A Feasibility Study of Behavioral Activation in the Rehabilitation of Veterans with Post-TBI Depression

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NCT04976621

Human Participant Information and Protocol Summary Excerpted from IRB approved Form 101, V. 6.0, Jan. 18, 2023, Approved by CMCVAMC IRB on 3/6/2023

Section 5: Human Participant Information

NOTE: *A participant is considered "enrolled" at the time the consent is signed so this number should include an allowance for screen failures prior to randomization.*

1. **How many participant records will be reviewed PRIOR to enrollment/consent occurring?**
   We may review up to 300 records and send up to 300 letters in order to obtain a sample of 40 subjects.

2. **How many participants will be screened PRIOR to enrollment/consent occurring?**
   We may conduct Phone Screens on up to 300 potential subjects (however it is most likely that we will screen about 70).

3. **How many participants will be enrolled (total number to include randomized and screen failures AFTER consent is obtained)?**
   60
   3.1. Will all research activity be the same at all sites? **Yes** ☐ **No** ☐ **N/A** ☒
   3.2. **If no,** please describe the activity that is different or limited (For example; 2 sites will analyze data only, or, 1 site will consent and enroll all participants etc.):

4. Are there any further screening procedures after enrollment? **Yes** ☒ **No** ☐
   4.1. **If yes,** describe: *Screening for the inclusion criteria on the CES-D and PHQ item 9 and exclusion criteria for the person with TBI (presence of psychosis, presence of asphasia, PHQ-9 affirmative response on item 9 indicating suicide ideation, or indication of dementia based on difficulty responding to interview questions will occur after consenting.*

5. **Are non-Veterans being enrolled?** ***NOTE:*** *This does* ***not*** *include non-Veterans enrolled at* ***non-VA*** *sites.* **Yes** ☐ **No** ☒
   5.1. **If yes**, provide justification.

NOTE:

- ***Every non-Veteran should sign VA form 10-0483****, Acknowledgement of the Notice of Privacy Practices (ANOP)*
- ***Once the ANOP is signed****, the research study staff must send the non-Veteran's name to the CMCVAMC Privacy Officer via encrypted e-mail. The signed ANOP must be kept in the research study binder.*
- ***If an oral informed consent is used****, the NOP should be sent to the non-Veteran via postal mail. In addition, the research study staff must write a Note-to-File that the NOP was sent to the non-Veteran.*

6. **Does this project target a specific race, gender or ethnic group as participants?**
   Yes ☐ **No** ☒
   6.1. **If yes,** indicate which group and why this group is being targeted.

7. **What is the age range of participants?** *(Check all that apply.)*

Neonates *(See note below)*	☐
Children Under 18 *(See note below)*	☐
Young Adults (18-21)	☐
Adults (22-65) **Age 21 allowed**	☒

Seniors (Over 65)	☒

NOTE: *If neonates or children is checked, certification by the Medical Center Director will be required. Only minimal risk research may be performed with children. Only non-invasive monitoring and/or prospective observational and retrospective record review studies that are minimal risk can be conducted in VA involving neonates.*

8. **Does the project involve the potential enrollment of any of the following populations or categories of participants? That is, are you targeting a specific group.** ***NOTE:*** *These populations must be checked "Yes" if they* ***are not being excluded*** *from the research.*

	Yes	No	N/A
a. Employees	☒	☐	☐
b. Students at the VA or Penn	☐	☒	☐
c Individuals with impaired decision-making capacity	☐	☒	☐
d. Pregnant women *(See below)*	☒	☐	☐
e. Economically and/or educationally disadvantaged persons	☒	☐	☐
f. Prisoners *(See Below)*	☐	☒	☐
g. Illiterate, limited, or no English language proficiency	☐	☒	☐
h. Terminally ill patients	☐	☒	☐
i. Children (See Below)	☐	☒	☐

16: Protocol Summary

1. **Introduction**

1.1. **Provide scientific background and rationale for study.**

Since 2000, 379,519 U.S. service members have been diagnosed with TBI, representing up to 22% of combat casualties.[1] In addition, many veterans of earlier wars have remote TBIs only recently diagnosed, the result of increased awareness of TBI in the Veterans Health Administration (VHA) and the general medical community.[2] Depression is one of the most common psychiatric sequela of TBI,[3,4,5] with prevalence estimates up to 53% for major depressive disorder (MDD).[6,7] It is also among its most serious sequelae. Post-TBI depression may interfere with rehabilitation effectiveness[8] and treatment adherence;[9] impede reintegration into family and community;[10,11] and lead to lower quality of life and functioning,[12,13] lower rates of return to work, problems in interpersonal relationships, and heavier caregiver burden.[3] Research documents a strong link between TBI and suicide risk.[14,15,16] Compared to the general population, individuals with TBI are at greater risk for depression and suicidal behavior, and risks of both remain elevated for many years.[17,18,19,20] Yet, post-TBI depression tends to be under-assessed and undertreated.[21] In light of this, the paucity of intervention research on post-TBI depression is remarkable.[6,22]

In the absence of RCT-based clinical guidelines for the treatment of post-TBI depression, current treatments are based largely on expert opinion rather than evidence from controlled trials.[23] The treatments most used for TBI depression are medication[24,25] and cognitive behavioral therapy (CBT).[26,27,28] Each approach has shortcomings for post-TBI depression. Many people prefer not to take medication, cannot tolerate its side effects, or fear stigma from seeking traditional treatment in specialty mental health programs.[29] These constitute barriers to pharmacological treatments. CBT also has significant limitations as a treatment for post-TBI depression. First, CBT depends upon cognitive work. It is based on the premise that behavior is closely linked to the way individuals perceive and think about their situation; thus, therapy targets maladaptive thinking to improve mood and functioning. Yet, many of TBI's hallmark deficits - especially in memory, organization, planning, and initiation - may interfere with the cognitive work that CBT requires. Second, CBT depends on the availability of mental health professionals with specialized training in CBT, and these providers are not always present in rehabilitation settings.

1.2. **Include summary of gaps in current knowledge, relevant data, and how the study will add to existing knowledge**.

Gaps in Current Knowledge. The absence of optimal evidence-based treatments for post-TBI depression justifies clinical research on promising treatment approaches that can be folded into TBI rehabilitation services, increasing its accessibility and potential for uptake. The proposed study will test the feasibility of behavioral activation (BA),[30,31] a well-established and empirically validated treatment that has its roots in CBT.[32] Rigorously tested in clinical trials since the 1970s,[33] BA's efficacy has been demonstrated in trials to reduce or prevent depression in several clinical populations (cancer,[34] macular degeneration,[35] diabetes,[36] PTSD,[37,38]) and to improve functioning in depressed older African Americans[39] and African Americans with mild cognitive impairment.[40] BA differs from CBT-based therapies in ways that improve its fit to post-TBI depression and its potential for uptake in a rehabilitation setting. BA is a brief behavioral treatment that helps people define goals, create and execute plans to attain them, and engage in meaningful activities - especially those that maintain or restore social roles that may be disrupted by TBI. Plan making has a preeminent role in social science,[41] and interventions that promote planning have been effective in improving health behaviors.[42] Because TBI may impair the capability to plan,[43] interventions that enhance it are especially relevant for rehabilitation. BA protocol components therefore emphasize goal setting (especially for activities that promote social connectedness), creation of a plan (broken down into

steps), strategies for implementation of the steps, identification of potential barriers, tactics to overcome them, activity monitoring and scheduling, and emotional regulation strategies. BA has rarely been used or studied for treatment of depression in a TBI population.[44,45]

Relevant data. Our previous R21-funded RCT with military veterans with TBI revealed a high prevalence of depressive symptoms, with 89% of veterans scoring at or above the cutoff for clinically significant depressive symptoms.[46] Several of our studies based on that R21 highlight the key role of depression in important outcomes.[47,48,49,50]

(1) Community reintegration. Our first study of predictors of CR in veterans with TBI tested sociodemographic characteristics, family factors, physical factors, pain, PTSD, time post-TBI, and depressive symptoms. Multiple regression revealed depressive symptoms to be the sole independent predictor of CR.[49]
(2) Depression as mediator of other effects on CR. This study[46] found depressive symptoms to totally mediate direct effects of both PTSD and physical functioning on CR. Such findings argue for targeting depression as a means of improving CR, enhancing rehabilitation effectiveness, and promoting other important outcomes.
(3) Employment. Our study of employment status in veterans with TBI[50] examined potential predictors of employment and found it associated with pain, depressive symptoms, and poor physical functioning. Physical functioning mediated the effect of pain, and depressive symptoms mediated the effect of physical functioning.
(4) Mediation of treatment effects on depressive symptoms by activity engagement. A home-based, family-inclusive intervention, the Veterans' In-home Program (VIP), was designed to target the home environment to align its social and physical demands with the veteran's TBI-related strengths and deficits. In a 2-group RCT, VIP was compared to usual care on several 4-month outcomes.[47] A secondary analysis[51] examined depressive symptomatology and tested activity engagement as a mediator. The study showed an effect of the VIP on depressive symptoms, with VIP participants scoring significantly lower on the CES-D at follow-up than controls. Activity engagement at follow-up reduced this direct effect to nonsignificance. This suggests that the VIP intervention's impact on depressive symptoms was attributable to increased activity engagement.

In summary, prior research indicates that (1) depression is prevalent among veterans with TBI; (2) it interferes with CR and employment outcomes; (3) BA is an effective therapy for depression in other clinical populations; and (4) BA is effective with populations having cognitive impairments. These findings justify moving forward with a pilot RCT to assess BA's feasibility with veterans with TBI in a rehabilitation setting.

How the proposed research would add to existing knowledge. The proposed research will develop the BA protocol and measures and provide preliminary data for a larger-scale efficacy trial of BA. This line of research has the potential to add a powerful clinical tool for treating depression in VA rehabilitation settings and, thereby, improve access to an important form of care for veterans with post-TBI depression. Furthermore, the research has the potential to enhance community reintegration of veterans with TBI, the ultimate goal of rehabilitation and a critical priority for the VA health system.

1.3. **Include rationale for including or excluding certain populations – in particular vulnerable populations.**

We are not including vulnerable populations as defined by NIH.

2. Objectives

2.1. ***Describe the study's purpose, specific aims, or objectives.***

The proposed pilot study is designed to test the feasibility of delivering BA for post-TBI depression in the VA rehabilitation setting. The specific aims are:

- **Aim 1: Assess feasibility in six domains.**[52,53]
  - a) Acceptability: Acceptability to patients and staff, assessed using qualitative and quantitative measures.
  - b) Process: Recruitment; refusal and retention rates; study completion; eligibility criteria; and number of sessions attended.
  - c) Practicality: The resources of the rehabilitation setting that support the BA intervention and the constraints that may interfere. These will determine the probability that BA can be implemented.
  - d) Treatment safety: Number of adverse events, those related and unrelated to the study.
  - e) Participant comprehension of interview questions and intervention activities.
  - f) Research burden: Length of interviews, participant fatigue, need for breaks, and emotional distress.

- **Aim 2: Provide preliminary evidence of response, assessed using a pilot randomized controlled trial (RCT).** Evidence of response is also considered a feasibility focus. The pilot RCT will compare the BA group to a control group using a 2-group design (see figure below).

- **Aim 3: Expand and refine the BA protocol and manual.** The investigators, rehabilitation clinic staff, and two veterans with TBI will constitute a panel charged with adapting the preliminary manual for TBI for use in the pilot RCT and then monitoring the study on a monthly basis. They will evaluate the BA strategies and assess the interviews for burden and cultural sensitivity. This will lead to a refined BA protocol and manual, to be evaluated in a larger study of BA's efficacy in the future.

Exploratory Aim: We will examine engagement in activity as a possible mechanism that underlies BA effects on depression.

2.2. **State the hypotheses to be tested.**

This is not applicable in this feasibility study.

3. **Resources and Personnel**

3.1. **Include where and by whom the research will be conducted.**

The research will be conducted by the individuals listed in 3.2 at the CMCVAMC.

3.2. **Provide a brief description of each individual's role in the study. Be sure to indicate who will have access to protected health information and who will be involved in recruiting subjects; obtaining informed consent; administering survey/interview procedures; and performing data analysis.**

Helene Moriarty, PhD, RN, FAAN, Principal Investigator

Access to PHI, involved in recruiting, consenting, administering survey/interview procedures at baseline, performing data analysis, providing input into the development of the intervention, participating in the development of presentations and papers arising from the work.

Laraine Winter, PhD, Co-investigator and Project Manager,

Access to PHI, involved in recruiting, consenting, administering survey/interview procedures, and performing data analysis, providing input into the development

of the intervention, participating in the development of presentations and papers arising from the work.

Keith Robinson, MD, Co-investigator

Chief of the Rehabilitation Medical Service at CMCVAMC

Access to PHI, involved in recruiting, administering survey/interview procedures, assessing the severity of TBI for all veteran study participants, providing input into the development of the intervention, and participating in the development of presentations and papers arising from the work.

Tracey Vause-Earland, PhD, OTR/L, Co-investigator

Access to PHI. She will provide training and oversight on behavioral activation for the OT interventionists and will be responsible for day-to-day oversight of delivery of the intervention arm. She will also monitor and ensure intervention fidelity through observation of some study sessions and review of audiotaped sessions. In addition, she will provide input into conceptual and methodological issues. throughout the conduct of the study, participate in regular team meetings, and will participate in dissemination of the findings.

Two Occupational Therapy Interventionists (TBD)

Access to PHI, responsible for delivering the BA intervention.

3.3. **If applicable provide information on any services that will be performed by contractors including what is being contracted out and with whom.**

Robin Casten, PhD

No access to PHI. As a consultant on the study, Dr. Casten will share her expertise in behavioral activation throughout the study and oversee the training, with co-investigator Dr. Vause-Earland, for occupational therapists who deliver the BA intervention. Dr. Casten has worked closely with the team to develop the attached preliminary intervention manual (Appendix 1) for behavioral activation for persons with traumatic brain injury, and she will continue to provide input into the refinement of this manual. She will also collaborate with the study team to assess treatment fidelity throughout the study, will provide consultation around methodological issues, and will participate in data interpretation and papers.

Two Consultants (TBD), to serve as Interviewers

Access to PHI, involved in recruiting, consenting, administering survey/interview procedures.

3.4. **If applicable provide information on any Memoranda of Understandings (MOUs) or Data Use Agreements (DUAs) that are being entered into including with whom and for what reason.**

This study does not use an MOU or DUA.

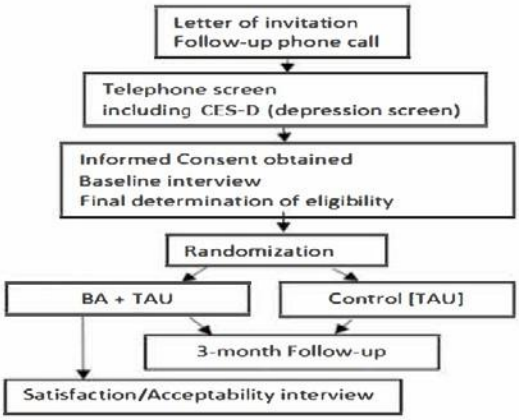
4. **Study Procedures**

4.1. **Study Design**

4.1.1. **Describe experimental design of the study. Include sequential and/or parallel phases of the study, including durations, and explain which interventions are standard of care.**

This feasibility study assesses feasibility in six domains and provides preliminary evidence of treatment response, through a pilot randomized controlled trial (RCT) The pilot RCT compares the intervention group (BA plus as Treatment as usual) with the control group (Treatment as usual). We will enroll 40 subjects (20 in each

group), conduct a baseline interview, randomize into the two groups, and then conduct a follow-up interview 3 months later. Subsequently, a qualitative phone interview to assess the experience of the intervention along with satisfaction/acceptability will be conducted with those in the intervention group. The BA intervention will be delivered in 6 sessions over 3 months by OTs trained in BA for post-TBI depression.



Procedure. At the baseline interview, the interviewer will review the study, answer veterans' questions, obtain Informed Consent, screen for depression using the CES-D scale and item 9 of the PHQ-9, and conduct the baseline interview battery. If the participant does not meet inclusion criteria based on the CES-D, and PHQ-9 at this time, they will not be included in the study as a randomized participant. We will thank them for their time, and they will receive compensation for the visit. They will also be offered referrals for services as appropriate.

Response cards presenting each question's response format will be employed to reduce response burden and facilitate interview progress. In previous studies, response cards were found helpful and acceptabl.[47,48] The estimated time of the baseline interview is 1.3 hours, including time for Informed Consent. Interviews of this length have been conducted with veterans with TBI and depression in previous research and were not found excessively burdensome.[47,48] The interview will be conducted in the setting preferred by the participant, a rehabilitation clinic office or his/her home. In our experience, most who complete the Baseline interview will be willing to continue to participate. Veterans who do not wish to continue with the study after the baseline interview will not be randomized or count towards our accrual goals.

Within 48 hours of the baseline interview, eligible veterans will be randomized using the method of random permuted blocks (to control for possible changes over time in subject mix) and concealed allocation. Those randomized to BA will be contacted within 5 days by the interventionist and scheduled for the first session.

Those randomized to BA will receive the 6-session BA intervention (as well as treatment as usual [TAU]). Control participants will receive TAU only (which may include current medical and mental health treatments.) Three months after Baseline, a blinded interviewer will conduct the follow-up interview in

person or on the phone with all veterans. Subjects will be sent reminder letters two weeks prior to this 3-month follow-up interview.

Study instruments and when they are used are described in a table in Section 8 and included in the Appendices.

Study staff will offer to share findings with participants.

4.1.2. **Include a description of how anticipated risk will be minimized and include an analysis of risk vs. potential benefit.**

This study is designed for persons with TBI who have a CES-D score of 16 or greater at both screening and baseline. Such a score indicates the presence of clinically significant depressive symptoms. Those who answer affirmatively (1, 2, or 3) at the baseline interview to item 9 from the PHQ-9, indicating suicide ideation, will not be eligible for the study.

Because this study involves interviews with persons with TBI who have at least mild depression, there is a minimal risk that the interviews may contribute to emotional discomfort in the discussion of personal matters. In our previous study of veterans with TBI in their homes (the large majority of whom scored above the cutoff for clinical depression on the CES-D Short Form), using many of the same interview instruments as proposed, we encountered no upset or excessive fatigue with any participants nor did any adverse events occur as a result of study participation.

The study poses minimal risk to study participants, based on experience with our earlier in-home intervention study with veterans with TBI, the literature on rehabilitation interventions with persons with TBI, and literature on BA. The risk of burden or fatigue from the interview or intervention is also low.

<u>Risks to privacy or subject discomfort about disclosing or considering sensitive information</u>

Study procedures are thoroughly explained during the consent process. Participants are assured that they can withdraw at any time or refuse to participate or respond to interviews or specific interview questions. When interviewing respondents, interview procedures will be employed to avoid overtaxing or burdening respondents and to enhance communication.

To minimize the potential risk of breach of confidentiality, the following safeguards will be in place:

- Study data from all sources (survey, interviews, and electronic record) are de-identified and only code numbers used. The master list linking code numbers with participant names and contact information is maintained separately from the de-identified data on a secure server.
- Study databases do not contain any identifiable data. All VA regulations for data security and encryption will be followed as required.
- If an interventionist or interviewer makes any visits to homes, they will transport identifiable data (e.g., name and address) in a locked briefcase.

Interventionists and interviewers receive initial and ongoing training to follow the mechanisms in place to ensure confidentiality of data.

- All study data are stored in a secure server.
- Study results will be represented only by aggregate data.
- All questionnaires and transcriptions of interviews are kept in a locked file cabinet (separate from the master list with participant names and assigned numbers. A master list of study participants that includes the assigned ID #, the first and last names, and any project-necessary grouping designations maintained for tracking purposes on PC computers is password protected on a secure server and stored in locked filing cabinets. Screening forms and data collection cover sheets that include identifying information are necessary. All such information is considered confidential and stored in a locked file cabinet separate from study data.
- All consent forms are kept in a locked file cabinet (separate from the master list with participant names and assigned numbers).
- Data collection takes place in a private place in the rehabilitation setting or by phone when the participant is in a private place.

Telephone conversations with or about study participants require common sense discretion. Attempts to schedule data collection with study participants or telephone conversations discussing issues related to the participants are conducted in a manner that assures confidentiality. When talking on the telephone, office doors are kept closed, voices are kept low, and last names are not used beyond what is necessary. Computer files used for the purpose of tracking study participants are set up with password protection. Access to these files is restricted to defined key personnel approved by the VA IRB.

Interviewer Training, conducted by the Drs. Moriarty and Winter, will emphasize consent as an ongoing process and dialogue and will provide the interviewer with detailed study information to ensure that the interviewer understands the protocol and can answer questions about the study. All research staff will undergo initial training by Drs. Moriarty and Winter to review confidentiality procedures consistent with the protocol and IRB regulations; they will monitor adherence to the confidentiality safeguards on a weekly basis.

Risks of fatigue or research burden

During the baseline and follow up interviews, the interviewer is alert for signs of fatigue or upset with the data collection procedures. The data collection can be stopped and continued at another time if the participant becomes fatigued. The interviewer will offer breaks at least two times during the interview. If the participant appears upset, the interviewer will stop the data collection process and offer support as needed. Data collection can be continued at another time if the participant desires.

Response cards presenting each question's response format will be employed to reduce response burden and facilitate interview progress. Used in our previous studies, response cards were found helpful and acceptable to participants. The estimated time of the baseline interview is approximately 1.3 hours, plus time for Informed Consent. Interviews of this length have been conducted with individuals with TBI and depression in our previous research and were not found excessively

burdensome. The interview will be conducted in the rehabilitation clinic office or home setting if preferred by the participant. Follow-up interviews will be conducted in-person or by phone.

Potential Benefits of Research to Subjects and Others:
The proposed study may provide benefits to study participants. Participants may acquire skills to help reduce their depressive symptoms and increase their participation in activities and the community. Participation may lead to more veterans with TBI being assessed and identified as having mild or moderate depressive symptoms. It is also possible that participants may have no direct benefit.

The present application of BA to TBI-related depression is designed to augment current clinical care for TBI. It does not take the place of other treatments for depression that persons with TBI may be receiving. Study participants are not asked to stop other treatments they are receiving for TBI or mental health problems. Results from the study will allow us to assess the feasibility of BA for veterans with post-TBI depression and will provide preliminary data to support a future larger efficacy trial. This feasibility study and future research may generate new knowledge around the development and evaluation of interventions that reduce depression and improve community reintegration for veterans with TBI.

Risk vs. Benefits
Knowledge gained through this feasibility study and future larger studies has the potential to advance the care of persons with depression post TBI and to extend our knowledge on the feasibility and efficacy of interventions for this population. Given that TBI is a major public health problem for military and civilian populations and in light of the high prevalence of depression post-TBI, the potential benefits for this population and society outweigh the potential risks

4.1.3. **Provide description of the study population (delineate all categories of subjects – patients, providers, family members, employees, etc.). Include anticipated enrollment numbers.**

A total of at least forty male and female Veterans at a VA outpatient Rehabilitation Medicine Service will be recruited to participate. We will oversample women to assure approximately 10% in each arm.

4.1.4. **As applicable, provide information on any added protections for vulnerable populations.**
N/A

4.1.5. **If applicable include information on data and specimen banking.**
N/A

5. **Recruitment Methods**

5.1. **State how many subjects will be needed.**
At least, forty male and female veterans at a VA outpatient Rehabilitation Medicine service will be recruited to participate.

5.2. **Describe when, where, how and by whom potential subjects will be identified and recruited.**

Names of veterans meeting inclusion criteria for age, diagnosis of TBI, and severity of TBI will be given by the Polytrauma Team, and then we will mail these Veterans l a letter of invitation that introduces the study and invites them to call the study phone number to express interest in the study. The letter also informs them that a member of the research team will be calling them to discuss the study. When a veteran expresses interest in continuing the discussion about the study, the team members will provide more information, answer questions, and determine eligibility. Once an individual is deemed likely eligible, the research interviewer will schedule the baseline interview.
A study flyer with a study phone number will be posted at the CMCVAMC, and Veterans may contact us from that.

5.3. **Describe materials that will be used to recruit subjects, e.g., advertisements. Include materials as an appendix or separate attachment**

Informational flyer (Appendix 4); Letter of Invitation (Appendix 5); Telephone script used after letter (Appendix 2)

5.4. **Describe any payments to subjects, including the amount, timing (at the end of the study or pro-rated for partial study participation), method (e.g., cash, check, gift card), and whether subjects will experience a delay in receiving the payment.**

There will be incremental payment for interviews: $40 for completion of the Baseline (BL) interview and $50 for the follow-up interview at 3 months.

6. **Informed Consent Procedures**

6.1. **Indicate if informed consent will be obtained and/or if you are requesting a waiver of informed consent or waiver of documentation of informed consent. If the research involves multiple phases, specify for which phases of the research the waiver(s) is being requested and/or the informed consent will be sought.**

We will obtain informed consent at the Baseline (BL) visit. We will obtain a Waiver of HIPAA for prescreening (letters, post-letter phone call.)

6.2. **Describe who will be obtaining informed consent, if applicable, and any circumstances that may need to be addressed (e.g. subjects with impaired decision making ability and the use of a legally authorized representative, etc.)**

The interviewers will obtain informed consent at the BL visit. This will take place at the CMCVAMC or at the subject's home, whichever the subject prefers. Subjects with impaired decision making ability or requiring a legally authorized representative will not be included.

6.3. **If applicable, indicate how local site study personnel will be trained regarding human subjects' protections requirements and how to obtain and document informed consent.**

To ensure subject safety and the validity and integrity of the data, Drs. Moriarty and Winter will be responsible for training the Research Interviewer(s) in enrollment and the ongoing consent process.

Interviewers will receive a set of readings on TBI and background on the study. They will undergo a one-day training on depression, TBI, the interview batteries, human subjects

protections, and safety plans. They will conduct four practice sessions with staff and role play as participants in four practice interviews.

Dr. Moriarty or Winter will observe several early interviews for each interviewer to assure integrity in the consent process and data collection process and adherence to confidentiality safeguards. They will provide additional training and review on a regular basis.

7. Inclusion/Exclusion Criteria

7.1. Describe the criteria that determine who will be included in or excluded from the study.

Inclusion Criteria. Veterans must be ≥21 years of age, meet professional criteria for mild or moderate TBI [54] and have a CES-D score ≥ 16 at both the Telephone Screen and Baseline.[56,57] Inclusion of those with mild TBI (mTBI), representing up to 50% of post-TBI depression, will provide a representative sample[7,12]. This also addresses the need for interventions that can prevent escalation from minor to major depression.[48,49] Those taking antidepressants or other medications affecting mood or behavior must have been using these for at least three months, to allow for stabilization. Similarly, those in psychotherapy can participate if therapy has been ongoing for three months or longer. Veterans must acknowledge current TBI-related symptoms on the Telephone Screen (Appendix 2) and speak English. Inclusion of those with other physical symptoms (e.g., pain) or who meet criteria for PTSD will insure a more representative TBI sample.

Exclusion criteria are a diagnosis of severe TBI; psychosis; aphasia; history of bipolar disorder, history of severe physical aggressiveness, judged by the clinical team; or currently receiving CBT for depression. Veterans with severe TBI were judged unlikely to be able to fully engage in BA. Dementia will be an exclusion. Since no cutoff on standard dementia-screens is established for TBI populations, probable dementia will be determined on a case-by-case basis using physician diagnosis and difficulty understanding interview questions. A review of CPRS will confirm TBI diagnosis and severity.

8. Study Evaluations

8.1. Describe all evaluations to be conducted (including screening; tests/questionnaires that will be administered; any procedures that subjects will be required to complete) and data collection methods. Include materials as an appendix or separate attachment.

The table describes the constructs, the instruments that operationalize them, number of items, and when administered. Appendix 6 presents the baseline and 3 month follow-up interview batteries.

Table 2. Study constructs, measures, number of items, and when administered.

CONSTRUCTS	MEASURES
OSU TBI Short form	Ohio State University TBI Identification Method-Short form[55] to confirm TBI diagnosis (OSU TBI-ID-SF) **Baseline interview**

Depressive Symptoms	The Center for Epidemiologic Studies Depression Scale (CES-D) is a well-established 20-item screening instrument that shows good psychometric properties in TBI populations. [56,57,58] **Baseline & Follow-up interviews.**
PHQ, question 9	The Suicide Ideation (Patient Health Questionnaire [PHQ-9], item #9)[59] **Baseline & Follow-up interviews.**
Positive & negative affect	The 20-item Positive and Negative Affect Schedule[60] (PANAS) is used to capture a wide range of emotions, allowing a broader examination of possible intervention effects beyond depressed affect. **Baseline & Follow-up interviews.**
Community Reintegration	The 17-item Participation Assessment with Recombined Tools-Objective (PART-O-17) [61, 62] is an objective measure of social functioning, developed from 3 existing CR measures to examine long-term outcomes and to evaluate intervention efficacy.[78, 79] **Baseline & Follow-up interviews.**
Quality of Life in TBI	The QoL-TBI [63, 64, 65, 66] is a 37-item patient-centered measure that captures the individual's perception of his/her health-related quality-of-life (HRQoL) in cognition, self-care, daily life and autonomy, social relationships, emotions, and physical problems. **Baseline & Follow-up interviews.**
Demographics & military characteristics	These characteristics are age, sex, years of education, race, Hispanic ethnicity, marital status, employment status, financial difficulty, combat exposure, and war cohort. **Baseline interview.**
Relevant health data	Years since most recent TBI, severity of TBI, co-morbidities, source of injury (e.g., blast exposure, vehicular, fall), number of TBIs, and history of prior TBIs and of depression. **Baseline interview and CPRS review.**
Post-Traumatic Stress Disorder	The 20-item PCL-5[67, 68] is a self-report measure of PTSD symptom severity assessing 20 symptoms experienced in the past month that correspond to the DSM-V. Each item is rated on a 5-point Likert scale, from 1 (not at all bothered) to 5 (extremely bothered). A score between 31-33 indicates probable PTSD.[86] **Baseline interview.**
Patient self-ratings of functioning	Self-rated competency in daily activities is measured using the Patient Competency Rating Scale (PCRS),[69,70] a 30-item standardized measure of patient competency designed for TBI populations. The stem question is, "How much of a problem have you had (in the past month) in …?" The response format is a five-point Likert scale from 1 (cannot do) to 5 (can do with ease). Higher scores indicate better functioning. **Baseline and Follow-up interviews.**
Healthcare services utilization	Veterans with TBI may use outpatient and inpatient care, mental health services, social services, and military service-connected and/or disability services. This Checklist will assess frequency of use of 11 healthcare services in the past month and since the baseline. **Baseline and Follow-up interviews.**
Behavioral Activation	The 23-item Behavioral Activation for Depression Scale (BADS)[71] measures engagement in social and occupational activities hypothesized to underlie depression and targeted for change by BA, using 7-point Likert responses from 0 (not at all) to 6 (completely). **Baseline and Follow-up interviews.**
Pain and self-rated health	Pain (frequency and intensity) and self-perceived health are especially germane to TBI and depression. These measures are taken from the SF36,[72] a well-established measure of health-related quality of life. **Baseline interview**.
COVID Impact	CAIR Pandemic Impact Questionnaire measures the physical, psychological, and financial impact of the COVID-19 pandemic[73] **Baseline and Follow-up interviews**
Dose and Intensity	The Delivery Assessment form (Appendix 7) is completed by the OT- interventionist after each session, documenting start and stop times, treatment setting, TBI-related problems worked on, BA components used, and amount of time for each. These data will be used to characterize the intervention content. **Each OT-intervention session.**
OT-rated Acceptability	This 18-item Acceptability and Enactment Scale is part of the Delivery Assessment Form (Appendix 7) based on measures extensively used by the investigators.[39] **Final OT session**.
Acceptability and experience of BA to participants	Measures of acceptability and perceived benefits from BA are collected in a final phone interview, immediately after the 3-month follow-up interview, with BA participants Appendix 9). **Acceptability by patients – final phone interview.**
Acceptability to clinic staff	Questions elicit clinic staff's thoughts about the feasibility and acceptability of a BA-based intervention in the rehabilitation clinic setting. **Acceptability by staff – after completion of data collection.**

9. **Data Analysis**

9.1. **Provide sample size determination and analysis (include anticipated rate of screen failures, study discontinuations, lost to follow-up etc.).**

This is a feasibility study using 40 subjects. It will assess recruitment, refusal, and retention rates and other indicators of feasibility as described earlier.

9.2. **Describe how, where and by whom the data will be analyzed.**

Data will be analyzed at the CMCVAMC by the PI and Co-Is.

Aim 1 will assess the feasibility of BA in the VA rehabilitation setting, following criteria suggested by Bowen et al.[52] and Thabane et al.[53]:

Acceptability to veterans and staff, assessed using qualitative and quantitative measures. Qualitative: This analysis will be conducted for open-ended interview questions concerning the experience of receiving BA (for veterans) and the process of its implementation in the rehabilitation setting (for clinic staff). After verification of transcript accuracy for interviews, ATLAS.ti will be used to facilitate data organization, coding, and retrieval. Qualitative content analysis[74] will inductively generate codes and categories. Line by line coding will be conducted to identify codes or statements of meaning (level I coding) that are then grouped into larger categories (level II, coding for themes). Strategies to support scientific rigor will be followed: for credibility (member checking findings with a subsample of participants); dependability (audit trial); transferability (thick description); and confirmability (audit trial).[75]

Quantitative: (1) On the Acceptance/Receipt Scale completed by the interventionist (final Delivery Assessment form), at least 75% should score $\geq$ 3.0 (Appendix 7); (2) On the Satisfaction Scale, administered to BA participants during the final interview (Appendix 9), $\geq$ 75% should score $\geq$ 3.0. (3) Willingness to participate in future related studies should be $\geq$ 75%. Criteria are based on our past study.[47]

(a) Process: (1) For recruitment, $\geq$50%, percent of veterans will be eligible to participate, and $\geq$30% will be willing to participate. (2) For retention, $\geq$75% of veterans in BA will attend $\geq$ 4 sessions, and $\geq$75% will complete the study. (3) Less than 15% deviation from protocol on the Treatment Fidelity Checklist will occur.

(b) Practicality: Resources of the rehabilitation setting that support the BA intervention and constraints that may interfere will assess the probability that BA can be implemented. Resources and constraints will be assessed by interventionists, the project manager, and clinic staff through discussions on issues including scheduling, coordination with other appointments, staff time, and space providing privacy.

(c) Treatment safety: Number of adverse events (study-related and unrelated) will be monitored.

(d) Eligibility criteria: The team will assess whether these criteria were too broad or restrictive.

(e)Participant comprehension: Interviewer and interventionist will note areas of participant difficulty understanding interview questions and intervention activities. Missing data will also reflect difficulty.

(f) Research burden: Length of time to complete interviews will be recorded using start and stop time data on the interview. The interviewer will record participant fatigue, wish to take breaks, and/or emotional distress.

Aim 2 will assess change in participant response by comparing Group 1 (BA + TAU) and Group 2 (TAU) on outcomes at T2 (3-month follow-up). We will first conduct

descriptive analyses separately for the BA and control groups to characterize the sample and assess the success of randomization in balancing the two groups. We will inspect trends, directions of change in the two groups, and associations between baseline characteristics (T1) and CES-D scores at follow-up (T2). The same trends and changes will be inspected for the secondary outcomes of CR and QOL. Analyses will be conducted using SPSS version 25.

Aim 3 is to develop and refine the BA protocol, manual, and interview measures. In the first 3 months, an expert panel comprising the investigators, interventionists, interviewer, clinic staff, and two veterans with TBI will review and modify the existing protocol and manual to adapt them for hallmark deficits of TBI. The panel will meet monthly to monitor the study, assessing need for additional compensatory strategies and removal or alteration of strategies that depend on: abstract thinking; patients' understanding of TBI-related depression; awareness of emotion and its regulation; and interpersonal issues. Interview measures will be assessed for participant comprehension, sensitivity, and burden. This pilot study will produce a refined BA protocol and manual for post-TBI depression whose efficacy will be evaluated in a larger RCT.

An Exploratory Aim will examine engagement in activity as the mechanism underlying effects of BA. Although mediation analysis is beyond the scope of this feasibility study, we will explore characteristics of activity engagement using the BADS and its associations with the BA intervention and with depression.

10. Withdrawal of Subjects

10.1. Describe any anticipated circumstances under which subjects will be withdrawn from the research without their consent.

Subjects may be withdrawn from the study by the PI without their consent if the PI deems it in the best interest or safety of the subject, such as if the subject expresses suicidal ideation, or increased depression that would increase risk of suicide. The study PI or project manager will notify the subject directly and offer a safety visit (in person or over the phone) and referrals for other services. Subjects will not be withdrawn for changes in antidepressants or other medications affecting mood or behavior, or for changes in psychotherapy after consenting. Investigators will document the change(s).

10.2. Describe the consequences of a subject's decision to withdraw from the research and the procedures for orderly termination of participation by the subject (e.g., the subject contacting the investigator for an end-of-study visit).

The subject may withdraw at any time. Subjects will be offered a safety visit and referrals for other services to provide more support after an early withdrawal (by subject or investigator).

11. Reporting

11.1. Include procedures for reporting unanticipated problems, serious adverse events, and protocol deviations.

Adverse events, protocol deviations, and unanticipated problems will be collected at each study visit or intervention following the signing of the informed consent, or when the study team becomes aware of them. They will be reported to the IRB at the time of continuing review, or sooner, per IRB requirements, as necessitated by the type of event (e.g. SAE, serious unanticipated problem, protocol deviation impacting subject safety).

Data and Safety Monitoring Plan

Drs. Moriarty and Winter will be responsible for ensuring that the trial is conducted according to the protocol and will also be responsible for implementing the data safety and monitoring plan as described below. A data and safety monitoring plan is established to ensure the safety of all study participants and to ensure the validity and integrity of the data.

To maintain the validity and integrity of the data, Drs. Moriarty and Winter will be responsible for training the Research Interviewer(s) in enrollment, the ongoing consent process, and data collection procedures and also be responsible for training the OT interventionists in their treatment-documentation procedures. Interviewer training will include a review of the eligibility criteria, study procedures, safety plans, completion and scoring of each of the study instruments, and safeguards to maintain confidentiality. Dr. Moriarty or Winter will observe the several early interviews for each interviewer to assure integrity in the consent process and data collection process and adherence to confidentiality safeguards. They will provide additional training and review as on a regular basis. They will also conduct a weekly inspection of IRB documents, study records, data security, and confidentiality safeguards to ensure that the study is adhering to the study protocol and research regulations. These items will be part of the weekly discussions among the research interviewer, Dr. Moriarty, and Dr. Winter that will address fidelity to the data collection protocol.

The training for the OT interventionists will include a review of the study protocol, confidentiality safeguards, and the safety plan for study participants who may need additional medical or mental health services. The interventionists will meet with the Drs. Moriarty, Winter and Vause-Earland twice monthly for debriefings. The co-investigator, Dr. Vause-Earland, will also observe at least five randomly selected intervention visits in Months 1-2 to monitor fidelity to the study protocol and confidentiality safeguards.

Treatment Fidelity Monitoring

We will monitor delivery of the intervention using a plan for providing oversight of treatment implementation based on the NIH Behavioral Change Consortium's recommendations for assessing and maintaining treatment fidelity.[76,77] The plan involves standardizing delivery and checking for protocol adherence utilizing three general strategies: following a treatment manual, checking adherence to the protocol, and maintaining provider skills. Specific steps to achieve treatment fidelity goals include the following:

(a) The Behavioral Activation condition is manualized to insure standardization of delivery.
(b) Twenty-five percent of the intervention sessions will be audiotaped by the interventionists (provided that the participant agrees to the taping), and the taped sessions will be reviewed by Drs. Moriarty and Winter and evaluated according to a priori criteria provided in a Treatment Fidelity Checklist (see Appendix 10).
(c) Non-specific treatment effects (e.g., interventionist characteristics) will also be measured using the Treatment Fidelity Checklist by rating audiotaped intervention sessions.
(d) To maintain interventionist skills and minimize drift, twice-monthly case conferences will be held. These will be attended by both interventionists and the investigators.

Adverse Event (AE) Reporting

Interventionists will be trained in procedures to manage distress, suicidal ideation, severe depression, and other responses as described earlier and noted in the table below. Given that both data collection and interventions may occur in people's homes (if preferred by the study participant), there is the potential for a member of our research team to encounter a potential emergency situation that is not related to study participation (e.g., environmental risk, medical emergency). We refer to such events as alerts and have well developed procedures for their management. All alerts will be reported to the VA IRB as required. We will follow the reporting requirements of the VA IRB. Thus, per the requirement of the VA IRB, all adverse events that are described in the informed consent will be reported to the IRB at continuing review and unexpected adverse events that are considered unrelated to the study will be reported at continuing review. An unexpected adverse event that is related to the study will be reported to the VA IRB within 72 hours (business days) of the investigator's becoming aware of it. Serious adverse events will be reported to the VA IRB within 72 hours regardless of whether it is related to the study or whether it is an onsite or offsite event. The event will be considered a serious adverse event, whether or not it is related to the study if any of the following six criteria are met: 1) hospitalization, 2) life-threatening reactions (e.g., heart attack), 3) persistent or significant disability/incapacity or permanent hardship or disability, 4) events that jeopardize the subject and require medical or surgical intervention to prevent one of the outcomes previously listed, 5) congenital anomaly/birth defect in the offspring of the research participant, and 6) death. Any deviations from the approved protocol will be reported to the IRB. A summary of all adverse events and/or unanticipated problems will be included with the continuing review/progress report for the IRB.

<u>Overview of Alerts, Adverse Events, and their Monitoring</u>
The table below describes the specific events we consider as an Alert or Adverse Event and the procedures we plan to follow.

Table: Other Specific Alerts/Adverse Events and Actions Taken

Emergency Alert/Adverse Event	**Action Taken**
Medical emergency: -Chest pains - Excessive bleeding - Fall and cannot get up - Difficulty breathing	If a research staff person encounters this situation while speaking on the phone, the person is put on hold and the staff person calls 911 immediately. If the situation occurs within the home, the staff person calls 911 immediately and stays with participant until help arrives. If the situation occurs in the rehabilitation setting, procedures for medical emergencies will be followed. Dr. Moriarty and Winter are informed immediately of the event, and they contact the individual for a follow-up within two days. Research staff member completes alert form and reports adverse event to IRB as required.
Threats to hurt self or others; severe depression; suicidality	Described later in text (Safety plans).
Evidence of abuse	Evidence of physical abuse is as follows: • Participant states to research staff that abuse occurs

	• Research staff observes physical evidence (black eye, black and blue marks on arms/legs) If the interviewer or OTs suspects child abuse, they will report this immediately to Dr. Moriarty or Winter, who will discuss this with the Polytrauma Social Worker Case Manager. If there is reasonable cause to suspect child abuse, this will be reported to the Child Abuse Hotline with Child Protective Services (215-683-6100). If the interviewer or OTs suspect spouse or partner abuse, they will report this immediately to Dr. Moriarty or Winter, who will review the situation with the Polytrauma Social Worker Case Manager. Information and contact information for community resources (such as Philadelphia Domestic Violence Hotline and Women Against Abuse) will be shared with the family member who is being abused. If the interviewer or OTs suspect elder abuse, this will be reported to the appropriate agency. The PI reports adverse event to the IRB as required. Note – The mandated reporting of child and elder abuse is stated in the consent form.
Extreme Home Hazards (if observed during home visit).	
-Exposed electrical wires -External door missing or cannot be locked -Ceiling, floors caved in -No temperature control (no air or heat – must be extreme) -Major infestation	Research staff member notifies PI within 24 hours. If alert is identified prior to baseline/randomization, the individual is not enrolled in study until the home hazard is addressed. If enrolled in the study, the PI contacts participant and refers him/her to a home repair program. PI completes Alert form.

Alerts and adverse events are reviewed at weekly meetings to assure that each has been managed appropriately and follow-up and resolution obtained. We expect adverse events to be infrequent. In the rare case in which multiple adverse events occur, the study team will meet to review the severity and cause and determine next study steps with the guidance of the IRB

<u>Safety Plan</u>
Given the population of interest (persons with TBI and depression), the team has developed a detailed safety plan for participants. The Rehabilitation Medicine Service and medical center employs mental health providers who can provide support to the study team for clinically emergent situations or circumstances that arise in the conduct of the research. A licensed clinician is always available at the medical center during business hours to facilitate assessment and support for emergent clinical situations. A licensed clinician is also available through the Behavioral Health Emergency Service during business hours and outside business hours.

If the interviewer or interventionists observe that a study participant is a threat to self or others or has severe depression, a safety plan is in place to manage this situation. If a research staff person encounters <u>a situation in the rehabilitation clinic</u> in which the person is severely depressed and threatens to hurt self or others immediately, or has answered affirmatively to item 9 on the

PHQ, the research staff member stays with the individual and calls on the emergency behavioral health services at the medical center. Patient can be escorted to the BH urgent walk-in clinic on the 7th floor for immediate assessment. Patients can also be escorted to the emergency room where there is psychiatric staffing 24/7 for immediate assessment. If there is an established BH provider, a phone call will be made to try to make immediate contact. If the person is not an immediate threat to self or others, then the person is actively encouraged to contact his provider and/or the contact is made for the person if he/she chooses. The research staff also informs the person that a member of the research team will be contacting him/her shortly to follow-up. Immediately at the conclusion of the interview, Drs. Moriarty and Winter are notified of the situation. They contact the person to obtain further information and encourage immediate action. The team has compiled a list of community resources (VA and non-VA) that will be shared with subjects for appropriate mental health resources, crisis lines, financial resources, and other resources as needed.

In the event that the interviewer or OT is meeting with the veteran in the home and assesses the veteran to be at high risk for suicide, or the veteran has answered affirmatively to the PHQ item 9 at baseline, or is very distressed, they will refer the veteran to the appropriate mental health resources and provide information on how to access these resources. During business hours, veterans can call the Mental Health Clinic staff at 215-823-4300 or come as a walk-in to the clinic for problems that need immediate attention. After business hours, veterans can phone the Corporal Michael J. Crescenz VA Medical Center psychiatrist on call for problems that need immediate attention; the veteran would call the main hospital number at 215-823-5800 and ask for the psychiatrist on call. If veterans are experiencing suicidal ideation, they can contact the Veterans Crisis Hotline at 1-800-273-TALK, call 911, or go to the nearest emergency room or the VA Medical Center's emergency room. When a veteran calls the 1-800-273-TALK crisis hotline number, he reaches the national hotline, indicates if he/she is a veteran by pressing 1, and then the hotline contacts the VA Medical Center Suicide Prevention Team, which contacts the veteran's provider or arranges for a provider if the veteran does not have one. If veterans are experiencing homicidal thinking, they can call 911 or go to VA's emergency room or the nearest emergency room. The interviewer or OT will encourage the veteran to seek the appropriate services, but if the OT or interviewer judges that the veteran needs emergency services for a life-threatening medical or psychiatric emergency and is unable to contact these services, the OT or interviewer will call 911 for the veteran if in the home. The OTs and interviewer will also report psychiatric concerns to the Drs. Moriarty or Winter, who will consult, as needed, with Dr. Casten, a consultant, and Dr. Robinson, a co-investigator, Chief of the Medical Rehabilitation Service, who has expertise in VA resources available for veterans with TBI and mental health problems. As per VA IRB regulations, the PI will complete Adverse Event Reporting forms and report to the IRB, as required.

<u>Training for the Safety Plan</u>
Training of our interviewer and interventionists in the safety plan will be reinforced on a regular basis. The OT co-investigator responsible for training the OTs in BA and overseeing their work, as well as Dr. Robin Casten, consultant on this project, have experience in delivering BA and safety plans for participants with depression and mental health crises. Dr. Casten has conducted several studies using BA to reduce depression and increase activity. Furthermore, Dr. Moriarty and Dr. Winter will provide education to the interviewer and OT interventionists on assessment of depression, signs of both suicide risk and warning signs of imminent suicide risk, how to respond and show support for participants at high risk for suicide, and how to connect veterans with suicide risk to appropriate resources/referrals. They will also provide training, along with Dr. Casten, on the Columbia Suicide Severity Rating Scale.[78] The Columbia Scale will be administered to participants who answer affirmatively (1, 2, or 3) to item 9 on the PHQ-9,

indicating the presence and duration of suicidal ideation. The Columbia Scale is an assessment tool that evaluates suicidal ideation and behavior; it has been used with military and civilian populations. Outcomes on this scale that can be used for safety monitoring include scores on suicidal behavior lethality, suicidal ideation, and suicidal ideation intensity. It is evidence-based in that much research has validated its relevance and the effectiveness of its questions in assessing suicide risk. Triage guidelines are available for the tool that indicate risk and need for further evaluation and management (e.g., triggers for immediate referral to mental health services and patient safety precautions). Data from the PHQ item 9 and Columbia Scale will be shared when the person is referred for mental health services.
The consent form will state that the research team may refer the participant to appropriate medical and mental health resources within the VA medical center. The consent will also note that in the event that a participant indicates an intention to harm self or others, we will be obligated to notify the appropriate medical and mental health professionals immediately.

12. **Privacy and Confidentiality**

12.1. **Describe whether the study will use or disclose subjects' Protected Health Information (PHI).**

The study uses subjects' PHI but does not disclose it.

12.2. **Describe the steps that will be taken to secure the data (e.g., training, authorization of access, password protection, encryption, physical controls, Certificates of Confidentiality, and separation of identifiers and data)**

To minimize the potential risk of breach of confidentiality, the following safeguards will be in place:

- *Study data from all sources (survey, interviews, and electronic record) are de-identified and only code numbers used. The master list linking code numbers with participant names and contact information is maintained separately from the de-identified data on a secure server.*
- *Study databases do not contain any identifiable data. All VA regulations for data security and encryption will be followed as required.*
- *If an interventionist or interviewer makes any visits to homes, they will transport identifiable data (e.g., name and address) in a locked briefcase. Interventionists and interviewers receive initial and ongoing training to follow the mechanisms in place to ensure confidentiality of data.*
- *All study data are stored in a secure server.*
- *Study results will be represented only by aggregate data.*
- *All questionnaires and transcriptions of interviews are kept in a locked file cabinet (separate from the master list with participant names and assigned numbers. A master list of study participants that includes the assigned ID #, the first and last names, and any project-necessary grouping designations maintained for tracking purposes on PC computers is password protected on a secure server and stored in locked filing cabinets. Screening forms and data collection cover sheets that include identifying information are necessary. All such information is considered confidential and stored in a locked file cabinet separate from study data.*
- All consent forms are kept in a locked file cabinet (separate from the master list with participant names and assigned numbers).

- Data collection takes place in a private place in the rehabilitation setting or by phone when the participant is in a private place.

13. **Communication Plan for Multi-Site Studies or Studies being done at Non-CMCVAMC Locations**

☒ N/A; skip to question 14

13.1. **Include plan for ensuring all required local site approvals are obtained and notifying the Director of any facility where the research in being conducted but the facility is not engaged.**

☐

13.2. **Include plan for keeping all engaged sites informed of changes to the protocol, informed consent, and HIPAA authorization.**

☐

13.3. **Include plan for informing local sites of any Serious Adverse Events, Unanticipated Problems, or interim results that may impact conduct of the study.**

☐

13.4. **Include plan for ensuring the study is conducted according to the IRB-approved protocol.**

☐

13.5. **Include plan for notifying all local facility directors and LSIs when a multi-site study reaches the point that it no longer requires engagement of the local facility (e.g., all subsequent follow-up of subjects will be performed by the PI from another facility).**

☐

14. **References** (bibliography of cited literature) Please see list of cited references at the very end of document. Our reference system does not allow us to place the references under item 14.

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