Annual Report

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14. ABSTRACT

The current state of the science leaves neuro-oncology providers aware of their patients' distress, yet without guidance for evidence-based treatment. Previous trials of evidence-based treatment for patients in this context did not include individuals with brain cancer. The purpose of this study is to assess the feasibility and acceptability of CALM, an evidenced-based treatment which aims to relieve distress following a brain cancer diagnosis, to meet military and civilian needs. Although research suggests CALM reduces distress in patients with advanced cancer, it has not been tested in brain cancer populations. Additionally, there may be a potential need for adaptations for this population, which will be studied in this trial. The first study is a single-arm, mixed-methods, Phase IIa, proof-of-concept trial (N=12) to inform CALM adaptations for Service Members, Veterans, their beneficiaries, and civilians with brain metastases. Upon completion of the Phase IIa trial, we will conduct a 2-year multi-arm randomized Phase IIb Pilot Trial (N = 60). CALM is being delivered individually to participants by trained CALM interventionists via telehealth. Currently, we have recruited 8/12 participants for the first phase of the trial. Two patients withdrew before study completion. Six patients have completed their course of CALM therapy.

15. SUBJECT TERMS

NONE LISTED

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1. Introduction

The current state of the science leaves neuro-oncology providers aware of their patients' distress, yet without guidance for evidence-based treatment. Previous trials of evidence-based treatment for patients in this context did not include individuals with brain cancer. The purpose of this study is to assess the feasibility and acceptability of Managing Cancer and Living Meaningfully (CALM), an evidenced-based psychotherapeutic treatment which aims to relieve distress following a brain cancer diagnosis, to meet military and civilian needs. Although research suggests CALM reduces distress in patients with advanced cancer, it has not been tested in brain cancer populations. Additionally, there may be a potential need for adaptations for this population, which will be studied in this trial. The first study is a single-arm, mixed-methods, Phase IIa, proof-of-concept trial (N=12) to inform CALM adaptations for SMs, Veterans, their beneficiaries, and civilians with brain metastases (bMET). Upon completion of the Phase IIa trial, we will conduct a 2-year multi-arm randomized Phase IIb Pilot Trial (N = 60). Following stratification for type of brain cancer (Primary Brain Tumor or bMET), participants will be randomized in a 2:1 design using a random number generator to either the CALM intervention or the treatment as usual control group.

Participants are being recruited from the VCUHealth and VCU Massey Cancer Center. CALM will be delivered individually to participants by trained CALM interventionists via telehealth. For both studies, psychological and behavioral assessments will take place at 3 timepoints (pre-intervention, post-intervention, and 3-month follow-up). Brief feasibility and acceptability surveys will be completed following each session, and an exit interview will be conducted within 1-month post-intervention completion.

2. Keywords

Managing Cancer and Living Meaningfully, CALM, Brain Cancer, Brain Metastases, Quality of Life, Depression, Death

Anxiety, Psychology

3. Accomplishments

What were the major goals of the project?

The table below is adapted from the original SOW first phase tasks. Projected completion dates and actual completion dates/months are detailed. Subtasks that are *italicized* were executed differently than the originally SOW, but were approved by the VCU IRB and the DOD before enrollment began. The numbers (representing grant month) and dates in parentheses indicate when an ongoing task began.

Study AIM 1: To conduct a mixed-method Phase IIa Proof of-Concept Trial (N = 12) with post-session surveys and individual exit interviews to guide CALM adaptation in SMs,Veterans, their beneficiaries, and civilians with bMET.	Projected Task/ Milestone Completion (Month)	Approximate Projected End Date	Actual Completion (Month)	Actual Completion Date (date updated)
Major Task 1: PRMC & IRB Submission & Approval				
Subtask 1: Finalize Protocol	1	9/15/2021	-2	7/1/2021
Subtask 2: Submit to Massey PRMC	1	9/15/2021	-2	7/22/2021
Subtask 3: Submit to VCU IRB / VA IRB	1	9/15/2021	1 to 2	9/20/2021
Subtask 4: Revise IRB	1 to 2	10/15/2021	2 to 5	1/3/2022
Subtask 5: Submit final approved protocol toclinicaltrials.gov	2	10/15/2021	2	10/7/2021
Milestone: Approval PRMC & IRB	3	11/15/2021	5	1/7/2022
Major Task 2: Recruit Participants				
Subtask 1: Identify Potential Eligible Participants	3	11/15/2021	7	3/23/2021
Subtask 2: Send Opt-Out Letters	3	11/15/2021	8	4/23/2021
Subtask 3: Screen for Eligibility/ Consent/ Enroll Participants	3 to 6	2/15/2022	Ongoing (11)	(8/11/2022)
Milestone: All Patients Allocated to Interventionist (N = 12)	6	2/15/2022	Ongoing **(8/12 recruited)**	**66% Complete**
Major Task 3: Complete CALM Intervention				
Subtask 1: Prepare REDCap database	3 to 4	12/15/2021	1 to 4	12/15/2021
Subtask 2: Run CALM Intervention for (N = 12)	4 to 10	6/15/2022	Ongoing (11)	(08/11/2022)
Subtask 3: Complete Post-Session Measures (Participant)	4 to 10	6/15/2022	Ongoing (11)	(08/11/2022)
Subtask 4: Complete Post-Session Measures (Interventionist)	4 to 10	6/15/2022	Ongoing (11)	(08/11/2022)
Subtask 5: Ongoing CALM Supervision	4 to 10	6/15/2022	Ongoing (11)	(08/11/2022)
Subtask 6: Baseline / Post-Intervention Assessment Measures Completed & Entered into Database	4 to 10	6/15/2022	Ongoing (11)	(08/11/2022)
Milestone: CALM Intervention Completed	10	6/15/2022	TBD	TBD
Major Task 4: Exit Interviews				
Subtask 1: Complete Exit Interviews with Enrolled Participants	8 to 12	8/15/2022	Ongoing (11)	(08/11/2022)
Milestone: Exit Interviews Transcribed and Coded	12	8/15/2022	TBD	TBD
Major Task 5: Data Analysis				
Subtask 1: Qualitative Thematic Analysis Performed	12 to 14	10/15/2022	TBD	TBD
Milestone: Quantitative Analysis Completed	15	11/15/2022	TBD	TBD
Major Task 6: Protocol Revisions				
Subtask 1: Review study findings with co-I's & patient advocates	15	11/15/2022	Ongoing (10)	Ongoing
Subtask 2: Collaboratively decide on necessary adaptations	15	11/15/2022	TBD	TBD
Subtask 3: Develop any additional materials needed (e.g., session handouts; appointment cards)	15-16	12/15/2022	TBD	TBD
Milestone: Adapted CALM protocol for brain cancer	16	12/15/2022	TBD	TBD

Of note: progress for the regulatory paperwork for Phase IIb has been made, in order to ensure less of a lag time between phases, to compensate for some of the previous delay experienced.

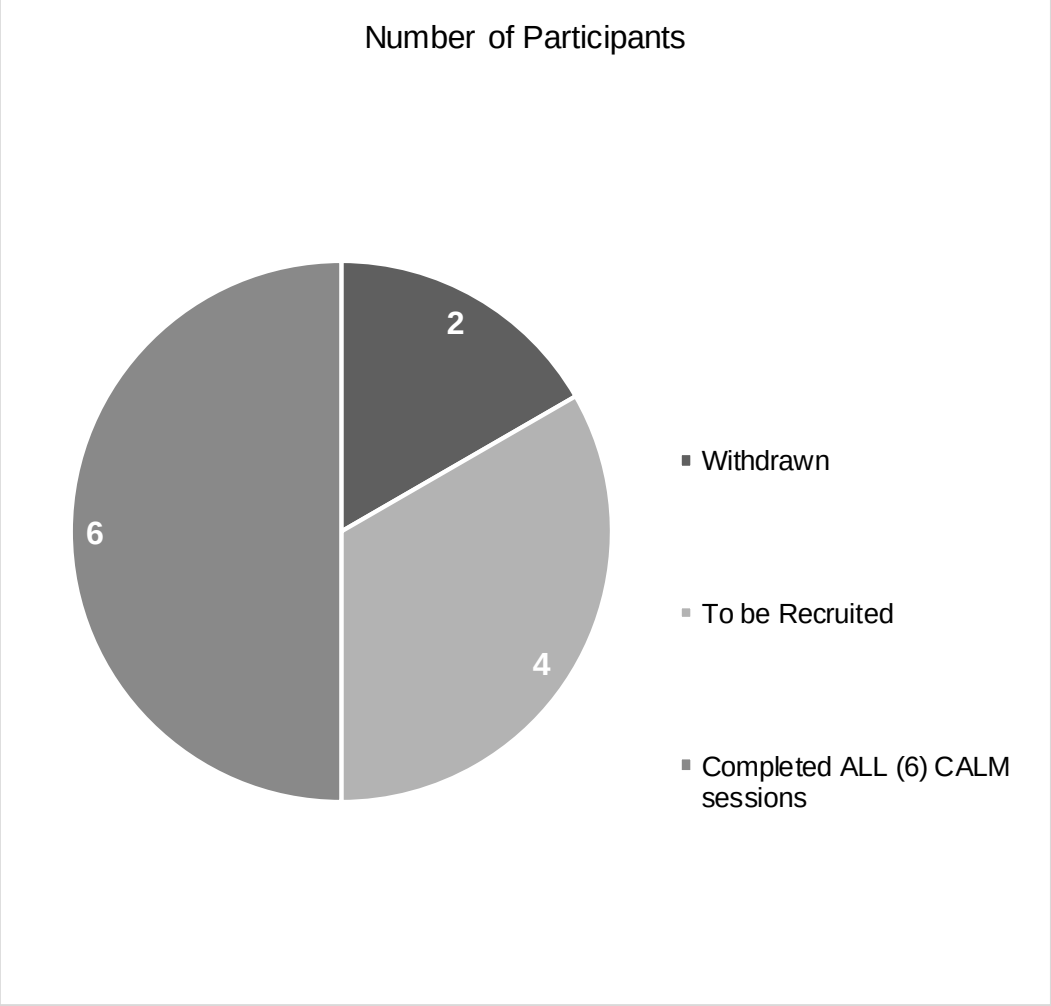
What was accomplished under these goals?

1) **Major Activities**

We have received approval from our IRB and the DOD (Major Task 1) and have begun enrollment for the first phase of the project. We are currently recruiting participants and running the CALM intervention (Major Task 2 and 3). We have recruited 8 out of 12 participants.

2) **Specific Objectives**

Currently, we have recruited 8 of the 12 participants needed for the trial. Six of the participants have completed the CALM intervention and their post-intervention / exit interview surveys. One individual enrolled, had one session, and withdrew from the trial. An additional individual enrolled, had two sessions, and withdrew from the trial. The graph below provides further detail on project recruitment and enrollment as of the writing of this report.



3) **Significant Results/Key Outcomes**

As the intervention is currently enrolling, we do not have any major findings or conclusions. As such data and graphs beyond enrollment are not available or applicable at this stage of the project. As feasibility is one of the major outcomes of this first phase, the study team has been recording what aspects of the project could be formatted differently to ensure it progresses more smoothly in its next iteration. As stated in our quarterly report, we have gained an implicit understanding of areas that are of particular concern to our current IRB. Additionally, we have noted that we may need to schedule screening for study enrollment in accordance with interventionist availability, and that our recruitment/enrollment goals should align with availability. We have also found a potential platform to use for our survey administration that will allow the surveys to be more accessible without research

assistant administration to standardize outcomes while also providing assistance. These observations will allow us to adjust for the next phase of the project.

4) **Other Achievements**

There are no other achievements to note at this time.

What opportunities for training and professional development has the project provided?

In order to address the project delays regarding clinician availability, two clinical psychology doctoral students and one psycho-oncology fellow are currently training in order to be able to take CALM cases, per protocol. After the clinicians finish their training cases, they will provide clinical services as a part of the intervention. Given the immense need for psychology providers in neuro-oncology, these training endeavors will not only impact our immediate clinical community, but the field overall.

How were the results disseminated to communities of interest?

Final results from the project are not yet available, so none have been disseminated at this point. Our patient advisory advocacy board has begun bi-monthly meetings. These members of the community are going to be provided updates on our study as it progresses, and will provide feedback for the next iteration of CALM.

What do you plan to do during the next reporting period to accomplish the goals?

We plan to continue to recruit for the current phase of the study, after clinician availability increases. We have 4 more patients to enroll for Study 1 completion. We plan on continuing to conduct assessments follow-up assessments for those currently enrolled. While we work on completing this phase, we will receive feedback from our patient advocacy advisory board on potential additional accommodations. We will also begin the regulatory process for the second iteration prior to accommodations being named, with a plan to amend the submission once those changes have been named. This will expedite the process and also allow for the necessary enhancements to be made, prior to submitting the protocol through the appropriate DoD channels.

4. Impact

What was the impact on the development of the principal discipline(s) of the project?

Nothing to report as first phase is ongoing.

What was the impact on other disciplines?

Nothing to report as first phase is ongoing.

What was the impact on technology transfer?

Nothing to report as first phase is ongoing.

What was the impact on society beyond science and technology?

Nothing to report as first phase is ongoing.

5. Changes / Problems

Changes in approach and reasons for change

We have made two explicit changes that differ from the statement of work. We initially intended to (1) submit this protocol to the McGuire VA IRB and (2) recruit individuals using “opt out letters.” We did not submit this protocol to the McGuire VA due to foreseeable significant delays in approval process, but were approved to advertise the study to those individuals receiving relevant treatment at the McGuire VA without this submission. We are not recruiting individuals using “opt-out” letters but instead allowing individuals to self-refer after receiving recruitment materials in the mail. Both of these aspects of the project are italicized in the table above detail project progress.

Actual or anticipated problems or delays and actions or plans to resolve them

This project has experienced delays due to the regulatory approval process. As a result, aspects of the project have been delayed until later in the timeline than initially projected. In response to this, we have accelerated recruitment efforts and have already enrolled 66% of the participants needed for the first phase of the grant. This was reported in the quarterly report.

One program participant enrolled in the study and withdrew after the first session, citing a misunderstanding of what is involved in the intervention. As a result, a concerted effort to explain and re-explain the intent and process of the project has been made with each following participant. We intend on addressing this issue with the Patient Advocate Advisory Board in order to pre-empt it from re-occurring in the second project phase.

Given the timeframe for the current phase, in regard to regulatory approval, we intend on beginning our IRB submission for the second phase of the project in advance of when we initially projected it be completed. We have begun drafting this submission.

Changes that had a significant impact on expenditures

Nothing to report.

Significant changes in use or care of human subjects, vertebrate animals, biohazards, and/or select agents

Nothing to report.

Significant changes in use or care of human subjects

Nothing to report.

Significant changes in use or care of vertebrate animals.

Not applicable.

Significant changes in use of biohazards and/or select agents

Not applicable.

6. Products

Publications, conference papers, and presentations

Nothing to report.

Website(s) or other Internet site(s)

Nothing to report.

Technologies or techniques

Nothing to report.

Inventions, patent applications, and/or licenses

Nothing to report.

Other Products

Database for Phase IIa is currently being used for data entry, but will include rich data needed to make adjustments to the intervention for Phase IIb.

8. Participants & Other Collaborating Organizations

What individuals have worked on the project?

Name: Dr. Ashlee Loughan
Project Role: Principal Investigator
Nearest person month worked: 12
Contribution to Project: Dr. Loughan has supervised and helped execute every aspect of the study, per her role.

Name: Jaclyn Sadicario
Project Role: Research Assistant
Nearest person month worked: 12
Contribution to Project: Jaclyn has coordinated the project including work on: regulatory submissions/communications, creating and maintaining databases, recruitment and enrollment, and general project communications / administrative duties.

Name: Dr. Autumn Lanoyre
Project Role: Co- Investigator
Nearest person month worked: 12
Contribution to Project: Dr. Lanoye has supervised, consulted, and supported on every aspect of the study, per her role.

Name: Kelcie Willis
Project Role: Interventionist
Nearest person month worked: 12
Contribution to Project: Kelcie Willis has served as an interventionist providing CALM therapy for this trial.

Name: Dr. Sarah Bruan
Project Role: Interventionist
Nearest person month worked: 12
Contribution to Project: Dr. Braun has served as an interventionist providing CALM therapy for this trial.

Name: Dr. Gary Rodin
Project Role: Co- Investigator
Nearest person month worked: 12
Contribution to Project: Dr. Rodin has provided clinical supervision for study interventionists.

Name: Dr. Mark Malkin
Project Role: Co- Investigator
Nearest person month worked: 12
Contribution to Project: Dr. Malkin has provided medical, population specific consultation on this trial, as needed.

Name: Dr. Suzanne Mazeo
Project Role: Co- Investigator
Nearest person month worked: 12
Contribution to Project: Dr. Mazzeo has provided support regarding qualitative aspects of trial and consultation on study development.

Name: Dr. Dace Svikis
Project Role: Co- Investigator

Nearest person month worked: 12
Contribution to Project: Dr. Svikis has provided support and consultation on study development and measure implementation specific to trauma and substance use.

Name: Dr. Leigh Swartz
Project Role: Co- Investigator
Nearest person month worked: 12
Contribution to Project: Dr. Swartz has provided support and consultation on study development. Dr. Swartz has facilitated communication with McGuire VA regarding recruitment for the current protocol.

Name: Leroy Thacker
Project Role: Co- Investigator
Nearest person month worked: 12
Contribution to Project: Mr. Thacker has provided support and consultation on study development.

Has there been a change in the active other support of the PD/PI(s) or senior/key personnel since the last reporting period?

Dr. Malkin (co-I) has left the VCU institution. He remains active in the project as a consultant, as needed. Funds have been re-distributed to support administrative roles.

What other organizations were involved as partners?

There is no formal partnership. Hunter Holmes McGuire VA personnel have allowed us to provide materials to their patients.

8. Special Reporting Requirements

Nothing to report.

9. APPENDICES

None attached.