-in or out a disorder. **See Appendix B2: Evaluating Domains I-V of the Client Self-Assessment (CSA)**.

Domains Assessed:

-Depression

-Bipolar Disorder

-Schizophrenia

-PTSD

-Substance Use

-Change Motivation

Electronic Additional Screening tools used in Anasazi (the EHR):

Patient Health Questionnaire (PHQ-9), remaining 7-questions. **See Appendix B4**.

Mood Disorder Questionnaire (MDQ), 14-Questions. **See Appendix B5**.

Prevention through Risk Identification, Management, and Education early psychosis screening (Labeled PRIME Schizophrenia Screening in EHR), 12-Questions. **See Appendix B6**.

PTSD Checklist, 6-Item (PCL-6; Labeled Trauma Exposure in EHR), 7-Questions. **See Appendix B7**.

Texas Christian University (TCU) Drug Screen-V (TCUDS-V; Labeled ACCTCU in EHR). **See Appendix B8**.

SCORE the URICA. **See Appendix B9**.

DECISION POINT:

-Determine if the person a) may **QUALIFY** for services and b) should be **REFERRED** for Intake Assessment.* **See Appendix B3.**

TREATMENT AS USUAL | **PART TWO: PROVISIONAL DIAGNOSING**

STAGE THREE: INTAKE ASSESSMENT BY LPC

Task(s):

-The Licensed Professional Counselor (LPC) reviews the QMHP's NAS recommendation.

-The LPC determines if the person has a qualifying diagnosis using the Diagnostic and Statistical Manual, 5th edition (DSM-5) diagnostic criteria. If a qualifying diagnosis is confirmed, the person is deemed eligible for services. If eligible, a **PROVISIONAL, QUALIFYING DIAGNOSIS** is made.

-If determined to be eligible, an **INTAKE ASSESSMENT (IA)** is completed and a TREATMENT PLAN is initiated.

-The person is then referred and scheduled for a **PSYCHIATRIC EVALUATION (PE)**, if agrees to medication management.

Domains assessed:

QUALIFYING DIAGNOSES:
(*MUST* BE PRESENT):

-Major Depressive Disorder

-Bipolar Disorder

-Schizophrenia

ADDITIONAL, ADD-ON DIAGNOSES:
(CANNOT BE THE *ONLY* DIAGNOSIS PRESENT)

-PTSD

-Substance Use

STAGE FOUR: PSYCHIATRIC EVALUATION BY NP

Task(s):

- The Psychiatric Nurse Practitioner (PMHNP) or Psychiatrist reviews the **INTAKE ASSESSMENT (IA)**.

-The PMHNP or Psychiatrist determines if the person has a qualifying diagnosis using DSM-5 diagnostic criteria. If eligible, the PROVISIONAL, QUALIFYING DIAGNOSIS is either confirmed or a new diagnosis made.

-A **PSYCHIATRIC EVALUATION (PE)** is completed and treatment is initiated. This appointment is designated as **APPOINTMENT ONE**.

-A FOLLOW UP appointment for treatment and diagnosis re-evaluation is scheduled. This appointment is designated as **APPOINTMENT TWO**.

Domains assessed:

QUALIFYING DIAGNOSES:
(*MUST* BE PRESENT):

-Major Depressive Disorder

-Bipolar Disorder

-Schizophrenia

ADDITIONAL, ADD-ON DIAGNOSES:
(CANNOT BE THE *ONLY* DIAGNOSIS PRESENT)

-PTSD

-Substance Use

Appendix E2

Worksheet Two: Screening 95

ROW_ID	CSA Scores						Stage of Change	Positive CSA?	Positive PTSD	Positive COPSD	Positive co/PTSD
	DEP	BIP	SCHIZO	PTSD	SA	URICA		Y = 1; N = 0	Y = 1; N = 0	Y = 1; N = 0	Y = 1; N = 0

Abbreviations/Definitions:

ROW_ID—Assigned participant number for data collection purposes.

CSA Scores—Each recorded participant score per disorder section (for DEP, BIP, SCHIZO, PTSD, SA) on the CSA.

DEP—Depression

BIP—Bipolar Disorder

SCHIZO—Schizophrenia

PTSD—Post-Traumatic Stress Disorder

SA—Substance Abuse

URICA—University of Rhode Island Change Assessment Scale

Stage of Change—Pre-Contemplation (PC; score <9); Contemplation (C; score 9-11); Preparation/Action (PA; score >11), as identified by the URICA.

Positive CSA—On the CSA, which particular disorder (DEP [D], BIP [B], SCHIZO [SC], PTSD [P], SA [SA]) is identified as a positive screen?

Positive PTSD—Has PTSD been identified on the CSA?

Positive COPSD—Has a Co-Occurring Substance Use Disorder and Psychiatric Disorder identified on the CSA?

Positive co/PTSD—Has a Co-Occurring Substance Use Disorder and PTSD identified on the CSA?

Coding: Yes = 1 No = 0

CONT.

NAS Scores					Positive NAS?	Positive NAS PTSD	Positive NAS COPSD	Positive NAS Co/PTSD	CSA NAS Agreement?
DEP	BIP	SCHIZO	PTSD	SA		Y = 1; N = 0	Y = 1; N = 0	Y = 1; N = 0	Y = 1; N = 0

Abbreviations/Definitions:

NAS Scores—Each recorded participant score per section (for DEP, BIP, SCHIZO, PTSD, SA) on the Needs Assessment Screening (NAS).

DEP—Depression

BIP—Bipolar Disorder

SCHIZO—Schizophrenia

PTSD—Post-Traumatic Stress Disorder

SA—Substance Abuse

Positive NAS?— On the NAS, which particular disorder (DEP [D], BIP [B], SCHIZO [SC], PTSD [P], SA [SA]) is identified as a positive screen?

Positive PTSD—Has PTSD been identified on the NAS?

Positive COPSD—Has a Co-Occurring Substance Use Disorder and Psychiatric Disorder identified on the NAS?

Positive co/PTSD—Has a Co-Occurring Substance Use Disorder and PTSD identified on the NAS?

CSA NAS Agreement?—Is the result from the CSA the same results from the NAS?

Coding: Yes = 1 No = 0

ROW_ID	IA_DX DEP?	IA_DX BIP?	IA_DX SCHIZO?	IA_DX SA?	IA_DX PTSD?	IA_DX COPSD?	IA_DX Co/PTSD?	IA DX
	Y = 1; N = 0	Y = 1; N = 0	Y = 1; N = 0	Y = 1; N = 0	Y = 1; N = 0	Y = 1; N = 0	Y = 1; N = 0	

Abbreviations/Definitions:

ROW_ID—Assigned participant number for data collection purposes.

IA_DX DEP—Is the person diagnosed with Depression?

IA_DX BIP—Is the person diagnosed with Bipolar Disorder?

IA_DX SCHIZO—Is the person diagnosed with Schizophrenia?

IA_DX SA—Is the person diagnosed with Substance Abuse?

IA_DX PTSD—Is the person diagnosed with Post-Traumatic Stress Disorder (PTSD)?

IA_DX COPSD—Is the person diagnosed with Co-Occurring Disorder?

IA_DX co/PTSD?—Is the person diagnosed with co-occurring Substance Use Disorder (SUD) and PTSD?

IA_DX— During the Intake Assessment (IA), which provisional diagnosis (DEP [D], BIP [B], SCHIZO [SC], PTSD [P], SA [SA]) was identified?

CONT.

IA_DX Agreement CSA?	IA_DX Agreement NAS?
Y = 1; N = 0	Y = 1; N = 0

Abbreviations/Definitions:

IA_DX Agreement CSA?—Is the IA provisional diagnosis the same disorder that was positively screened in the CSA (Stage One)?

IA_DX Agreement NAS?— Is the IA provisional diagnosis the same disorder that was positively screened in the NAS (Stage Two)?

Coding: Yes = 1 No = 0

CONT.

PE_DX DEP?	PE_DX BIP?	PE_DX SCHIZO?	PE_DX SA?	PE_DX PTSD?	PE_DX COPSD?	PE_DX Co/PTSD?	PE DX
Y = 1; N = 0	Y = 1; N = 0	Y = 1; N = 0	Y = 1; N = 0	Y = 1; N = 0	Y = 1; N = 0	Y = 1; N = 0	

Abbreviations/Definitions:

PE_DX DEP—Is the person diagnosed with Depression?

PE_DX BIP—Is the person diagnosed with Bipolar Disorder?

PE_DX SCHIZO—Is the person diagnosed with Schizophrenia?

PE_DX SA—Is the person diagnosed with Substance Abuse?

PE_DX PTSD—Is the person diagnosed with Post-Traumatic Stress Disorder (PTSD)?

PE_DX COPSD—Is the person diagnosed with Co-Occurring Disorder?

PE_DX co/PTSD?—Is the person diagnosed with co-occurring Substance Use Disorder (SUD) and PTSD?

PE_DX— During the Psychiatric Evaluation (PE), which provisional diagnosis (DEP [D], BIP [B], SCHIZO [SC], PTSD [P], SA [SA]) was identified?

CONT.

PE_DX Agreement IA?	PE_DX Agreement CSA?	IA_DX Agreement NAS?
Y = 1; N = 0	Y = 1; N = 0	Y = 1; N = 0

Abbreviations/Definitions:

PE_DX Agreement IA?—Is the PE provisional diagnosis the same disorder that was positively screened in the IA (Stage Three)?

PE_DX Agreement CSA?—Is the PE provisional diagnosis the same disorder that was positively screened in the CSA (Stage One)?

PE_DX Agreement NAS?— Is the PE provisional diagnosis the same disorder that was positively screened in the NAS (Stage Two)?

Coding: Yes = 1 No = 0

Appendix E4

Worksheet One: ANALYTICAL DATA SET, Sociodemographic Data 99

Week	Date	ROW-ID	Name	DOB	Client ID	New Client?
					Y = 1; N = 0	Y = 1; N = 0

Abbreviations/Definitions:

Week—The week number (1, 2, 3, etc.) the screening assessment took place.

Date—The day of the week the screening assessment took place. Used to determine the clinic in which the screening was completed. Screening days are Tuesdays in Palestine and Thursdays in Jacksonville.

ROW_ID—Assigned participant number of a potential client for data collection purposes.

Name—Initials of a potential client.

DOB—The potential client's Date of Birth.

Client ID#--Every person completing an intake screening, whether qualified or disqualified for services, was granted a client ID number.

New Client?—Is person 1) new to services, or has the person 2) received services, or made contact, with the ICMHC previously?

Coding: Yes = 1 No = 0

CONT.

	Age						Race/Ethnicity						Gender	
18-19	20-29	30-39	40-49	50-59	60-69	+70	White (W)	Black (B)	Asian (A)	Other (O)	Mixed (≥2) (M)	Latino/ Hispanic	M	F

Abbreviations/Definitions:

ROW-ID—Assigned participant number for data collection purposes.

Age—According to age range for adult clients.

Race/Ethnicity—**Race** is self-determined as: **White, Black, Asian, Other**, or **Mixed** (defined as identifying with two or more races). If "Mixed ≥2," box is identified, other identified races will not be counted. Each person will be considered **White, Black, Asian, Other,** or **Mixed** Race. **Ethnicity** is identified concurrently with Race. **If identifies as Latino/Hispanic, Yes = 1, No = 0**.

Gender—**M** = Male; **F** = Female.

CONT.

Health Insurance					Resident City			
Self-Pay	Medicaid	Medicare	Private/Commercial	No Information	Jacksonville	Palestine	Frankston	Other

Health Insurance—Type of health insurance coverage:
Self-Pay (**SP**; either uninsured or paying without insurance coverage); **Medicaid** (**MD**) or **Medicare** (**MC**) coverage (Government); **Private/Commercial** (**PC**; employment-based, or non-governmental coverage); **No Information** (**N**; identified); **Blank** (nothing listed).

Resident City—What city person resides in. Includes three most populated cities served by the ICMHC: **Jacksonville** (Cherokee County); **Palestine** (Anderson County); **Frankston** (either county); or **Other** (another city not listed).

Table 1

Psychometric Properties of the Client Self-Assessment (CSA) Screening Tools

Screening Tool*	Domain Assessed	Number of Questions**	Question Type	Total Score (within CSA)	CSA Cut-off Score	Sensitivity	Specificity	Reliability	Validity	Source
ACCESS Screening Tool	Previous MH TX	11	Open-ended	--	--	--	--	--	--	--
PHQ-9	I-Depression	10	Likert	9	2	0.88	0.88	--	--	CQAIMH, 2008
MHSF-III	Previous MH TX II-Mania III-Psychosis	18	Yes/No	12	9	0.81-0.90	0.48-0.68	--	0.73-0.76	SAMHSA, 2015
DSM-5 L1CCM	II-Mania III-Psychosis V-Substance Use	23	Likert	12	9	--	--	0.53-0.56 0.72 0.75-0.78	--	APA, 2013
PC-PTSD	IV-Traumatic Stress Symptoms	4	Likert	12	9	0.70-0.87	0.85-0.92	--	--	Tiet et al., 2013; van Dam et al., 2013
URICA-M	CMTR	24	Likert	14	9, 12	--	--	0.68-0.88	--	SAMHSA, 2015

Note. (Validated Screening Tool) PHQ-9, Patient Health Questionnaire, 9-Question; MHSF-III, Mental Health Screening Form-III; DSM-5 L1CCM, DSM-5 Adult Level-one Cross-Cutting Symptom Measure; PC-PTSD, Primary Care PTSD; URICA-M, University of Rhode Island Change Assessment for Substance Abuse and Mental Health.

(Domain Assessed) Previous MH TX, Previous Mental Health Treatment; CMTR, Change Motivation Treatment Readiness.

*The full version of each screening tool was *not* used. All were modified/limited to include three questions per domain I-V on CSA.

**Per use of full version of each respective screening tool.

Table 2

Psychometric Properties of the Needs Assessment Screening (NAS) Screening Tools

Screening Tool	Domain Assessed	Number of Questions	Question Type	Assesses Disorder Severity?	Maximum Score	Cut-off Score	Sensitivity	Specificity	Reliability	Validity	Flesh-Kincaid Level	Source
PHQ-9	I-Depression	10	Likert	Yes	27	10	0.88	0.88	--	--	5	CQAIMH, 2008
MDQ	II-Bipolar Disorder	13	Yes/No	No	9	7	0.58-0.73	0.67-0.93	--	--	6	CQAIMH, 2008
PRIME	III-Schizophrenia	12	Likert	No	60	14	--	--	"Excellent"	"Strong evidence; Good"	6	CHEO, 2017; Yale School of Medicine, 2017
PCL-6	IV-PTSD	6	Likert	No	24	14	0.92	0.72	--	--	12	Tiet et al., 2013
TCUDS-5	V-Substance Use	11	Yes/No	Yes	11	2	0.85	0.82	0.89-0.95	--	6	Institute of Behavioral Research, 2014a; SAMHSA, 2015
URICA-M	CMTR	24	Likert	Yes	14	9, 12	--	--	0.68-0.88	--	6	SAMHSA, 2015

Note. Flesh-Kincaid Level designates the reading level according to grade level for the tool. PHQ-9, Patient Health Questionnaire, 9-Question; MDQ, Mood Disorder Questionnaire; PRIME, Prevention through Risk Identification, Management, and Education early psychosis screening; PCL-6, PTSD (Post-Traumatic Stress Disorder) Checklist, 6-Question; TCUDS-5, Texas Christian University Drug Screen for DSM-5; URICA-M, University of Rhode Island Change Assessment for Substance Abuse and Mental Health; CMTR, Change Motivation Treatment Readiness.

Table 3

Demographics of Adults Entering the Open Intake Process

Characteristic	n	% of Total
Client Status		
New	71	47%
Previous	80	53%
Age		
18-19	5	3%
20-29	55	36.5%
30-39	46	30.5%
40-49	22	15%
50-59	14	9%
60-69	8	5%
70+	1	1%
Race		
Black	31	21%
White	107	71%
Mixed	2	1%
Other	2	1%
Unspecified	9	6%
Ethnicity		
Hispano/Latino	12	8%
Non-Hispano/Latino	121	80%
Unspecified	18	12%
Gender		
Male	63	42%
Female	88	58%
Health Insurance Status		
Medicaid	23	15%
Medicare	15	10%
No Information	24	16%
Private/Commercial	12	8%
Self-Pay	64	42%
Unspecified	13	9%
Resident City		
Frankston	3	2%
Jacksonville	51	34%
Palestine	67	44%
Other	30	20%

Note. Total number (n) of persons for each category is 151 (n = 151).

Table 4

Chi-Square Crosstabulation for PTSD Disorder

DIAGNOSIS	STAGE	CONGRUENT STAGE	ASSESSMENT	Congruent Positive Screens		Congruent Negative Screens		Incongruity		Total	
				n - % of Total		n - % of Total		n - % of Total		n - %	
PTSD	I-CSA	I	CSA	-	-	-	-	-	-	-	-
		II	NAS	29*	29.7%	57*	58.1%	12*	12.2%	98	100%
		III	IA	23*	22.5%	51*	50.0%	28*	27.5%	102	100%
		IV	PE	15*	19.7%	37*	48.7%	24*	31.6%	76	100%
PTSD	II-NAS	I	CSA	-	-	-	-	-	-	-	-
		II	NAS	-	-	-	-	-	-	-	-
		III	IA	21*	22.3%	49*	52.2%	24*	25.5%	94	100%
		IV	PE	13*	20.0%	36*	55.4%	16*	24.6%	65	100%
PTSD	III-IA	I	CSA	-	-	-	-	-	-	-	-
		II	NAS	-	-	-	-	-	-	-	-
		III	IA	-	-	-	-	-	-	-	-
		IV	PE	15*	18.3%	46*	56.1%	21*	25.6%	82	100%

Note. PTSD, Post-Traumatic Stress Disorder; CSA, Client Self-Assessment; NAS, Needs Assessment Screening; IA, Intake Assessment; PE, Psychiatric Evaluation.
*$p < .001$. Analyzed using Fisher's Exact Test, 2-sided.

Table 5

Chi-Square Crosstabulation for COPSD Disorder

DIAGNOSIS	STAGE	CONGRUENT STAGE	ASSESSMENT	Congruent Positive Screens		Congruent Negative Screens		Incongruity		Total	
				n - % of Total		n - % of Total		n - % of Total		n - %	
COPSD	I-CSA	I	CSA	-	-	-	-	-	-	-	-
		II	NAS	22*	27.2%	51*	63.0%	8*	9.8%	81	100%
		III	IA	21*	20.6%	51*	50.0%	30*	29.4%	102	100%
		IV	PE	7[a]	9.2%	43[a]	56.6%	26[a]	34.2%	76	100%
COPSD	II-NAS	I	CSA	-	-	-	-	-	-	-	-
		II	NAS	-	-	-	-	-	-	-	-
		III	IA	10[a]	12.7%	54[a]	68.4%	15[a]	18.9%	79	100%
		IV	PE	4[a]	7.1%	42[a]	75%	10[a]	17.9%	56	100%
COPSD	III-IA	I	CSA	-	-	-	-	-	-	-	-
		II	NAS	-	-	-	-	-	-	-	-
		III	IA	-	-	-	-	-	-	-	-
		IV	PE	5[a]	6.1%	55[a]	67.1%	22[a]	26.8%	82	100%

Note. COPSD, Co-occurring Psychiatric and Substance Use Disorder; CSA, Client Self-Assessment; NAS, Needs Assessment Screening; IA, Intake Assessment; PE, Psychiatric Evaluation.

[a]Does not meet Chi-square assumption for expected frequency of ≥ 5; result statistically insignificant.

*$p < .001$. Analyzed using Fisher's Exact Test, 2-sided.

Table 6

Chi-Square Crosstabulation for co/PTSD Disorder

DIAGNOSIS	STAGE	CONGRUENT STAGE	ASSESSMENT	Congruent Positive Screens		Congruent Negative Screens		Incongruity		Total	
				n - % of Total		n - % of Total		n - % of Total		n - %	
co/PTSD	I-CSA	I	CSA	-	-	-	-	-	-	-	-
		II	NAS	6[a]	6.5%	79[a]	85.9%	7[a]	7.6%	92	100%
		III	IA	4[a]	4.0%	79[a]	78.2%	18[a]	17.8%	101	100%
		IV	PE	1[a]	1.3%	58[a]	76.3%	17[a]	22.4%	76	100%
co/PTSD	II-NAS	I	CSA	-	-	-	-	-	-	-	-
		II	NAS	-	-	-	-	-	-	-	-
		III	IA	3[a]	3.4%	81[a]	92.1%	4[a]	4.5%	88	100%
		IV	PE	0[a]	0.0%	58[a]	90.6%	6[a]	9.4%	64	100%
co/PTSD	III-IA	I	CSA	-	-	-	-	-	-	-	-
		II	NAS	-	-	-	-	-	-	-	-
		III	IA	-	-	-	-	-	-	-	-
		IV	PE	1[a]	1.2%	73[a]	90.1%	7[a]	8.7%	81	100%

Note. co/PTSD, Co-occurring Post-Traumatic Stress Disorder; CSA, Client Self-Assessment; NAS, Needs Assessment Screening; IA, Intake Assessment; PE, Psychiatric Evaluation.

[a]Does not meet Chi-square assumption for expected frequency of ≥ 5; result statistically insignificant.

*$p < .001$. Analyzed using Fisher's Exact Test, 2-sided.

Table 7

Retrospective Chart Review for New PTSD Diagnosis

	New Diagnosis Made Between August 1 and December 1	
Diagnosis	2016	2017
PTSD	53	41
Substance Abuse (single diagnosis)	62	58
Depression (MDD)	180	200
Bipolar Disorder	116	107
Schizophrenia	47	52
Total New Diagnoses	458	458

Note. PTSD, Post-Traumatic Stress Disorder; MDD, Major Depressive Disorder.

Table 8

Chi-square Crosstabulation of Retrospective New PTSD Diagnosis Data, 2016 and 2017

Year		PTSD		Total
		No	Yes	
2016	Count	405	53*	458
	% within Group	88.4%	11.6%	100%
2017	Count	417	41*	458
	% within Group	91%	9%	100%
Total	Count	822	94*	916
	% within Group	89.7%	10.3%	100%

Note. PTSD, Post-Traumatic Stress Disorder.

*$p > .05$. Analyzed using Fisher's Exact Test, 2-sided.