

# Clinical Research Priorities for Creative Arts Therapies Addressing Service Members and Veterans with TBI and Associated Psychological Health Conditions

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A Report from the 2023 State-of-the-Science Summit and  
Roundtable Series

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## **Introduction**

Creative Forces<sup>®</sup>: NEA Military Healing Arts Network (Creative Forces) is an initiative of the National Endowment for the Arts (NEA) in partnership with the U.S. Departments of Defense (DoD) and Veterans Affairs (VA) that seeks to improve the health, well-being, and quality of life for military and veteran populations exposed to trauma, as well as their families and caregivers, by increasing knowledge of and access to clinical creative arts therapies and community arts engagement. Creative Forces is managed in partnership with Civic Arts, the Henry M. Jackson Foundation for the Advancement of Military Medicine, and the Mid-America Arts Alliance.

In November 2023, Creative Forces hosted a hybrid (in-person and virtual) summit, bringing together clinicians and researchers for two days to consider the state of research on using creative arts therapies for military and veteran populations. Following the summit, a group of academic researchers and health professionals from the fields of creative arts therapies, neuroscience, rehabilitation medicine, and behavioral health took part in a series of roundtable discussions that continued to explore prospects for the field: specifically, topics warranting further investigation, and resources and actions needed to advance such research.

This report was commissioned by Creative Forces<sup>®</sup>: NEA Military Healing Arts Network and the Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc. Authored by ProgramWorks, who attended the summit and facilitated the roundtables, it summarizes potential new directions for research that were generated at the summit and in the post-summit roundtable discussions. It is intended to serve as a planning tool for military and civilian

researchers and clinicians who wish to study the efficacy and impact of creative arts therapies in military and veteran populations.

## Creative Arts Therapies Research for Service Members and Veterans

The Creative Forces initiative was established in 2012 as a clinical program in partnership with the Walter Reed National Military Medical Center. The initiative now has three components:

1. **Clinical.** Creative Forces is placing creative arts therapies at the core of patient-centered care at DoD and VA facilities, including telehealth delivery of care for patients in rural and remote areas and others who have difficulties in accessing in-person care. In clinical settings, creative arts therapists provide art, music, dance/movement therapies, as well as therapeutic writing instruction for military patients and veterans.
2. **Community.** Since 2017, Creative Forces has invested in community arts engagement activities in order to advance understanding of their benefits and impacts for military and veteran populations exposed to trauma. In 2021, the NEA began the Creative Forces Community Engagement grant program to support emerging and established non-clinical arts engagement projects.
3. **Capacity.** Creative Forces has created a National Resource Center that includes the development of toolkits, training materials, and other resources to support best practices in serving the target populations. Visit [CreativeForcesNRC.arts.gov](https://CreativeForcesNRC.arts.gov) to learn more.

### Creative Forces Clinical Programs

Since 2012, the clinical component has expanded to 12 sites at DoD and VA treatment facilities across the nation and includes telehealth services. Currently, 32 creative arts therapists, collectively funded by the NEA, DoD, and VA, provide art therapy, dance/movement therapy, and music therapy at these 12 clinical locations and through telehealth programs for rural and remote areas. Together, the 12 clinical programs serve approximately 160 new patients annually per therapist. Since 2012, over 18,000 patients have been served.

## Creative Arts Therapies Research

Creative Forces has a standing commitment to the pursuit and promotion of clinically relevant biomedical and behavioral research on the effectiveness of creative arts therapies for service members and veterans, as well as for their family members and caregivers. In 2016, the first research paper associated with the initiative was published, reporting on the impact of long-term art therapy for a senior military service member experiencing post-traumatic stress and traumatic brain injury.

In 2017, the NEA convened a planning team to identify priorities and to develop an agenda for Creative Forces research. The resulting [Creative Forces Clinical Research: A Strategic Framework and Five-Year Agenda \(2018-2022\)](#) was grounded in a review of relevant research, an analysis of knowledge gaps, and the perspectives of clinicians, researchers, other field experts, and a clinical research planning team. The report also benefited from information and insights exchanged during two symposia.

In 2020, the initiative produced conceptual frameworks for four focus areas within Creative Forces' clinical services: art therapy, dance/movement therapy, music therapy, and therapeutic writing. The four frameworks were developed through a collaboration of creative arts therapists and researchers, with input from leadership and federal and non-federal experts. A final report, *Creative Forces Conceptual Frameworks Phase 2*, includes the conceptual frameworks, logic models, and literature reviews for each clinical discipline and for therapeutic writing.

In 2021-2023, the NEA, in partnership with Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc. (HJF), supported four feasibility/pilot research studies in the use of creative arts therapies with military-connected populations through the Creative Forces network. Two art therapy studies focused on emotional processing, self-regulation, and other symptoms of traumatic stress, and two music therapy studies addressed the discomfort, disability, and quality of life associated with chronic pain. In 2023, one of these research teams received \$900,000 additional funding for a randomized controlled trial of music therapy for U.S. veterans with chronic pain.<sup>1</sup>

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1. [Creative Forces Clinical Study of Music Therapy and Chronic Pain in U.S. Veterans](#)

## Clinical Research Topics and Findings to Date

Creative Forces continues to support research and evaluation into how creative arts therapies, as part of an integrated clinical care model, have helped to address trauma experienced by military service members and veterans. At the time of the 2023 summit, 25 clinical, peer-reviewed studies and scholarly articles had been published by Creative Forces network-affiliated researchers.<sup>2</sup> So far, Creative Forces research has illuminated the relationships of clinical creative arts therapies or practices to positive outcomes such as:

- Recovery from traumatic experiences through meaning-making, positive framing, and verbal processing.
- Reduction of the symptoms associated with traumatic brain injury, post-traumatic stress disorder (PTSD), and chronic pain.
- Improvements to emotional expression and the awareness of mood and physical states.
- Development of healthy independent coping mechanisms.
- Indicators of hope and gratification within the context of strengths-based rehabilitation.
- Reduction of isolation and stigma, and growth in measurements of social connectedness, improved communication, and positive emotion.

Through its clinical research program, Creative Forces also has studied:

- Neurophysiological mechanisms of change associated with creative arts therapies.
- Feasibility and acceptability of delivering creative arts therapies interventions to service members and veterans within outpatient treatment settings.
- Systematic evaluation of creative arts therapies programs within military treatment facilities.
- Telehealth delivery of creative arts therapies.

## Revisiting Clinical Research Approaches and Priorities

Several strategies have contributed to the initial success of Creative Forces clinical research: adroit selection of rigorous research designs; funding of research opportunities at Creative Forces sites; collaboration with other health/rehabilitation/academic disciplines and partners; and an increased emphasis on generalizability of findings. Over time, Creative Forces clinical research

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2. [Creative Forces Clinical Peer Reviewed Publications Inventory](#)

teams have grown stronger in number and expertise, allowing for expansion of research activities, heightened rigor, and a more systematic approach for accumulating and producing knowledge.

The 2023 summit represented an inflection point for Creative Forces clinical research. Amid the accumulation of studies and a growing commitment to advance research throughout the network, the five-year research agenda ended, creating an interlude for reappraising priorities that will guide the allocation of resources. Additionally, in 2023, the U.S. Congress appropriated \$10 million to the DoD's National Intrepid Center of Excellence (NICoE) to support clinical creative arts therapies for military personnel. The DoD, through the NICoE and the Uniformed Services University of the Health Sciences, is directing the new funding toward research.<sup>3</sup> The insights from the series are meant to inform the ongoing Creative Forces strategic investments in research, the complementary investments being administered by the Department of Defense, and others navigating clinical research goals involving similar interventions..

## 2023 State-of-the-Science Summit

On November 16-17, 2023, the Creative Forces Clinical Program hosted a clinical research summit in Bethesda, Maryland. The summit's mission was to:

*Explore the state of current research, including knowledge gaps that can be addressed to inform practices and policies related to creative arts therapies for military and veteran populations.*

The summit drew approximately 60 in-person and 50 virtual attendees for a series of presentations, keynotes, panel discussions, and breakout groups that focused on the state of research on using creative arts therapies for military and veteran populations. Summit attendees included leadership from the NEA and the overall Creative Forces initiative, representatives from the Department of Defense, the Department of Veterans Affairs, and the Uniformed Services University of the Health Sciences. The summit was also attended by creative arts therapists, medical and behavioral health professionals, clinical and academic researchers, and a range of other professionals interested in creative arts therapies research and/or other therapies for military and veteran populations.

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3. Consolidated Appropriations Act, 2023, Pub. L. No. 117-328 (2022), <https://www.govinfo.gov/app/details/PLAW-117publ328>



Over the two days, the summit addressed key milestones and gaps in clinical research funding, studies, and practices supporting the delivery of creative arts therapies to military service members, veterans, and their families and caregivers. Preliminary research findings from four feasibility studies addressing research questions in the creative arts therapies for military and veteran populations were presented and discussed. These studies had been funded through the Creative Forces initiative from 2021 through 2023.

As summit participants considered the status of research in the creative arts therapies for military and veteran populations, a few key observations emerged. While research on using creative arts therapies is promising, the field would benefit from focusing research on specific conditions and on greater use of agreed-upon definitions of specific conditions/diagnoses, standardized protocols, and common outcome measures.

In general, there remains a need for more scientific rigor and broader dissemination of research tools, practices, and results. There is, consequently, a significant need to build a robust evidence base regarding the efficacy of creative arts therapies for military and veteran populations to: 1) establish the value of creative arts therapies for patients and healthcare systems and 2) develop systems and policies to integrate creative arts therapies into healthcare to improve patient outcomes.

## **Post-Summit Roundtables**

Following the summit, the Creative Forces leadership convened roundtable meetings to continue the cross-disciplinary exchanges. Roundtable participants included academic researchers and health professionals from the fields of creative arts therapies, neuroscience, rehabilitation medicine, and behavioral health (see Appendix). A variety of participants were selected from the DoD, VA, and the civilian sector to meet between January and April 2024, for two full-day workshops and two virtual meetings, to build upon the summit discussions. Group members reflected on strategies for producing robust evidence on using creative arts therapies for service members and veterans. The participants were invited to discuss key topics in need of investigation, as well as resources and actions needed to advance research into creative arts therapies for military-connected populations.

## A Vision for the Field

A core aim of this field of research is to build an understanding of the impact of creative arts therapies for service members and veterans with traumatic brain injury and psychological sequelae to trauma. This aim is being pursued by conducting high-quality studies informed by research-practitioner partnerships. Summit and roundtable participants identified multiple fields of impact that warrant study: biological, psychological, functional, behavioral, social, and economic impacts. These fields address the breadth of clinical outcomes, underlying mechanisms of change, foundations for treatment innovations, and systemic impact. Based on summit proceedings and subsequent roundtable discussions, a long-term vision for researchers, practitioners, and policymakers is that:

*Creative arts therapies optimize sustainable outcomes through evidence-based practice for military-connected populations.*

This vision highlights the importance of scientific evidence as the basis for creative arts therapies for military-connected individuals. Key components of the vision are described below.

- **Evidence-based practices:** Creative arts therapies are informed by empirical data that demonstrate the effectiveness of specific interventions (e.g., protocols, dosages) in addressing the needs of military-connected individuals.
- **Outcomes:** Creative arts therapies improve outcomes such as quality of life, mental and behavioral health, and functional independence as they relate to daily tasks—including military-specific tasks. These outcomes also demonstrate the value of creative arts therapies within interdisciplinary healthcare models and for military-connected populations.
- **Sustainability:** The long-term benefits of creative arts therapies demonstrate durability of positive impacts, not just short-term symptom improvement.

## Research Needs

Summit and roundtable participants discussed the topics most essential for research on using creative arts therapies for service members and veterans. Roundtable participants refined the following list, in no specific order, taking into consideration patient needs and a timeframe of eight to ten years. Among roundtable participants, this was the span of time considered necessary for

developing research resources, obtaining funding, conducting studies, and publishing findings.

- Cognition
- Emotion regulation
- Functional activity
- Opioids and other substance use
- Pain
- Suicide
- Trauma exposure

There are qualitative differences among these topics: some are based on function, some on systems, some on symptoms, and some are event specific. A similar complexity is captured in a biopsychosocial model of functioning and disability model offered by the International Classification of Functioning (ICF), Disability and Health.<sup>4</sup> A VA interpretation of this model acknowledges “the multifaceted relationship between a health condition (disorder or disease) and the interaction among body, whole person (Veteran) and social perspectives, and considers context (environmental and personal factors) that can serve as barriers to or facilitators of functioning and disability.”<sup>5</sup>

Although definitions of these topics—and hypotheses about their relationships—are outside the purview of this paper, they are the appropriate domain of research investigators.

The discussions also highlighted the role of research in understanding the various mechanisms of action behind creative arts therapies. Such knowledge can explain why an intervention works and lead to further insights and more precise interventions. Group members, therefore, encouraged mechanistic studies that can inform clinically-oriented research on the efficacy of creative arts therapies.

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4. <https://www.who.int/standards/classifications/international-classification-of-functioning-disability-and-health>

5. [ICF\\_description\\_of\\_function\\_final.pdf](#) (va.gov)

## Proposed Actions for The Field

The summit and roundtable discussions considered the essential resources and actions necessary for rigorous, programmatic research that builds a body of evidence for using creative arts therapies in military and veteran populations. The following actions can be taken by researchers and clinicians, both within and across institutions, to develop the necessary research tools, practices, and infrastructure.

### Develop Research Tools through Systematic Study

High-quality investigations require standardized interventions and reliable, validated outcome measures. These components are essential for replication and accumulation of sound evidence. Systematic research to develop the intervention protocols and outcome measures should be done early in the process and is a necessary step for the field.

#### Standardize Interventions

To be assessed and compared, interventions must be implemented consistently across patients, therapists, and research sites. This practice requires standardization of interventions, as well as the development of protocols aligned with the interventions. For research, interventions should be:

- Based on a theory or model,
- Developed and tested systematically,
- Documented in a protocol with a manual,
- Publicly available, and
- Informed by creative arts therapies practitioners.

To be effective, intervention protocols and manuals need to provide standard definitions and specify the dose, timing, frequency, session length, and content of the intervention. A process for measuring the fidelity of implementation will strengthen such research overall.

Throughout the summit and roundtable discussions, participants observed a tension between the therapeutic priority of responding to the needs of an individual patient, and the need to use standardized protocols to ensure consistent implementation for the purposes of replication. It was generally agreed that standardized protocols should be customizable and include guidance on how to adjust implementation based on specific factors, such as setting, modality, and patient condition.

## Standardize Measurement of Outcomes

Research tools must align with the targeted outcomes, be sensitive enough to detect change, and be reliable and valid so that, across studies, findings can be compiled and compared. Common data elements (variables) and validated outcome measures will enable researchers and clinicians to achieve consistent, accurate measurement within and across study sites.

Research outcomes may rely on existing measures or on new measures developed specifically for this research field. Each approach has benefits and drawbacks. Strong, existing measures are ready-to-use but may need to be validated for military and veteran populations and transferability to the creative arts therapies' disciplines. Newly developed measures can be tailored specifically to the creative arts therapies and military and veteran populations, but they take much longer to develop. Another consideration is whether outcome measures are specific to one creative arts therapy discipline or applicable across multiple disciplines and, therefore, useful in cross-disciplinary research.

The following approaches can help advance outcome measurements in creative arts therapies:

- Identify the measures needed based on research goals and questions;
- Augment self-report measures and increase objectivity by using neurological, performance, and physiological measures, such as functional magnetic resonance imaging (fMRI), motion capture, skin conductance, reaction time, biomarkers, etc;
- Increase the use of simple physiological measurement through wearables; and
- Use multiple types of measures in combination for confirmatory data (e.g., fMRI, therapist observation, and self-report).

Currently, some toolkits are being developed to assess cognition, motor functioning, sensation, and emotion for a variety of patient populations and conditions through the National Institutes of Health, where there is also research and funding of the development of biomarkers critical to mechanistic studies. In addition, established tools, and toolkits, such as the NIH Music-Based Intervention Toolkit,<sup>6</sup> may help to advance the field rapidly.

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6. <https://www.nccih.nih.gov/research/the-nih-music-based-intervention-toolkit>

## Enhance Protocols and Measures through Systematic Research and Training

Effective development and implementation of these tools requires systematic research and training. The following actions were discussed as critical to the further development of research in the field:

- Identify scales validated for these populations or validate existing scales (in use with other populations) for military and veteran populations;
- Create templates for conducting validation studies;
- Conduct research on the feasibility, utility, standardization, and patient acceptance of research measures prior to inclusion in larger studies; and
- Build common use through training of creative arts therapists and the creation of a database of measures.

## Plan a Progression of Studies that Will Demonstrate the Comprehensive Value of Creative Arts Therapies for Military and Veteran Populations

Studying the return on investment (ROI) of creative arts therapies can demonstrate the benefit or value to healthcare organizations, patients/clients, and providers, alike. While there is no formal ROI framework in healthcare literature, existing approaches typically revolve around economic considerations (such as revenue), non-economic aspects (such as value or impact), or a fusion of both domains (Thusini et al., 2022).<sup>7</sup> Benefits of ROI studies help with the following.

- **Allocation of resources:** Justify the investment of creative arts therapies by showing that they deliver tangible benefits in relation to the resources expended.
- **Evidenced-based decision making:** Provide evidence of the effectiveness and cost-effectiveness of creative arts therapies to make informed choices about integrating the therapies into military and veteran healthcare systems.
- **Maximizing impact:** Ensure creative arts therapies are delivering meaningful outcomes and making a positive impact for military-connected populations.
- **Interest holder collaboration:** Support the implementation and expansion of creative arts therapies within the federal health systems in collaboration with key military and veteran interest holders.

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7. Thusini, S., Milenova, M., Nahabedian, N., Grey, B., Soukup, T., Chua, K., Henderson, C. (2022). *BMC Health Services Research* 22:1492 <https://doi.org/10.1186/s12913-022-08832-3>.

- **Accountability and transparency:** Assess the efficiency and effectiveness of creative arts therapies and ensure healthcare systems are accounting for the use of resources.
- **Enhanced access to services:** Increase the availability of creative arts therapies for military-connected populations, ensuring that individuals who could benefit from these therapies have access to them.
- **Continuous improvement:** Identify areas for optimization and refinement, ensuring that resources are directed towards the most effective interventions.

Roundtable participants acknowledged that effectively demonstrating the ROI for creative arts therapies takes a comprehensive effort. Foundational work is essential. This includes implementing a comprehensive research approach, identifying investment goals as well as gaps in existing ROI literature, and building capacity by employing or contracting with a ROI researcher.

Increasingly, program leaders, evaluators, and researchers are seeking input from the people they serve, evaluate, and study. This motive is often driven by the imperative of equity and by a commitment to ensure that a given program truly addresses the needs and interests of the people served. Participant panels or patient alumni can provide unique and important perspectives on various aspects of research, such as whether the outcome being studied is meaningful or whether a certain measure will prove acceptable. Examples of such panels exist in the VA system.<sup>8</sup>

Potential near-, mid-, and long-term strategies, identified during roundtable discussions, are described below. In identifying the most essential research topics (listed above), roundtable participants focused exclusively on outcomes for service members and veterans. These ROI strategies build on that same core and expand from there.

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8. [https://www.hsrd.research.va.gov/publications/vets\\_perspectives/Nov-Dec23-Veteran-Research-Engagement-Panel.cfm](https://www.hsrd.research.va.gov/publications/vets_perspectives/Nov-Dec23-Veteran-Research-Engagement-Panel.cfm)

<b>Near-Term</b>	<b>Demonstrate improved biopsychosocial outcomes and functional activity</b> for military and veteran populations. Quantifying the benefits of creative arts therapies for improving the quality of life and functional activity for service members, veterans, and their families provides a basis for establishing ROI.
<b>Mid-Term</b>	<b>Accountability and transparency:</b> Assess the efficiency and effectiveness of creative arts therapies and ensure healthcare systems are accounting for the use of resources.
<b>Long-Term</b>	<b>Enhanced access to services:</b> Increase the availability of creative arts therapies for military-connected populations, ensuring that individuals who could benefit from these therapies have access to them.

## Build Research Practice and Infrastructure

Successful programmatic research requires effective research practices and infrastructure. It became clear during the summit that the absence of one or both of these resources represents challenges for several institutions and researchers. Roundtable discussions highlighted the following strategies for building research practices and infrastructure:

- Strengthen and broaden research partnerships and networks;
- Implement stepwise systematic research;
- Share technical resources;
- Expand training opportunities;
- Strengthen policy; and
- Cultivate funding.

### Strengthen and Broaden Research Partnerships and Networks

Research networks increase capacity through interdisciplinary collaboration, particularly through sharing knowledge and resources, including strategies for co-training of researchers and practitioners, communication and dissemination of findings, and advocacy. They also broaden access to populations and settings/sites and can host more ambitious or comprehensive research projects than can individual researchers or academic and healthcare institutions. Research networks in the creative arts therapies for military and veteran populations may include



military and civilian researchers, clinicians, patients, and academic and healthcare institutions.

Central to the research network for creative arts therapies is the relationship between clinicians and researchers. This dynamic relationship was at the heart of many summit and roundtable discussions, with consistent references to its bidirectional nature:

**Research must inform clinical practice, clinical practice must inform research, and research-practice partnerships are critical for advancing the science.**

Roundtable participants identified near-, mid-, and long-term steps for building research partnerships and networks, noting that these structures demand time and institutional support.

<b>Near-Term</b>	<ul style="list-style-type: none"> <li>Identify current resources, gaps, and priority needs</li> <li>Identify partners with aligned interests and/or complementary resources</li> </ul>
<b>Mid-Term</b>	<ul style="list-style-type: none"> <li>Establish common goals/priorities as a basis for building relationships</li> <li>Develop communications and infrastructure for collaboration</li> <li>Plan for sustainability</li> </ul>
<b>Long-Term</b>	<ul style="list-style-type: none"> <li>Develop a strategic plan for the research network that supports standardization and sustainability</li> </ul>

## Implement Stepwise, Systematic Research

Implementing stepwise, systematic research ensures that each stage of the research process builds upon the previous one. In the steps outlined below, research progresses from theory through the implementation of study to an evaluation of its strengths and weaknesses, which inform future investigations. Roundtable participants stressed the importance of choosing the best study design for the population and the selected research question, noting that innovative research strategies that also maintain scientific rigor should be considered.

<ol style="list-style-type: none"> <li>Define topic</li> <li>Conduct literature review (theory and methodologies) and research gap analysis</li> <li>Identify data elements and measures (may include pilot testing)</li> <li>Understand and plan for the distinct needs of clinical practice and research (e.g., standardization)</li> </ol>
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5. Develop research questions and protocols
6. Determine research design
7. Conduct research (may include pilot testing)
8. Evaluate implementation of the intervention
9. Disseminate research findings
10. Work with clinicians and policymakers to integrate research findings into clinical practice
11. Evaluate the use of research findings in clinical practice

Roundtable participants identified near-, mid-, and long-term steps for implementing a research program over time.

<b>Near-Term</b>	<ul style="list-style-type: none"> <li>• Obtain institutional support</li> <li>• Conduct small-scale feasibility studies</li> </ul>
<b>Mid-Term</b>	<ul style="list-style-type: none"> <li>• Develop mechanisms for evaluating significance of feasibility studies</li> <li>• Determine which to move forward and the best designs to use</li> <li>• Continually evaluate research progress</li> </ul>
<b>Long-Term</b>	<ul style="list-style-type: none"> <li>• Use implementation science to translate research into clinical practice and improve the overall quality of research and interventions</li> </ul>

## Share Technical Resources

Researchers and clinicians develop many tools and protocols. When shared and used, these resources improve researcher-to-researcher communication, research consistency, and overall efficiency. With research involving multiple host entities (DoD, VA, academic institutions, etc.), the location and management of repositories may need to reside within those individual systems. Ideally, external partners will be able to access the repositories. Examples of the types of resources and templates that may be needed are listed below.

- Lexicons and operational definitions
- Conceptual models
- Interventions, protocols, and manuals
- Validated outcome measures
- Templates for research designs
- Guidelines for subject recruitment
- Guidelines for compensating research participants

- Subject screening protocols
- Consent forms aligned with Human Subjects Protection
- Institutional Review Board (IRB) protocols and general practice guidelines
- Templates for research/grant proposal, including suggested budget categories
- Training materials
- Database of research tools
- Database of potential collaborators
- Data-sharing agreements
- Memoranda of Understanding/Agreement

## Expand Training Opportunities

Discussions during the summit and roundtable meetings highlighted the need for training to improve research capacity across the field. Three themes consistently resonated throughout the discussions: 1) research training for clinicians; 2) training in creative arts therapies for researchers; and 3) military systems/culture training for civilians. There were also recommendations for increasing, among creative arts therapists, research preparation and experiences with military and veteran populations. Such actions may include:

- Incorporating research training into professional education programs;
- Providing continuing education in research;
- Offering career development grants for research of creative arts therapies for military-connected populations; and
- Offering paid internships, fellowships, mentorships for research and/or experience in military/veteran settings.

## Cultivate Funding

Sustainable funding for research in the creative arts therapies for military and veteran populations requires a multifaceted approach. Some strategies may include:

- **Provide access to grant writers or technical assistance for developing funding applications.** Creative arts therapists participating in the summit and roundtables reported that lack of experience in applying for research grants and/or lack of research time in clinical schedules are barriers to seeking grants for research.
- **Use progressive funding models.** Align funding with the evolving needs and scope of the research, increasing funding amounts from foundational research (literature reviews, instrument development) through small-scale studies (pilot or feasibility studies) to more complex multisite investigations

or randomized controlled trials. As an example, Creative Forces funded four feasibility/pilot studies to address priority research questions in art therapy and music therapy, followed by additional funding to advance one of the research teams to a randomized controlled trial.

- **Expand and diversify funding sources for sustainable funding.** In addition to traditional internal and external funding streams, consider partnering with organizations and institutions interested in the populations and clinical practices related to this research, such as military and veteran organizations, policymakers, and philanthropic organizations, as well as those investing in integrated healthcare for military-connected populations. A first step may be needed to raise the awareness of these stakeholders of the benefits of creative arts therapies for military and veteran populations and how research findings translate into clinical practice. Seek and/or support dedicated funding streams within institutions, create long-term partnerships with philanthropic organizations, and/or integrate research priorities into broader initiatives addressing the needs of military and veteran populations.
- **Consider a research portfolio management team for efficiency.** Within large organizations, such as the DoD or the VA, a central team that tracks research in the use of creative arts therapies for military and veteran populations can support collaborations within the agency and reduce redundancies.

## Strengthen Policy

There are several policy areas related to institutions and regulatory frameworks that impact the ease with which research can be conducted. Key among them are: funding and resource allocation; governance of internal and external partnerships (e.g., Memoranda of Understanding/Agreement); standards of clinical practice, particularly in integrated healthcare; productivity standards, particularly as related to protected research time for creative arts therapists; and incentivization for research. Several researchers reported challenges in navigating conflicting policies related to funding and research approvals, both within their own institution and between partner institutions. These points of conflict represent additional areas for intervention.

## **Conclusion**

Research on the use of creative arts therapies for military and veteran populations shows promise for improving a variety of factors and outcomes. A robust body of evidence is imperative to demonstrate the value of creative arts therapies for patients and healthcare systems and to develop infrastructure and policy for integrating creative arts therapies into healthcare for military and veteran populations.

This paper summarizes the ideas generated during the summit and roundtable deliberations about how to develop a strong body of evidence. It identifies potential topics in need of research, as well as resources and actions to support that research. It is designed to inspire collaboration, innovation, and investment in research on the creative arts therapies to improve outcomes for military and veteran populations.

## Appendix – Roundtable Participants

Member	Position and Affiliation
<b>Jennifer DeLucia, DAT, ATR-BC, LCAT</b>	Assistant Professor, Chair, Department of Creative Arts Therapy, College of Visual and Performing Arts, Syracuse University
<b>Rebekka Dieterich-Hartwell, PhD, BC-DMT, LPC</b>	Research fellow at Drexel University; Behavioral Health Clinician and Dance/Movement Therapist at MossRehab Institute of Brain Health
<b>Liz K. Freeman, MA, BC-DMT</b>	HJF Lead Dance/Movement Therapist in support of the National Intrepid Center of Excellence (NICoE), Walter Reed National Military Medical Center
<b>Melissa Walker Freeman, MA, ATR</b>	Healing Arts Program Coordinator at the National Intrepid Center of Excellence (NICoE), Walter Reed National Military Medical Center, and Lead Art Therapist for Creative Forces®: NEA Healing Arts Network
<b>Lori Gooding, PhD, MT-BC</b>	Associate Professor of Music Therapy, College of Music, Florida State University
<b>José M. Lara-Ruiz, Ph.D.</b>	Research Psychologist, Psychological Health Center of Excellence, DHA - Research and Engineering
<b>Charles E. Levy, MD</b>	Research Physician, University of Florida, Center for Arts in Medicine, and Department of Occupational Therapy; HJF
<b>Brianna Martin, MA, BC-DMT</b>	Dance/Movement Therapist, Recreational/Creative Arts Therapy Department VA Pittsburgh Healthcare System
<b>Stephanie Maxfield Panker, PhD, DPT</b>	Clinical Affairs Section Chief, Traumatic Brain Injury COE, Defense Health Agency
<b>Nate McLaughlan</b>	HJF Music Therapist for Creative Forces in support of the National Intrepid Center of Excellence (NICoE), Walter Reed National Military Medical Center
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