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Battlefield Acupuncture in the Management of Non-Traumatic Low Back Pain in Service Members

Amber M. Birkle, Angelyn M. Brown, Diana M. Costa, Vonya M. Gibbons & Marita J. Prince

Uniformed Services University

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Completion Verification Form

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The DNP Practice Project Team verifies that the following components of the DNP project, accomplished by the above students, is of sufficient rigor and demonstrates doctoral level scholarship to meet the requirements for USUHS GSN graduation:

- Presentation of DNP project to the leadership/stakeholders at the Phase II Site,
- Abstract/Impact Statement (*Appendix F*), and
- DNP Project written report.

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Abstract

Phase II Sites: Womack Army Medical Center, Fort Bragg, NC; Carl R. Darnall Army Medical Center, Fort Hood, TX

Project Title: Battlefield Acupuncture in the Management of Non-Traumatic Low Back Pain in Service Members

Authors: Amber M. Birkle, Angelyn M. Brown, Diana M. Costa, Vonya M. Gibbons, & Marita J. Prince

Background: The high prevalence of low back pain (LBP) in active duty service members (ADSM) places significant burden on the overall strength and capability of the force. Battlefield Acupuncture (BFA) is a safe, effective treatment for non-traumatic LBP and aligns with VA/DoD Clinical Practice Guideline (CPG) recommendations for non-pharmacological therapies.

Clinical Question: In active duty service members with non-traumatic low back pain, does battlefield acupuncture provide improved medical readiness when compared to current practice?

Project Design: Rosswurm and Larrabee's model for evidence-based practice change was the organizing framework. An educational campaign and an outpatient BFA clinic were implemented to increase knowledge of VA/DoD CPG for LBP and improve patient access to BFA. The project was conducted simultaneously at Fort Bragg and Fort Hood.

Results: Questionnaire responses indicated providers were knowledgeable of the CPG, but encountered barriers implementing BFA into clinic schedules. After the educational campaign, the rate of BFA offered by providers increased 121%. Fort Bragg and Fort Hood BFA walk-in clinics resulted in 228 encounters. Combined, 71% of soldiers undergoing BFA experienced measurable pain relief averaging an overall reduction of 2.1 on a 10-point scale. During the intervention period, BFA administration increased by 212% at both sites. At Fort Bragg, patients who received BFA treatment were 46% less likely to be prescribed a CNS depressant, 93% less likely to have a new profile, and 44% less likely to have a pre-existing profile for LBP. At Fort Hood, reduction in CNS depressant rates was not observed. However, patients were 30% less likely to have a new profile and 52% less likely to have a pre-existing profile for LBP.

Organizational Impact and Implications for Practice: Providing education on the CPG and BFA will expand provider knowledge and promote BFA as an appropriate pain management technique. Administration of BFA will improve ADSM readiness and reduce duty limiting profiles and CNS depressant medication prescriptions.

Battlefield Acupuncture in the Management of Non-Traumatic Low Back Pain in Service Members

Introduction

Low back pain (LBP) among US active-duty service members (ADSMs) is a common ailment and a leading cause of permanent disability in the Army (Rhon & Fritz, 2015). Studies show that 7.4% of active duty soldiers have at least one diagnosis of LBP, and of those, 50% have more than one documented episode (Armed Forces Health Surveillance Center [AFHSC], 2010). LBP can lead to physical limitations, psychological symptoms, and a reduced quality of life.

Fort Bragg, North Carolina and Fort Hood, Texas are two of the largest Army bases in the United States. Fort Bragg is the home to the 82nd Airborne Division and the U.S. Army Special Operations Command with more than 57,000 soldiers. Fort Hood is home to III Corps and the First Army Division West with an estimated 41,000 soldiers. Both posts have an indispensable mission of sustaining, equipping, training, and rapidly deploying full-spectrum forces. The extraordinary op-tempo combined with specialized operations requiring heavy equipment, airborne maneuvers, and extensive physical demands increase the likelihood that soldiers will incur musculoskeletal and lower back injuries (Roy, Fish, Lopez, & Piva, 2014).

The impact of LBP can be mitigated by proper surveillance, diagnosis, treatment, and rehabilitation. The Department of Veterans Affairs (VA) and Department of Defense (DoD) Clinical Practice Guideline for Diagnosis and Treatment of Low Back Pain (2017) provide instruction for the care of LBP at Fort Bragg and Fort Hood. This is consistent with the American College of Physicians clinical practice guideline for the treatment of LBP and supports the use of acupuncture as a non-pharmacologic and non-invasive therapy to reduce pain in

patients with chronic LBP (Qaseem, Wilt, McLean, & Forciea, 2017; VA/DoD, 2017). Battlefield acupuncture (BFA), an auricular acupuncture protocol often used in the military setting, is a technique in which small semi-permanent needles shaped like darts are inserted into targeted auricular points for sustained stimulation (Walker, Pock, Ling, Kwon, & Vaughan, 2016). BFA should be considered as a treatment option to reduce pain and improve function among soldiers with LBP and to improve overall unit readiness.

Significance of the Problem

More than 80% of American adults experience some form of LBP in their lifetime (Deyo, Mirza, & Martin, 2006). LBP is the fourth most common reason for an office visit to general practitioners, with only routine physicals, hypertension, and diabetes responsible for more visits (Martin et al., 2008). Despite the prevalence of back pain in primary care, primary care providers frequently do not use the best evidence for diagnosing and managing back pain. Many providers continue to order unnecessary diagnostic imaging that both increases the overall expense of treatment and often prolongs patient return to wellness (Martin et al., 2008). In addition to exposing patients to unnecessary diagnostic tests, non-evidence based treatment strategies, such as the prescribing of opioids, expose patients to greater risk of dependence or misuse (Qaseem et al., 2017).

Treating LBP with evidence-based methods while containing costs is crucial. In 2013, the price of treating LBP and neck pain amounted to 87.6 billion dollars making it the third costliest diagnosis in the US, next to ischemic heart disease and diabetes. (Martin et al., 2008). From 1995 to 2013, LBP and neck pain healthcare spending increased by 57.2 billion dollars, which rose at a faster rate than any other diagnosis (Dieleman et al., 2016). In 2006, approximately 65 billion dollars was attributed to lost wages and productivity from missed work due to LBP

(Qaseem et al., 2017). These statistics highlight the tremendous financial impact that LBP has on the patient and society.

LBP is the second most common reason for seeking healthcare in ADSMs, affecting more than 150,000 soldiers annually (George et al., 2007). LBP continues to be the leading cause of medical discharges in all military services (Childs et al., 2015). LBP was the most common reason for non-battle injury resulting in evacuation from Operation Iraqi Freedom from 2003 to 2006 (Jensen, Rodriquez, & Galante, in press). The clinical treatment of LBP is particularly important for providers who care for ADSMs. In a five-year period between 2010 and 2014, there were more than six million outpatient healthcare visits for LBP generated by service members (SMs) and back pain encounters increased by 34% (Clark & Hu, 2015). Approximately 11.2% of injuries from airborne operations at Fort Bragg involved LBP (US Army Public Health Command, 2010). Soldiers in armored cavalry units who spend frequent time in tactical vehicles and wear heavy equipment, like those at Fort Hood, are more likely to suffer from LBP. The incidence of moderate LBP or worsening LBP rises to 22% for these soldiers during deployment when time spent in tactical vehicles and wearing body armor increases (Roy, Lopez, & Piva, 2013). Every soldier removed from the fight due to LBP puts a strain on mission readiness and success of some of the Army's most elite forces.

Readiness is the highest priority in military medicine. Military leaders count on healthcare providers to improve outcomes and prevent lost duty days. LBP is a multifactorial ailment that can be frustrating for both patients and military providers who seek speedy recovery. This is a particular challenge for those suffering from LBP as most individuals who seek care will have recurrent episodes of LBP (Clark & Hu, 2015).

Clinical Question

In active duty service members with non-traumatic low back pain, does battlefield acupuncture provide improved medical readiness when compared to current practice?

Focus Areas

LBP is a wide-spread and debilitating ailment, negatively impacting crucial mission readiness. The VA and DoD addressed this problem by publishing clinical practice guidelines to inform clinicians of the standard of care for the treatment of LBP. The guidelines reflect a variety of possible interventions, including acupuncture, which may be implemented in treating this multifactorial and incapacitating health complaint. Battlefield acupuncture is a technique that it safe, economically sound, and above all effective in the treatment of LBP as supported in the published literature. The objective of this project was to increase the use of BFA in the treatment of LBP through a combination of provider education and the mitigation of potential barriers to implementation BFA in the primary care setting.

Provider education. Clinician support is essential to the success of any change in clinical practice. Providers became familiar with this project through educational in-services and printed toolkits outlining the VA/DoD clinical practice guidelines for LBP and the utility of BFA. The education strategy was multimodal and had multidisciplinary involvement (Patelarou et al., 2017). The educational in-service incorporated providers and clinic leadership in a limited, collegial setting better facilitating attendee engagement (Anwar & Batty, 2007). The printed toolkit expanded on what BFA is and how it can be used in the treatment of LBP. The project design combined in-service and written material to capitalize on increased retention associated with combining the two (World Health Organization [WHO], 2005). Printed materials were

replenished regularly as providers shared the information with patients. Clinicians were also provided verbal reminders of the project during the scheduled hours of the walk-in clinic.

Walk-in BFA clinic. To mitigate one of the predicted barriers to incorporating BFA, that of provider availability, a walk-in clinic was established within the greater primary care clinic. Logistically, establishing a walk-in clinic simplified the process for patients and providers. The walk-in clinic allowed patients that were informed of the hours to have a flexible window in which they could receive the pain-relieving treatment. Evidence suggests that patients appreciate the convenience of walk-in clinics (Hutchison et al., 2003). The walk-in clinic allowed providers to offer BFA to patients without the hindrance of incorporating the procedure into the already constrained 20-minute appointment time. Further, even clinicians that had not yet been certified to perform BFA could incorporate it into the patient's treatment plan by way of the walk-in clinic.

Relevance to Military Nursing

Advanced practice nurses are in an ideal position to provide patient-centered, holistic, collaborative medical care. Nurse practitioners are the most rapidly growing component of the primary care workforce and consistently deliver high quality and cost-effective care (AANP, 2013). Nurse practitioners in the military continue to expand their practice by serving in non-traditional roles both in garrison and deployment settings where they are responsible for maintaining the health and readiness of the force. Family nurse practitioners as primary care providers are the first line managers of LBP. There are approximately 160 Army family nurse practitioners on active duty across 32 Army Military Treatment Facilities (MTFs) (Yackel et al., 2018). Among Army nurse practitioners deployed to Iraq or Afghanistan, spinal pain was the second most common diagnosis treated while in theater (Lewis, Stewart, & Brown, 2012). Nurse

practitioners and other advanced practice nurses are well-positioned and qualified to provide BFA as a complementary treatment for LBP.

Logic Model

As a component of the initial planning stage, a logic model was constructed as a way to visually represent relationships among project variables (W. K. Kellogg Foundation, 2004). The logic model incorporates a framework of the current situation and desired end-state, identification of relevant information sources, communication with stakeholders, and analysis of the data points which inform outcome success (Annex A). The development of a logic model provided shared group understanding, shaped the project as one grounded in an achievable outcome, and identified data points that would validate the achievement. A more detailed approach including specific steps involved in implementation was necessary.

Organizing Framework

Evidence-based practice (EBP) informs nursing interventions, administrative processes, and educational practices in all healthcare settings. Incorporating EBP at the point of care must be accomplished in a systematic manner that uses a formal process to appraise evidence, enhance the effectiveness of patient care, and evaluate efficiency (White, Dudley-Brown, & Terhaar, 2016). The EBP Organizing Framework that best incorporates the development of our intervention and the most logical steps toward implementation thereof is the Model for Evidence-Based Practice Change developed by Rosswurm & Larrabee. This model is broken down into six steps in sequence: 1) assess the need for clinical practice change, 2) link problem, interventions, and outcomes, 3) synthesize the best evidence, 4) design practice change, 5) implement and evaluate the change, and 6) integrate and maintain the practice change

(Rosswurm & Larrabee, 1999). Each of these steps informed the development and implementation of this project.

Project Design

General Approach

This project is a multifaceted introduction and promotion of BFA for the treatment of non-traumatic LBP in the primary care setting conducted simultaneously at Fort Bragg and Fort Hood. This project focused on two main components: to improve provider knowledge about the VA/DoD guidelines for the treatment of LBP and to mitigate perceived barriers to offering BFA in the primary care setting. Parallel provider educational campaigns for one clinic at each location were conducted promoting the use of BFA, sharing current clinic trends, and presenting significance of LBP in maintaining military readiness. Congruent BFA walk-in clinics were then implemented to remove barriers in access to BFA as a non-pharmacological treatment option and to assess patient interest in BFA as a treatment modality.

Current literature supports BFA as an effective adjunct to therapy, demonstrating reduced pain in patients with LBP. Retrospective chart reviews were conducted at both locations to explore patterns in rates of BFA for LBP, provider practices regarding CNS depressant medication prescriptions, and general trends in profiles for LBP at the respective clinics. The information collected from the literature search and chart reviews were used to shape the provider educational campaign and informational handouts. Providers were given pre and posttest surveys to assess knowledge of VA/DoD guidelines and BFA. Provider educational campaigns conducted at Fort Bragg and Fort Hood utilized similar PowerPoint presentations, and informational toolkits. Walk-in BFA clinics were designed and executed at one primary care clinic on each military installation. The goal of this project was to improve outcomes in soldiers

with LBP and ultimately identify readiness improvement opportunities by promoting the use of BFA as an evidence based practice in primary care. Womack Army Medical Center's FY19-FY21 Quadruple Aim Performance Plan outlines the need for better treatment of musculoskeletal pain that would facilitate soldiers' prompt return to duty. This project aligns well with that aim and further emphasizes a need for practice change. Carl R. Darnall Army Medical Center's Commander cited readiness as his top priority. This project encourages an adaptive and evidence based approach to ensuring soldier readiness.

Setting

Fort Bragg in North Carolina is home to the 82nd Airborne Division and the U.S. Army Special Operations Command. It is the largest Army installation worldwide by population with over 57,000 soldiers. (Roy, Fish, Lopez, & Piva, 2014; Womack Army Medical Center, 2018). Fort Bragg has eight primary care outpatient health clinics including three community based medical homes to serve ADSMs, dependent beneficiaries, and retirees. This project took place at the Clark Health Clinic under the higher organization of Womack Army Medical Center (Womack Army Medical Center, 2018). Clark Health Clinic serves approximately 12,000 active duty beneficiaries from the United States Army Special Operations Command, John F. Kennedy Special Warfare Center and School, 20th Engineers Brigade, and 50th Expeditionary Signal Battalion. The project team worked in collaboration with a mentor in the Interdisciplinary Pain Management Clinic, clinic leadership, group practice manager, and clinic administrators to construct and cultivate an environment of positive change (White, Dudley-Brown, & Terharr, 2016).

Fort Hood, Texas is home to III Corps and the First Army Division West. III Corps includes both the 3rd Armored Cavalry Regiment and the 1st Cavalry Division. It is the largest

armored instillation in the military with an estimated 41,000 soldiers (U.S. Army Fort Hood, 2020). Fort Hood has ten health clinics and medical homes for family members and retirees, six of which also serve ADSMs (Carl R. Darnall Army Medical Center, 2020). The project took place at Thomas Moore Health Clinic. This clinic consists of four medical teams that serve 10,900 active duty beneficiaries mainly from the 13th Expeditionary Sustainment Command. The Fort Hood project team partnered with Carl R. Darnall Army Medical Center (CRDAMC) Pain Management, clinic leadership, team lead nurses, and administrative staff to ensure successful completion of the project goals and produce a movement of change within the clinic.

Procedural Steps

After having identified LBP as an ailment with significant adverse impact to patient quality of life and mission readiness, meticulous evaluation of the VA/DoD Clinical Practice Guideline revealed potential treatments that may be underutilized. The use of battlefield acupuncture was identified as a potential area of performance improvement. A literature search was conducted to evaluate and synthesize available evidence on the efficacy of using BFA in the management of LBP. The PubMed, Embase, and CINAHL databases as well as Google Scholar web search engine were used to search for articles, abstracts, or dissertations that would provide applicable evidence. The key search terms in the collection of evidence were *battlefield acupuncture* and *low back pain.* Additional search terms used were *ear acupuncture, auricular acupuncture, auriculotherapy, back pain, backache,* and *lumbago.* Inclusion criteria for all searches were peer-reviewed and English language articles. No articles were excluded based on publication date in an effort to obtain the largest pool of potential sources. This search strategy resulted in 457 references. Four additional articles found cited in items during the full-text review and appearing pertinent to the clinical question were added to the total quantity of

identified articles for the literature review. The 461 references were then evaluated for inclusion in the literature review. References were excluded after screening the titles for duplication, abstracts for applicability, and full-text articles for intervention eligibility criteria. As a result of this process, 18 articles were selected for final analysis in the literature review.

The articles evaluated included two systematic reviews, four case reviews, eight randomized controlled trials, two literature reviews, one feasibility study, and one retrospective chart review. The samples size of the articles ranged from one to 753 participants. Six of the articles clearly identified BFA as their acupuncture method while the other 12 articles either did not specify the method of auricular acupuncture or used a technique other than BFA. Melnyk and Fineout-Overholt's (2011) hierarchy of evidence scale was used to assign a level of evidence category. Of the articles that were included in the literature review, there were one level I (systematic review/meta-analysis), nine level II (well-designed randomized controlled trial) and two each in levels IV (correlational design), V (systematic reviews of descriptive or qualitative studies), VI (a single descriptive or qualitative study), and VII (expert commentary). The number of randomized controlled trials (RCTs) found in the literature is reassuring. The seven RCTs that used pain rating as the dependent variable all showed improvement in that measure. The one that used opioid prescription rates saw a reduction in demand. The case reviews, retrospective chart review, feasibility study, and literature reviews do not allow for the same degree of generalizability; however, they do offer insight into the various circumstances where auricular acupuncture was successfully implemented in the treatment of LBP.

To assess quality, the articles were appraised using the Johns Hopkins Nursing Quality of Evidence Appraisal method (Newhouse, Dearholt, Poe, Pugh, & White, 2007). This tool combines the values of samples size, control, study design, and scientific evidence to categorize

each article into one of three domains. One of the articles evaluated was of the highest quality deserving an "A." Twelve "B" rated articles indicate that the conclusions are reasonably definitive despite some weaknesses in design or evidence. Five "C" rated articles indicate that the conclusions drawn are not definitive. An additional limitation to the quality of evidence is perceived researcher bias in that many were vested in the success of auricular acupuncture as an intervention for pain. Several of the included articles shared the same authors which limits the diversity of perspective in the represented literature. However, this may be understandable as emerging science often has early adopters publishing a great number a works before the literature pool expands.

A necessary element of all evidence based practice is a thorough review of the evidence. Having completed this essential step, Rosswurm & Larrabee's Model for Evidence-Based Practice Change (1995) informed the implementation of the additional procedural steps.

Assess the need for clinical practice change. Retrospective chart reviews were conducted covering encounters from September through November 2018 for LBP in primary care providers at Clark Health Clinic at Fort Bragg and Thomas Moore Health Clinic at Fort Hood. For ADSMs, the annual Army Physical Fitness Test routinely takes place in October, which coincides with the intervention period. As this increased physical demand may impact the numbers of soldiers reporting with LBP, special consideration was paid to ensure both chart reviews incorporated the month of October. The reviews were used to establish trends for LBP treatment in primary care and inform the need for performance intervention. The initial search included a variety of low back pain diagnoses including low back pain (ICD 10 M54.5), lumbago (ICD 10 M54.41), dorsalgia (ICD 10 M54.9), among others. However, the results gleaned though searching wide-ranging diagnosis codes proved insignificant, with greater than 80% of

the encounters assigned a diagnosis of low back pain (ICD M54.5). Focusing on ADSM charts with the ICD-10 diagnosis code M54.5 (low back pain), the authors analyzed rates of BFA being offered and administered, central nervous system depressant medication (CNS) prescriptions, and activity limiting temporary and permanent LBP profiles. Preliminary chart reviews showed that Clark Health Clinic has over 4,000 encounters for LBP annually. Approximately 32% of patients with LBP were prescribed muscle relaxants, 28% were placed on temporary profiles averaging 51-days, and 13% of patients were offered BFA, while only 9% of patients received BFA. Thomas Moore Health Clinic had over 3,500 annual LBP encounters. An estimated 34% of patients with LBP were prescribed muscle relaxants, 42% receive temporary profiles averaging 45-days, and no patients were offered BFA. The data revealed that primary care providers at both clinics were not maximizing the use of the VA/DoD guidelines in the treatment of LBP.

Link the problem, interventions, and outcomes. Primary care providers at Clark Clinic and Thomas Moore Clinic were not incorporating recommendations from the VA/DoD guidelines in their practice for the treatment of LBP. The standard treatment of LBP included interventions that had a negative impact on readiness such as routine use of CNS depressants and placing patients on duty-limiting profiles. BFA was identified as a feasible, underutilized intervention that both Clark Clinic and Thomas Moore Clinic could implement readily, and which aligned with VA/DoD guidelines. The director of the Fort Bragg Interdisciplinary Pain Management Clinic was consulted and brought on as a BFA project champion. The pain management director shared his experiences with implementing BFA into practice in addition to offering support by ensuring providers had the needed certification for practicing BFA in primary care. Greater implementation of BFA for the treatment of LBP showed potential in

positively impacting some of the identified military readiness shortfalls associated with standard treatment for LBP.

Synthesize the best evidence. An updated literature review was completed, and data was analyzed on the effectiveness of BFA in the treatment of LBP, as discussed above. There were consistent findings among the appraised literature that BFA and other methods of auricular acupuncture are effective treatment modalities for LBP. It is encouraging that 14 of the articles were published in the last five years, suggestive that the body of evidence will continue to grow. The benefits of auricular acupuncture for LBP outweigh the risks and it is a practical intervention with encouraging clinical applications. Implication for practice, based on findings in the literature, suggest that healthcare providers offer BFA as an adjunct therapy to conventional treatment. It is safe with few side effects, inexpensive, and quick to perform. Battlefield acupuncture may reduce pain, reduce the need for medications, improve mood, enhance well-being, reduce stress, improve functionality, and provide a greater sense of autonomy to the patient (Hart, 2008). Based on the literature review, BFA was definitively identified as the foundation of a worthy evidence-based intervention involving the promotion and incorporation of BFA into standard care for non-traumatic LBP among ADSMs.

Designing practice change. Communication centered methods of policy, procedure, and evidence sharing were used to inform providers in their practice (White, Dudley-Brown, & Terhaar, 2016). Several meetings were held with the clinic leadership to present the proposal for the walk-in BFA clinic, discuss implementation timeline, treatment space requirements, resources, staffing, and securing BFA supplies. Throughout the planning process, communication flowed between clinic staff, leadership, stakeholders, and subject matter experts to build a committed group in support of BFA.

Patient and provider educational resources like informational BFA handouts, toolkits for treatment of LBP, and brightly colored referral slips were created to increase knowledge and ease access to the walk-in clinic. Throughout the planning process, the project team maintained communication with leaders at Fort Bragg and Fort Hood as well as subject matter experts to build a committed group in support of this project.

Clark Clinic and Thomas Moore primary care providers and support staff were given pre-test surveys to evaluate overall knowledge of the LBP CPG, as well as BFA practices and perspectives. Staff at each clinic were provided similar 30-minute educational PowerPoint presentations discussing the updated VA/DoD CPGs for LBP. Preliminary clinic statistics were reviewed including prescriptive practices, imaging, profiles, a summary of the evidence BFA for LBP, and implementation plan for BFA walk-in clinic. Providers who were not able to attend were given the same educational in-service individually to ensure all staff received the information. A month later, providers completed a post-test to evaluate if knowledge of the VA/DoD guidelines had improved and if there were changes to BFA practices or perspectives.

Implement and evaluate change in practice. Patient and provider educational resources for LBP, BFA informational handouts, and referral slips were tailored to the needs of each respective clinic and distributed to providers and support staff. The walk-in BFA clinic was implemented at Clark Clinic and Thomas Moore Clinic in September and October 2019, providing treatment twice weekly on Tuesdays and Thursdays from 0700-1130. This time frame maximized patient participation by absorbing soldiers utilizing ‘sick call’ hours and offered flexible access around the workday.

Demographic information and pre- and post-treatment pain scores, using the Defense and Veterans Pain Rating Scale (DVPRS), were collected on all patients who utilized the walk-in

BFA clinic. The data were analyzed to determine potential impact in pain reduction, CNS depressant prescription rates, and activity limiting profiles, as factors influencing readiness among SMs.

The walk-in clinics allowed providers to explore the efficacy of BFA for LBP in their patient populations without any additional time constraints, which was identified as a hindrance to full BFA inclusion in primary care (Taylor et al., 2018). Furthermore, the walk-in clinic served as a venue for providers who received BFA training but needed observed BFA administration to complete credentialing requirements.

Integration and maintenance of change in practice. The teams at Fort Bragg and Fort Hood will present the project results to clinic and hospital leadership, offer tools for implementation, and data supporting continuation of the intervention with support from local staff and stakeholders for ongoing sustainment. Presentations to both clinic personnel and the larger medical community leadership sharing the results and participation data are forthcoming. The outcomes of this evidence-based practice project were shared with the Army's Center for Nursing Science and Clinical Inquiry medical research group for consideration of more expansive implementation beyond the two military bases included in this project.

HIPAA Concerns

Safeguarding protected health information (PHI) was a priority for the duration of this EBP project. All team members were trained in Health Insurance Portability and Accountability Act of 1996 (HIPAA) standards and completed annual updates prior to project initiation. Though this project was focused on evaluating the volume of BFA procedures, some data collection involved the use of personally identifiable information (PII) and PHI. Computer generated encounter lists of active duty patients seen at Clark Clinic and Thomas Moore Clinic

for LBP under the International Classification of the Disease, tenth edition (ICD-10) diagnosis code M54.5 were retrieved for the timeframes September to November 2018 and August to November 2019. Approximately twenty percent of these encounters were included in the pre-intervention, intervention, and post-intervention electronic health record (EHR) review to determine rates of BFA, CNS depressant prescriptions, and imaging for LBP. The patients associated with these encounters were then cross-referenced with the e-profile/Medical Protection System (MEDPROS) using manual data referencing to determine associations with temporary and permanent LBP profiles. A locked cabinet in locked room accessible only to team members was used for the limited temporary storage of this PII/PHI. Once the manual electronic record review was completed, the information was placed on a spreadsheet using a unique numbering system free from PII/PHI. The computer-generated encounter lists containing PII/PHI were destroyed in accordance accepted standards. Additionally, team members were exposed to expected PII/PHI during the walk-in BFA clinic and documented in the EHR as in a typical patient encounter. Patient reported demographical and pain data was collected and placed on a spreadsheet using a unique numbering system and PII/PHI was never aggregated outside of the EHR. The patient information and specific data reviewed was never displayed or utilized by anyone other than the team members.

Legal considerations for this project included ensuring that providers administering BFA conducted an informed consent with all patients outlining the risks of the procedure and documenting the informed consent in the EHR. As a point of clarification, this is the same informed consent conducted for all procedures in the medical setting. In addition, the use of e-profiles and MEDPROS for the purposes of tracking military readiness falls into the Military Command Exception to the dissemination of PHI (Defense Health Agency, 2015).

This EBP project was submitted to both WAMC's Independent Review Board (IRB) and CRDAMC's IRB for approval. Because it did not necessitate any human research subjects it did not meet the criteria for a research project and subsequent full formal investigation by the IRB was waived. This project does not meet the established conditions for research, which involves "a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge," as defined by criteria published by the Office of Human Research Protections in the Code for Federal Regulations, Title 45 Public Welfare, Part 46 Protection of Human Subjects (Department of Health and Human Services, 2009, page 4).

Project Results

Provider Surveys

A total of 25 physician assistants, nurse practitioners, and physicians from the Fort Bragg and Fort Hood clinics completed pre and post knowledge questionnaires on LBP management as it relates to the VA/DoD CPG and BFA.

Table 1

Provider Demographics

Provider Type	Number	%	Certified to Perform BFA	%
Nurse Practitioner	9	36.0	3	12.0
Physician Assistant	2	8.0	2	8.0
Physician	14	56.0	4	16.0

Note. Adapted from "Provider Knowledge of Battlefield Acupuncture in the Management of Non-Traumatic Low Back Pain at a Military Health Clinic," by A. Birkle, A. Brown, D. Costa, V. Gibbons, M. Prince, L. Magyar, and C. Berry-Caban, Unpublished manuscript, Fort Bragg, NC.

Numerical variables were reported in medians and interquartile ranges. All categorical variables were reported in counts and frequencies. Paired pre and post differences were analyzed using McNemar's test, a statistical test used on paired nominal data. Gain scores were calculated to measure the difference between test scores obtained. Analysis was conducted using SPSS 24.

Inferential analyses were considered significant if the corresponding *p* value was less than 0.05 and all applicable tests were two-tailed (Birkle et al., 2020).

All scores demonstrated an increase in knowledge after the provider in-service, with the most significant change in knowledge regarding BFA procedure code recognition which revealed a six-fold increase. The other questions for which responses correct increased to a level of significance was in successfully identifying risk factors for acute or subacute low back pain becoming chronic.

Table 2

Provider Knowledge of Battlefield Acupuncture

Question	Pre-Test	%	Post-Test	%	Gain Score	*P*
The current VA/DoD guidelines recommend offering all the following for the treatment of chronic low back pain in the absence of red flags except ...	17	68.0	19	76.0	11.8	0.491
HEDIS suggest refraining from imaging for newly diagnosed low back pain in the absence of red flags until at least …	12	48.0	17	68.0	41.7	0.134
Red flags for low back pain include all of the following ...	17	68.0	19	76.0	11.8	0.425
When performing acupuncture in the clinic setting, the appropriate CPT code is …	1	28.0	7	28.0	600.0	0.030

Table 2 (continued).

Risk factors for an acute low back pain becoming chronic include …	7	28.0	16	64.0	128.6	0.01

Note. Adapted from "Provider Knowledge of Battlefield Acupuncture in the Management of Non-Traumatic Low Back Pain at a Military Health Clinic," by A. Birkle, A. Brown, D. Costa, V. Gibbons, M. Prince, L. Magyar, and C. Berry-Caban, Unpublished manuscript, Fort Bragg, NC.
[a]HEDIS = Healthcare Effectiveness Data and Information Set; employers and individuals use.
HEDIS to measure how well health plans provide service and care to their members.
[b]CPT = Current Procedural Terminology; refers to a set of medical codes used by physicians, allied health professionals, non-physician practitioners, hospitals, outpatient facilities, and laboratories to describe the procedures and services they perform.

Providers not certified to perform BFA (n=15) were asked to provide their opinions about BFA using a Likert Scale of 0 to 10. A 0 on the scale corresponded with strongly disagree whereas a 10 corresponded with strongly agree (Table 3). Most of the providers indicated they were confident in referring patients for BFA and agreed clinic leadership supported the use of BFA.

Table 3

Opinions of Providers Not Certified to Perform BFA

Question	Mean	SD
I can confidently refer patients for battlefield acupuncture treatment for pain within my clinic	8.3	0.9
There are no barriers for me to refer patients for battlefield acupuncture	7.8	0.9
MTF leadership supports the use of battlefield acupuncture for pain	7.7	1.6
I believe that battlefield acupuncture is an effective treatment for non-traumatic low back pain	7.1	2.3
Patients respond positively when battlefield acupuncture is suggested as part of a treatment plan	6.7	2.3

Note. Adapted from "Provider Knowledge of Battlefield Acupuncture in the Management of Non-Traumatic Low Back Pain at a Military Health Clinic," by A. Birkle, A. Brown, D. Costa, V. Gibbons, M. Prince, L. Magyar, and C. Berry-Caban, Unpublished manuscript, Fort Bragg, NC.

Providers certified to perform BFA (n=9) were asked to provide their opinions about BFA using a Likert Scale of 0 to 10. A 0 on the scale corresponded with strongly disagree

whereas a 10 corresponded with strongly agree (Table 4). Most providers indicated they had adequate supplies to perform BFA and reported positive patient experiences performing BFA.

Table 4

Opinions of Providers Certified to Perform Battlefield Acupuncture

Question	Mean	SD
I have the supplies I need to perform BFA	9.2	1.6
Performing BFA does not adversely impact my clinic flow	9.1	2.4
The use of BFA has enhanced my practice	8.7	1.9
Patients respond positively when BFA is used as a treatment plan	8.6	1.9
I feel confident in my ability to perform BFA	8.1	2.1
MTF leadership supports the use of BFA for pain	8.0	2.5
I believe that BFA is an effective treatment for non-traumatic LBP	7.7	2.1
Table 4 (continued).		
I have been taught how to chart BFA to receive maximum RVUs	7.3	3.7

Note. Adapted from "Provider Knowledge of Battlefield Acupuncture in the Management of Non-Traumatic Low Back Pain at a Military Health Clinic," by A. Birkle, A. Brown, D. Costa, V. Gibbons, M. Prince, L. Magyar, and C. Berry-Caban, Unpublished manuscript, Fort Bragg, NC.

Lastly, all providers were given the opportunity to provide qualitative feedback on the surveys concerning perceived barriers to performing BFA in clinic. The most common responses included lack of time to educate, consent, and perform BFA during an acute appointment, patient willingness to participate, and the feasibility of treatment continuity.

Immediately following the educational campaign, the rate of BFA offered by providers at Clark Health Clinic, Fort Bragg increased 121%. The rate of BFA offered by providers at the Thomas Moore Health Clinic, Fort Hood increased by 255%.

Fort Bragg Walk-in BFA Clinic

The Fort Bragg BFA walk-in clinic resulted in 159 encounters for ADSMs with LBP. Each patient was screened for contraindications to treatment and their basic demographic

information was obtained. Participants were 72% male and 28% female with the majority being enlisted SMs (84%), followed by commissioned officers (16%). The average age of the participants was 31.6 years. SMs indicated prior treatments to include stretching, physical therapy, massage, yoga, heat application, osteopathic manipulation treatment, chiropractor, tens unit, corticosteroid joint injections, and BFA. The most common medications used to treat LBP were non-steroidal inflammatory agents and muscle relaxants. Lastly, the patients were asked if they were currently on a temporary or permanent profile for LBP.

After BFA treatment, 82.2% of these patients achieved measurable pain relief, with an average overall reduction of 2.1 on the 0 to 10-point DVPRS. Most SMs received 1 BFA treatment (n=97). Several SMs elected to return for additional treatments: 17 SMs returned twice, three returned three times, one returned five times, and two returned seven times during the 2-month timeframe the BFA clinic was accessible. Patients were instructed to wait at least four days in between treatments.

After completion of the BFA clinic, readiness factor outcomes were compared between the SMs that received treatment in the BFA clinic and the SMs analyzed in the September and October 2019 chart review that did not participate in the BFA clinic. SMs that participated in the BFA clinic were 46% less likely to be prescribed a CNS depressant medication, 93% less likely to have a new profile generated, and 44% less likely to have an existing temporary or permanent profile in place.

During the intervention period, BFA administration increased by 203% at Clark Health Clinic. After the walk-in clinic ceased, rates of BFA administration for LBP returned to near pre-intervention levels.

Fort Hood Walk-in BFA Clinic

The Fort Hood BFA walk-in clinic resulted in 72 patient encounters for ADSMs with LBP. Each patient was screened for contraindications to treatment and their basic demographic information was obtained. Participants were 72% male and 28% female with the majority being enlisted SMs (83%), followed by commissioned officers (17%). Prior treatments and common medications were similar to the Fort Bragg patient population. Each of the SMs provided their temporary or permanent profile status for LBP.

After BFA treatment, 43% of these patients achieved measurable pain relief, with an average overall reduction of 1.9 on the 0 to 10-point DVPRS. Most of the SMs received 1 BFA treatment (n=66). A total of four SMs returned to have BFA performed twice and two returned three times during the 2-month time frame the BFA clinic was accessible. Patients were advised that they should wait at least four days in between treatments.

After completion of the BFA clinic, readiness factor outcomes were compared between the SMs that received treatment in the BFA clinic and the SMs analyzed in the September and October 2019 chart review that did not participate in the BFA clinic. A reduction in CNS depressant rates was not observed in the SMs that received BFA treatment. However, patients were 30% less likely to have a new profile and 52% less likely to have a pre-existing profile for LBP.

Prior to the BFA walk-in clinic at Fort Hood, the rate of BFA administration was 0%. Therefore, the rate of increase for BFA during the intervention period is mathematically infinite, but an increase from 0 to 72 is nonetheless a commendable result. After the walk-in clinic concluded, rates of BFA administration for LBP returned to near pre-intervention levels.

Results Analysis

Providers are knowledgeable about the VA/DoD CPG for the management of LBP. The results of the post-surveys indicate an improved understanding of BFA and how the treatment aligns with the CPG's recommendations for non-pharmacologic integrative therapies for effective pain management. However, the largest barrier to administering BFA identified by the providers is limited time during acute appointment visits. Removing this constraint and encouraging providers to refer their patients with LBP to the BFA walk-in clinic improved patient access to BFA treatment. Patient autonomy was also observed as SMs were able to self-refer. The availability of a walk-in clinic significantly increased the rates of BFA offered and administered in both clinics.

Comparing the patient encounters in both 2018 and 2019 chart reviews, patients participating in the BFA clinics demonstrated improved pain and readiness factors. This supports BFA as an effective pain management option and treatment which may limit the need for duty-limiting profiles for SMs.

After the BFA walk-in clinics were complete, rates of BFA administration for LBP nearly returned to pre-intervention levels. This data supports a correlation between the rates of BFA being offered and access to treatment. A separate walk-in clinic or healthcare staff member designated to solely perform BFA at a given time and day may be necessary to ensure providers continue offering BFA and SMs receive appropriate treatment. The need for sustained BFA access is further demonstrated by the number of SMs returning for repeat treatment.

Organizational Impact / Implications to Practice & Policy

The results of this evidence-based practice project have broad implications at the front-line, unit, clinic, MTF, and service level. BFA can be easily administered by multiple skill types including medics and other non-privileged providers. The certification course for administering

BFA should be offered to health care professionals at all skill levels to increase the opportunity for use. As this project demonstrated, the use of a clinical resource outside of the primary care provider can increase patient administration of BFA in a clinic setting. Policies that limit registered nurses, licensed practical nurses, and medics who are BFA certified from providing BFA in the clinic setting under a under a privileged provider should be reconsidered.

Using BFA to augment the treatment of LBP in operational and austere environments may curtail some LBP-related evacuations. The BFA needles and alcohol pad used for cleansing the ear prior to insertion require minimal room and add little weight to an aid bag. BFA can also be considered to reduce pain in military medical transport and evacuation from theater (Burns et al., 2012).

Offering BFA at the unit and clinic level promotes patient-centered care by increasing access to a non-pharmacologic treatment option that a patient may pursue after shared-decision making. BFA's potential impact on readiness for SMs with LBP cannot be ignored and increasing rates could contribute to improved unit readiness statistics by reducing profiles and CNS depressant use. Additionally, SMs that have autonomous access to BFA, as demonstrated through the project walk-in clinic implementation, have an additional tool to self-manage recurrent episodes of LBP that can hinder performance throughout military service.

At the MTF level, increasing BFA procedures can bring additional income when documented in the EHR and coded correctly. BFA costs approximately $6.50 in supplies. The CPT code for acupuncture is currently worth 0.60 relative value units (RVU) which can boost the encounter reimbursement by more than thirty dollars. Offering BFA through a walk-in clinic or in a group setting is well-received by patients and can rapidly increase rates (Federman, Radhakrishnan, Gabriel, Poulin, & Kravetz, 2018). The MTF is also where the BFA certification

program, competency validation, and credentialing processes should be maintained (DoD, 2020). Currently, BFA is not available through the purchased care component of the TRICARE program which validates the need to maintain certification and training through the MTF.

As part of an integrative pain-management plan, BFA is often cited as an opportunity to curb opioid prescription for chronic pain which may reduce opioid misuse disorders in SMs (Federman et al., 2018; Montgomery, 2020). The pre and posttest chart review did not find a significant prescribing pattern of opioids for LBP, but with the National opioid epidemic, BFA should be considered as an intervention to curb an increase in rates. Increasing rates of BFA for LBP across the Army has the potential to influence individual, unit, and Army readiness through reduction of activity-limiting profiles and CNS depressant prescription rates, which directly correlates to increasing medical readiness across the forces preserving personnel capability and wartime strength.

Future Directions for Research & Practice

Though the body of evidence on BFA has grown in recent years, there are multiple topics that can be further explored with high-quality random control trials and higher-level evidence. Future directions for research involving BFA should focus on pain, function, and quality of life outcomes using standardized pain scales for both acute and chronic LBP. Specifically, research involving BFA use in SMs and its impact on readiness factors such as activity-limiting profiles, return to duty rates, and CNS depressant medication prescriptions is needed to advance BFA among military personnel. Research on the operational impact of BFA including avoidance of non-battle injury related LBP evacuation rates and pain management in military evacuations is needed to determine the impact of BFA's role in front-line pain management.

Additional research opportunities involving BFA include studies on patient demographics that may influence outcomes, patient rate of return for subsequent BFA treatments, and BFA's pain outcomes by specific LBP conditions. In addition, studies regarding establishment of BFA specific clinics, appointments, or group appointment procedures would be helpful for organizational and clinic adoption. Finally, research involving patient satisfaction measures that demonstrate not only outcome related satisfaction but also satisfaction related to the offering of BFA as a non-pharmacologic therapy is something that should be considered.

Conclusion

The pervasiveness of LBP among ADSMs has imposed substantial burden on the military and warfighter readiness. BFA is an effective and safe treatment for LBP. Increasing rates of BFA as a non-pharmacologic integrative therapy for LBP can improve soldier readiness by decreasing pain, CNS depressant medications rates, and activity limiting profiles. BFA should be offered to SMs with LBP, but barriers exist related to provider templating in the clinic and certification. Many SMs are eager to act upon the opportunity to self-refer to BFA for LBP if the BFA is readily accessible. Providers are also enthusiastic to refer patients to an easily accessible BFA clinic to augment comprehensive treatment plans for LBP. A sustainment program that promotes increased access to BFA could be achieved through measures such as replication of the project walk-in clinic model, establishing flexible clinic time to perform BFA, training and certifying many skill types including medics and nurses, and optimizing BFA related organizational policies and procedures.

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Appendix A

CITI PROGRAM

Completion Date 28-Aug-2017
Expiration Date 27-Aug-2020
Record ID [redacted]

This is to certify that:

Amber Birkle

Has completed the following CITI Program course:

OUSD P&R Human Research (Curriculum Group)
Biomedical Investigators and Research Study Team (Course Learner Group)
1 - Biomedical Investigators (Stage)

Under requirements set by:

Office of the Under Secretary of Defense (Personnel and Readiness)

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w5abb51ae-d8ee-407b-89f3-e25852e6e475-24319187

CITI PROGRAM

Completion Date 28-Aug-2017
Expiration Date 27-Aug-2020
Record ID [redacted]

This is to certify that:

Amber Birkle

Has completed the following CITI Program course:

Responsible Conduct of Research (RCR) (Curriculum Group)
Responsible Conduct of Research (RCR) (Course Learner Group)
1 - Basic Course (Stage)

Under requirements set by:

Office of the Under Secretary of Defense (Personnel and Readiness)

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w680ce69b-7158-429d-9178-711fa5d909b2-24319188

Appendix A (continued).

CITI PROGRAM

Completion Date 24-Aug-2017
Expiration Date 23-Aug-2020
Record ID [redacted]

This is to certify that:

Angelyn Brown

Has completed the following CITI Program course:

OUSD P&R Human Research (Curriculum Group)
Biomedical Investigators and Research Study Team (Course Learner Group)
1 - Biomedical Investigators (Stage)

Under requirements set by:

Office of the Under Secretary of Defense (Personnel and Readiness)

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?wb8287ae1-127a-4878-b1b0-78bf03ef0028-24290998

CITI PROGRAM

Completion Date 30-Aug-2017
Expiration Date 29-Aug-2020
Record ID [redacted]

This is to certify that:

Angelyn Brown

Has completed the following CITI Program course:

Responsible Conduct of Research (RCR) (Curriculum Group)
Responsible Conduct of Research (RCR) (Course Learner Group)
1 - Basic Course (Stage)

Under requirements set by:

Office of the Under Secretary of Defense (Personnel and Readiness)

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?wf95c3284-8564-4a12-a2a0-92b22940d7b9-24338910

Appendix A (continued).

CITI PROGRAM

Completion Date 12-Sep-2017
Expiration Date 11-Sep-2020
Record ID [redacted]

This is to certify that:

Diana Costa

Has completed the following CITI Program course:

OUSD P&R Human Research (Curriculum Group)
Biomedical Investigators and Research Study Team (Course Learner Group)
1 - Biomedical Investigators (Stage)

Under requirements set by:

Office of the Under Secretary of Defense (Personnel and Readiness)

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w5caa31b0-2b94-4251-92bc-9c4ba9871094-24342602

CITI PROGRAM

Completion Date 18-Jun-2019
Expiration Date 17-Jun-2022
Record ID [redacted]

This is to certify that:

Diana Costa

Has completed the following CITI Program course:

Responsible Conduct of Research (RCR) (Curriculum Group)
Responsible Conduct of Research (RCR) (Course Learner Group)
1 - Basic Course (Stage)

Under requirements set by:

Office of the Under Secretary of Defense (Personnel and Readiness)

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w638439aa-619c-4c9a-bc5e-edf762822ac5-24342603

Appendix A (continued).

CITI PROGRAM

Completion Date 29-Aug-2017
Expiration Date 28-Aug-2020
Record ID [redacted]

This is to certify that:

Vonya Gibbons

Has completed the following CITI Program course:

OUSD P&R Human Research (Curriculum Group)
Biomedical Investigators and Research Study Team (Course Learner Group)
1 - Biomedical Investigators (Stage)

Under requirements set by:

Office of the Under Secretary of Defense (Personnel and Readiness)

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?wde40d7d2-929c-4e45-a6b8-d1257de9f200-24333257

CITI PROGRAM

Completion Date 18-Jun-2019
Expiration Date 17-Jun-2022
Record ID [redacted]

This is to certify that:

Vonya Gibbons

Has completed the following CITI Program course:

Responsible Conduct of Research (RCR) (Curriculum Group)
Responsible Conduct of Research (RCR) (Course Learner Group)
1 - Basic Course (Stage)

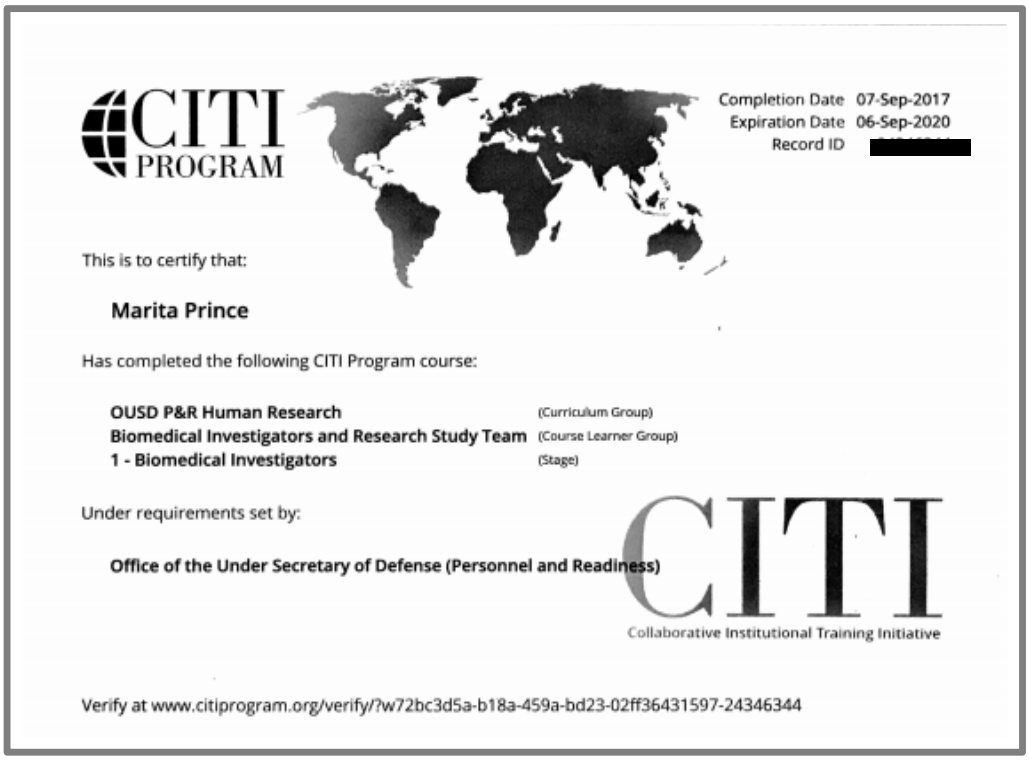
Under requirements set by:

Office of the Under Secretary of Defense (Personnel and Readiness)

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?wd4bf5fec-5bda-4978-bf26-30e02db9f9a7-24333258

Appendix A (continued).



CITI PROGRAM

Completion Date 07-Sep-2017
Expiration Date 06-Sep-2020
Record ID [redacted]

This is to certify that:

Marita Prince

Has completed the following CITI Program course:

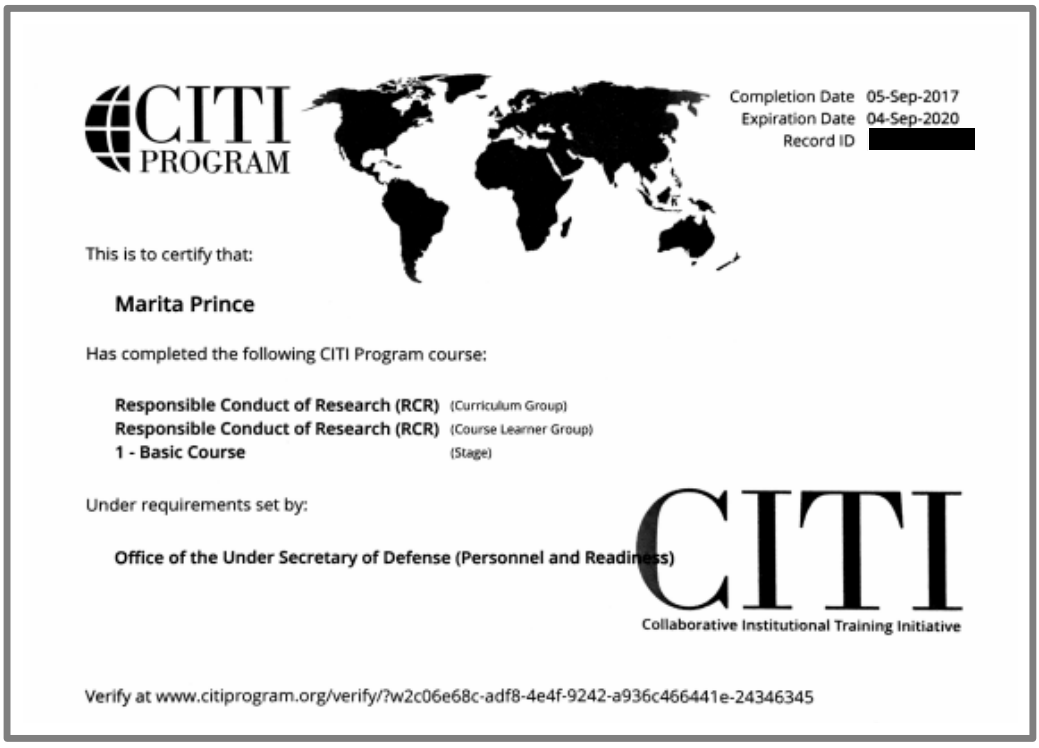
OUSD P&R Human Research (Curriculum Group)
Biomedical Investigators and Research Study Team (Course Learner Group)
1 - Biomedical Investigators (Stage)

Under requirements set by:

Office of the Under Secretary of Defense (Personnel and Readiness)

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w72bc3d5a-b18a-459a-bd23-02ff36431597-24346344



CITI PROGRAM

Completion Date 05-Sep-2017
Expiration Date 04-Sep-2020
Record ID [redacted]

This is to certify that:

Marita Prince

Has completed the following CITI Program course:

Responsible Conduct of Research (RCR) (Curriculum Group)
Responsible Conduct of Research (RCR) (Course Learner Group)
1 - Basic Course (Stage)

Under requirements set by:

Office of the Under Secretary of Defense (Personnel and Readiness)

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w2c06e68c-adf8-4e4f-9242-a936c466441e-24346345

Appendix B

USUHS FORM 3202N
DANIEL K. INOUYE GRADUATE SCHOOL OF NURSING
EVIDENCE-BASED PRACTICE/PERFORMANCE IMPROVEMENT PROPOSAL

VPR Date Stamp

Project Number: GSN-61-10768 (VPR will assign)

Project Title: Battlefield Acupuncture in the Management of Non-Traumatic Low Back Pain

SECTION A: STUDENT POC INFORMATION

1. Name (Last, First, MI): Birkle, Amber, M. Student E-mail: amber.birkle@usuhs.edu
2. Home Address: [redacted]

SECTION B: COMMITTEE CHAIR / SENIOR MENTOR INFORMATION

3. Name (Last, First, MI): Radford, Kennett, D.
4. Telephone: 301-295-1161 Fax: 301-295-1707 E-mail: kennett.radford@usuhs.edu
5. USUHS Building/ Room No.: E-1050

SECTION C: PROJECT INFORMATION

6. Attach the Abstract for the proposal, including the following sections: Site Location of the Project, Title, Authors, Background or Problem/Issue, Clinical Question/Purpose, Project Design, Anticipated Organizational Impact/Implications for Practice and also include the Proposed Timeline. Single space the abstract and use Times New Roman font, size 12.
7. Is this proposal related to an active research project of the Chair/Senior Mentor identified in Section B? ☐ Yes ☒ No
   If yes, complete below; if no, proceed to Part 8.
   Project Number: _____
   Project Title: _____
   Project Start Date: _____ Project End Date: _____
8. Anticipated period of performance: Project Start Date: 1/15/2019 Project End Date: 5/15/2020
9. Performance Site(s): Womack Army Medical Center, Fort Bragg, NC
10. Does this project involve any classified information? (Contact the USUHS Security Office for guidance) ☐ Yes ☒ No
11. Do you have a funding source for this project? ☐ Yes ☒ No ☐ NA
    If yes, specify the funding agency and the amount provided:

SECTION D: SIGNATURES

The following signatures attest to the validity of the above information:

BIRKLE.AMBER.MICHELLE.[redacted] — Student (Project Point of Contact for the Group) (Signature and Date)

Kennett Radford [redacted] — Chair/Senior Mentor (Signature and Date)

JOHNSON.HEATHER.L.[redacted] — Chair/Program Director (Signature and Date)

Chair/Program Director (Signature and Date)

WANZER.LINDA.JEANNE.[redacted] — DNP Project Director or PhD Director (Signature and Date)

SEIBERT.DIANE.C[redacted] — Associate Dean for Academic Affairs, GSN (Signature and Date)

WASSERMAN.JOAN.E.[redacted] — Associate Dean for Research, GSN (Signature and Date)

ROMANO.CAROL.A.[redacted] — Dean, DKI Graduate School of Nursing (Signature and Date)

In light of the above signatures, the project is approved.

[redacted] — USUHS Vice President for Research

2 Aug 2019 — Date

USUHS Form 3202N (VPR) - Revised Sep 2015 v1.2
Previous versions are obsolete

Appendix C

DEPARTMENT OF THE ARMY
WOMACK ARMY MEDICAL CENTER
2817 REILLY ROAD
FORT BRAGG, NORTH CAROLINA 28310-7324

MCXC-DQS 24 June 2019

MEMORANDUM FOR MAJ Louis Magyar, AN, Assistant Professor, Uniformed Services University of the Health Sciences and Director, Doctor of Nursing Practice Phase II Program, Womack Army Medical Center (WAMC), 2817 Reilly Road, Fort Bragg, NC 28310-7301

SUBJECT: Determination for Project, "Battlefield Acupuncture in the Management of Non-Traumatic Low Back Pain," WAMC Protocol Number 190601

1. The subject project was reviewed for applicability of human subjects protection regulations.

2. The purpose of this project is to increase the use of battlefield acupuncture as an evidence-based intervention in the treatment of non-traumatic low back pain in active duty service members. An educational campaign promoting and informing providers about the use of BFA for low back pain will be launched at Clark Health Clinic in attempts to increase BFA rates. A pre- and post-educational intervention questionnaire will be administered to participants attending the educational instruction. Pre- and post-intervention retrospective chart reviews will be conducted. Although the evaluation is systematic it is not designed or intended to contribute to generalizable knowledge.

3. The undersigned has determined the protocol does not meet the definition of research as defined by 32 CFR 219.102(l): a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge.

4. This project will be conducted by MAJ Amber Birkle, CPT Angelyn Brown, MAJ Diana Costa, and MAJ Vonya Gibbons for partial fulfillment of the requirements of the DNP degree program. MAJ Magyar will provide oversight of this activity.

5. The project may proceed as described with no further requirement for regulatory review and cannot be presented as research in any resulting presentation or publication. If you have not already done so, you will need to obtain appropriate permission from any impacted departments before implementing this project.

6. In the event that there is a change to the project that might change this determination, a modification to the project must be submitted for review.

Appendix C (continued).

MCXC-DQS 24 June 2019
SUBJECT: Determination for Project, "Battlefield Acupuncture in the Management of Non-Traumatic Low Back Pain," WAMC Protocol Number 190601

7. Point of contact for this action is the undersigned at 910-907-6307.

[redacted]

CARYN L DUCHESNEAU, CIP
Director, Human Research
Protection Program

Appendix D

DEPARTMENT OF THE ARMY
HEADQUARTERS, CARL R. DARNALL ARMY MEDICAL CENTER
36065 SANTA FE AVENUE
FORT HOOD, TEXAS 76544-5065

MCXI-QCD 12 July 2019

MEMORANDUM FOR MAJ Marita Prince

SUBJECT: Determination of Not Research

PROTOCOL TITLE: Battlefield Acupuncture in the Management of Non-Traumatic Low Back Pain

CRDAMC PROTOCOL #: 19-22

REVIEW TYPE: Administrative

ACTION: NOT RESEARCH STATUS DETERMINATION

1. The Carl R. Darnall Army Medical Center (CRDAMC) Human Research Protections Office (HRPO) received the above-referenced project dated 20 June 2019 for review of applicability of human subjects protections regulations.

2. The CRDAMC Human Protections Administrator (HPA) has reviewed your proposed project and has determined that your project does not meet the definition of research as defined under 32 CFR 219.102.

3. Research is defined under 32 CFR 219.102 as follows:

> "Research means a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge."

4. Based on the information you provided, the project was determined to be "not research" for the following reasons:

a. The project is not designed to contribute to generalizable knowledge. The goal of this project is to improve provider use of battlefield acupuncture in the management of non-traumatic low back pain at CRDAMC and other Military Treatment Facilities (MTFs). The project is not designed to influence theory or future research designs.

b. The intent of the project is to improve adherence to the Veterans Affairs (VA) and Department of Defense (DoD) clinical practice guidelines for low back pain and potentially enhance patient outcomes at CRDAMC and across MTFs. The design is

Appendix D (continued).

MCXI-QCD
SUBJECT: Determination of Not Research for CRDAMC Protocol # 19-22

specific to the Thomas Moore Health Clinic of CRDAMC, but results may be shared across MTFs to increase soldier readiness and promote existing evidence-based practice guidelines..

5. Because the project has been determined to be "not research", it is not subject to further review from the CRDAMC HRPO. This determination should not be construed as approval to initiate the project. **Other institutional approvals may be required** and should be coordinated through your department.

6. Because this is a Quality Improvement (QI)/Process Improvement (PI) Project, please ensure you work with the **QI/PI staff** going forward as applicable. The POC for QI/PI projects is Kerry Perez, at kerry.r.perez.civ@mail.mil or (254) 553-1962.

7. Please be reminded that your project **may become research subject to IRB review** if it becomes and/or includes a systematic investigation to develop or contribute to generalizable knowledge. In the event there is a change to the above-described project that may affect its determination, please contact your CRDAMC HPA who will re-evaluate the project and determine if a research protocol must be submitted in eIRB.

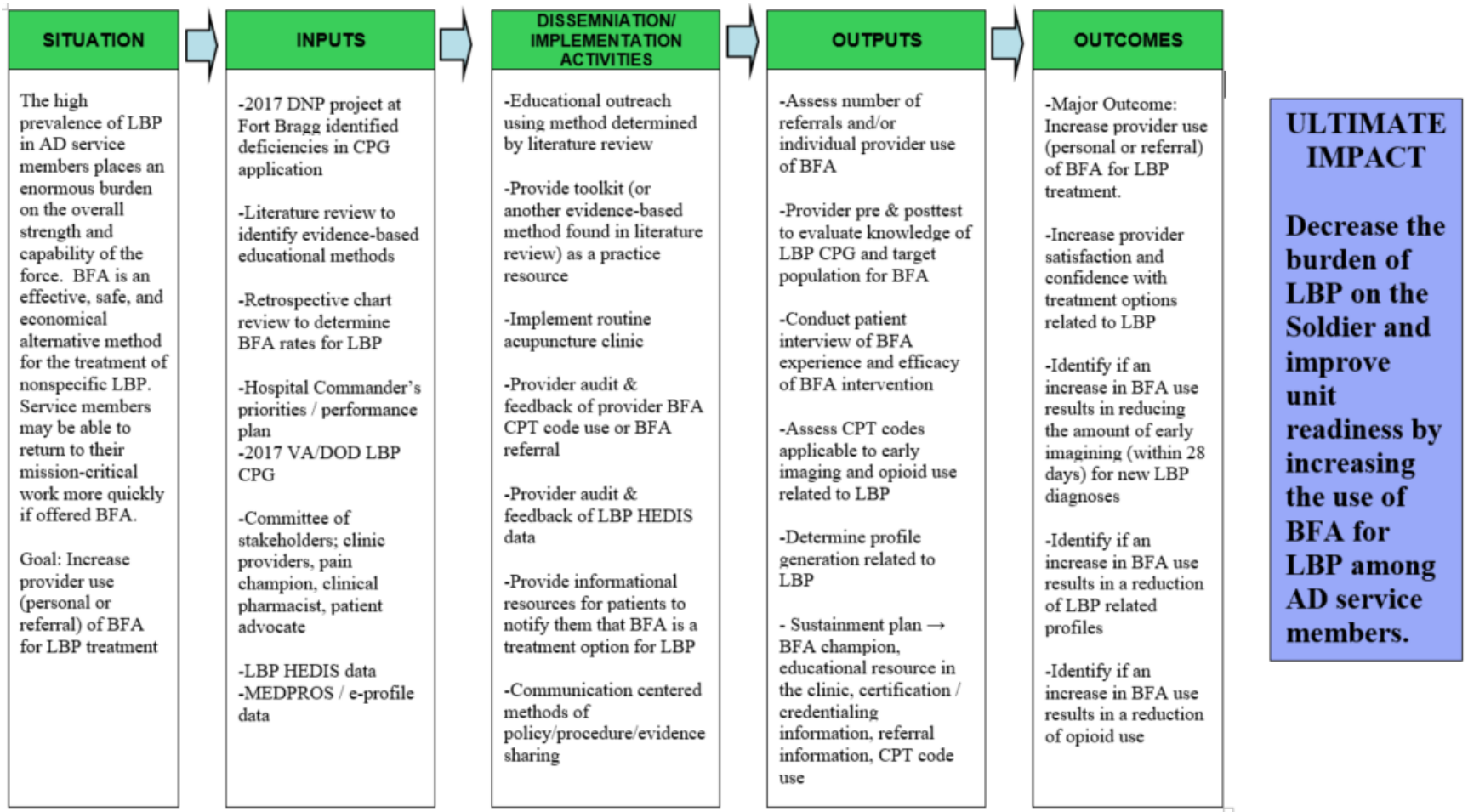
8. You are reminded that **publication clearance is required prior to the release of any information outside of the institution**. Please refer to the Public Affairs Office (PAO) for specific requirements.

9. The POC for this review is the CRDAMC HPA at rachell.l.jones.civ@mail.mil or (254) 553-9779.

[redacted]

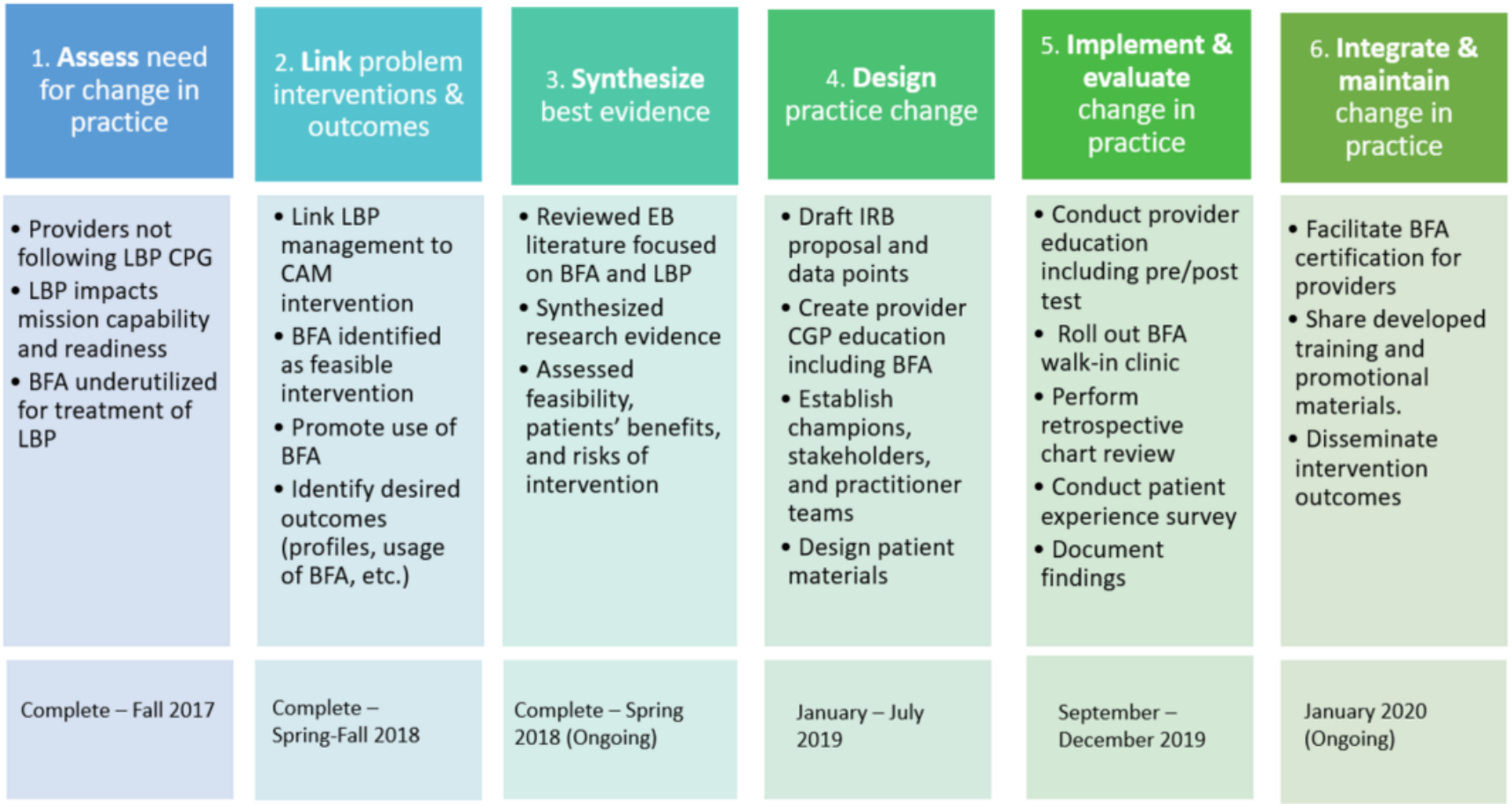
RACHELL L. JONES, Ph.D.
Human Protections Administrator

Annex A: Logic Model

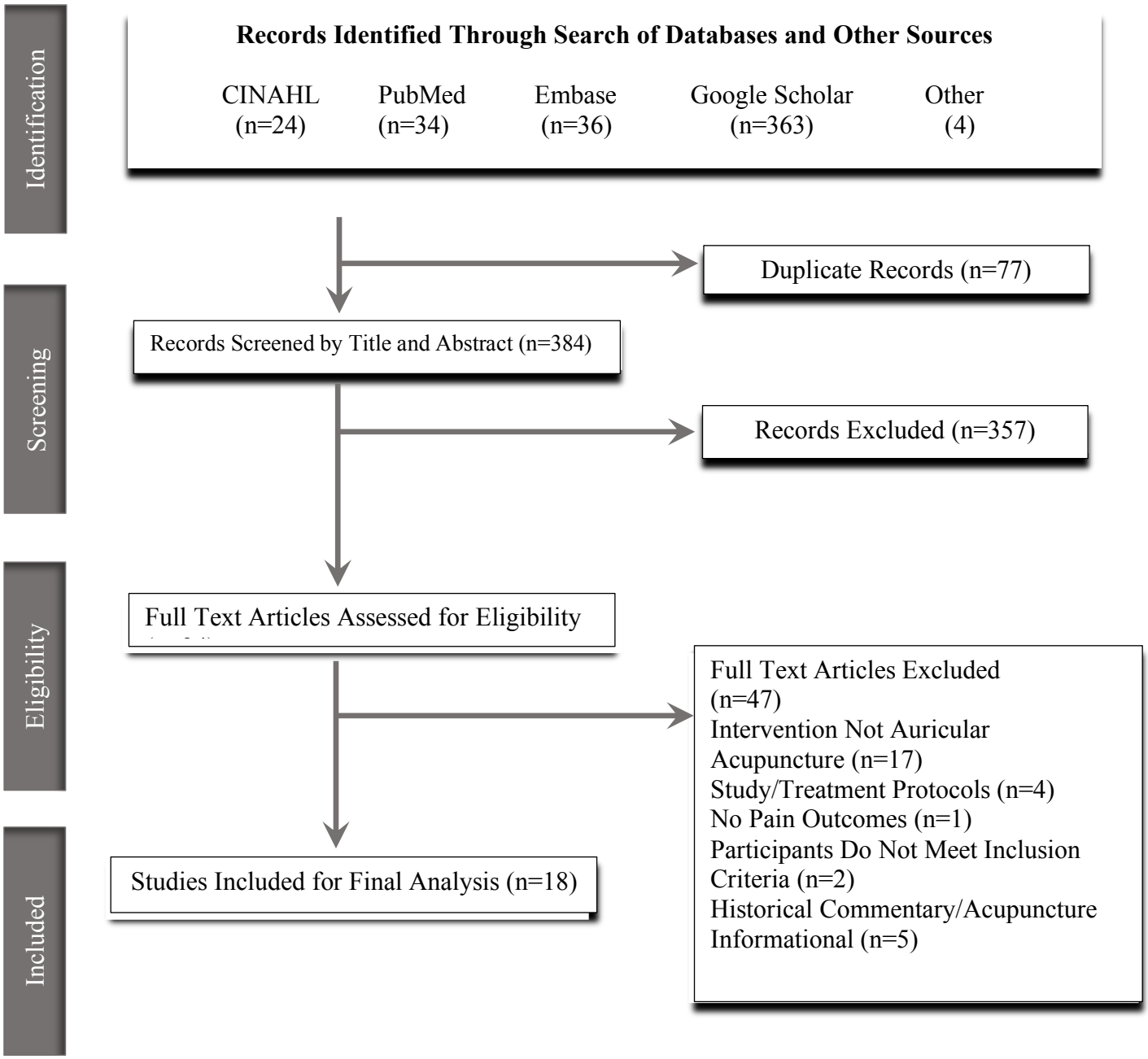


AD = Active Duty
BFA = Battlefield Acupuncture
HEDIS = Healthcare Effectiveness Data Information Sets
LBP = Low Back Pain
VA = Veterans Administration
DoD = Department of Defense

Annex B: Rosswurm & Larrabee's Model for Evidence-Based Practice Change



Annex C: Prisma Diagram



Annex D: Literature Appraisal Tool

First Author		
Article Citation		
Brief Title		
Study Question		
Design Type *(Descriptive, experimental, etc.)*		
Sample / Size	What was the sample size?	
	Is the sample patients or non-patients?	
	If patients, what was the male/female count?	
	What was the sampling method?	
	What was the response rate (if applicable)?	
Outcome Variables & Definitions *IV/DV*		
Measures *Instruments or tools used, validity and reliability, level of data (nominal, ordinal, interval, and ratio)?*		
Analytical Approach *Statistical tests–appropriate based on design assumptions?*		
Findings *What were the results of the study? Each statistical test should have a result*		
Limitations *What does the author state as limitations? Do you see any additional limitations?*		

Hierarchy of Evidence Rating System Please check one. *(Modified from Melnyk & Fineout-Overholt, 2011)*			
	☐ I	Evidence from a systematic review or meta-analysis of all relevant randomized controlled trials, or evidence-based clinical practice guidelines based on systematic reviews of RCT's	Strongest ↕ Weakest
	☐ II	Evidence obtained from at least one well-designed RCT	
	☐ III	Evidence obtained from well-designed control trials without randomization	
	☐ IV	Evidence from well-designed case control and cohort studies	
	☐ V	Evidence from systematic reviews of descriptive and qualitative studies	
	☐ VI	Evidence from a single descriptive or qualitative study	
	☐ VII	Evidence from the opinion of authorities and/or reports of expert committees	

Level of Quality Please check one. *(Modified from Johns Hopkins Nursing Quality of Evidence Appraisal, 2007)*	*Grade*	*Level*	*Research*	*Non-research*
	☐ A	High	Consistent results, sufficient sample size, adequate control and definitive conclusions; consistent recommendations based on extensive literature review that includes thoughtful reference to scientific evidence	Expertise is clearly evident.
	☐ B	Good	Reasonable consistent results, sufficient sample size, some control, and fairly definitive conclusions; reasonable consistent recommendations based on fairly comprehensive literature review that includes some reference to scientific evidence	Expertise appears to be credible.
	☐ C	Low/ Major flaw	Little evidence with inconsistent results, insufficient sample size, conclusions cannot be drawn	Expertise is not discernable or is dubious.

General Comments	

Annex E: Patient Took Kit

INFORMATION
from Your Family Doctor

Low Back Pain

What is low back pain?

Low back pain is when you feel soreness or discomfort in your lower back, buttocks, or hips. It is a common problem.

What causes low back pain?

It is usually caused by muscle strain in your lower back. If you strain a muscle in your back, it can hurt to move it, walk, bend, or twist.

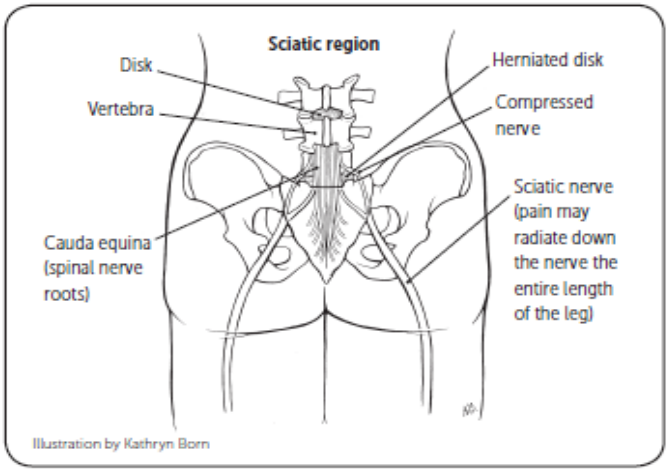
Another cause of low back pain is a bulging disk. Disks in your spine give cushioning and support. When a disk bulges, or herniates, it may irritate a nerve *(see drawings)*. This can cause pain that goes down your thigh or leg. Pain caused by nerve irritation is called sciatica (sigh-AT-tic-ah).

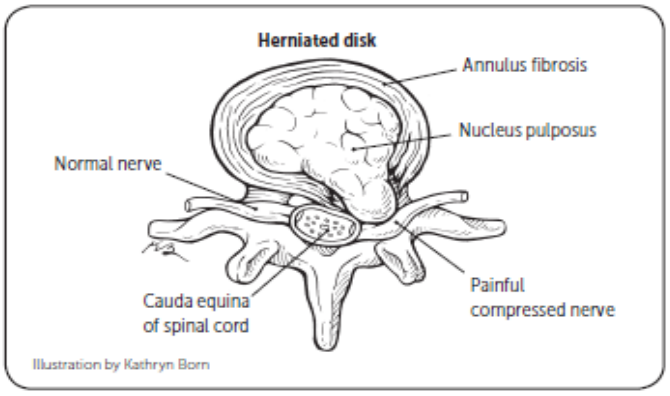
Sometimes, back pain is caused by an infection, cancer, or other diseases. This is rare.

Who gets low back pain and why?

Three out of four people have low back pain at some time in their lives. You can get low back pain from straining to lift heavy objects or by twisting your back. People often hurt their backs when they are

continues





AMERICAN ACADEMY OF FAMILY PHYSICIANS

Annex E: Patient Took Kit (continued).

INFORMATION
from Your Family Doctor

Low Back Pain *(continued)*

moving furniture, playing sports, or gardening. It can also happen while you are at work.

How long will it last?

Most people slowly start to feel better over a few weeks. Nearly all people are completely better within six to eight weeks.

How will my doctor find the cause of the pain?

Your doctor will ask you questions about your pain and will give you a physical examination.

Most people don't need to have an x-ray or other scans. Your doctor will decide if you should have these tests after your examination.

Will bed rest help?

You may need to rest in bed for a day or two, but too much bed rest can stop you from getting better. Some people worry that staying active will hurt their backs more. Getting back to your normal activities may hurt or be uncomfortable at first, but it shouldn't cause any damage. You may try gentle stretches or yoga before returning to your normal activities.

What can I do to help with the pain?

- Try not to do things that make the pain worse, like sitting for a long time, lifting heavy objects, or bending or twisting.
- Stick to your normal activities as much as you can. Gentle exercise like walking helps you get better faster.
- Some over-the-counter medicines can help pain or swelling. These include ibuprofen (brand name: Advil or Motrin), naproxen (brand name: Aleve or Naprosyn), and acetaminophen (brand name: Tylenol). Your doctor may also prescribe medicine to help with pain or muscle spasms.
- Try using heating pads or taking a warm bath or shower.
- Your doctor can show you some gentle exercises to help stretch your back and make the muscles stronger.
- A physical therapist, massage therapist, or chiropractor may help with your pain and make you feel better.

When should I return to work?

Your doctor can tell you when it is okay to go back to work. It is important to try to stay active. But, if you have to sit for many hours or do a lot of physical activity at work, you may need to make some changes for awhile.

How can I prevent low back pain?

You can prevent low back pain with physical therapy, exercising, and stretching. Supports and back belts do not prevent low back pain.

Exercise regularly and lose weight if you are overweight. Being inactive can lead to low back pain. Regular exercise like walking, swimming, or biking is good for your back. These activities put less stress on your back than sitting and standing.

continues

Annex E: Patient Took Kit (continued).

INFORMATION
from Your Family Doctor

Low Back Pain *(continued)*

Don't lift heavy objects by bending over at the waist. Bend your hips and knees and then squat to pick up the object. Keep your back straight and hold the object close to your body. Don't twist your body while you are lifting.

If you have to sit at your desk or drive for a long time, take breaks to stretch.

How can I tell if my back pain is serious?

You should get medical care right away if:

- You are older than 50 years
- The pain was caused by an injury, like a fall or car crash
- You have trouble sleeping because of the pain
- You lose weight without trying or have a fever, chills, or a history of cancer
- You have trouble urinating or controlling your bowels

Tell your doctor if the pain goes down your leg below your knee, or if your leg, foot, or groin feels numb. See your doctor if your pain doesn't get better after two or three weeks of treatment.

Where can I find more information?

Your doctor

AAFP's Patient Information Resource
https://familydoctor.org/conditions/low-back-pain/

Backcare
http://www.backcare.org.uk

National Library of Medicine MedlinePlus
https://medlineplus.gov/ency/article/007425.htm

Spine-health
http://www.spine-health.com

October 2018

This handout was adapted with permission from Kinkade S, Sisson RB. Low back pain [patient handout]. *Am Fam Physician*. 2007;75(8):1190-1192. https://www.aafp.org/afp/2007/0415/p1190.html. Accessed June 5, 2018.

Annex F: Patient Information Brochure

Where Did Battlefield Acupuncture Come From?

Battlefield Acupucture (BFA) was created by Dr. Richard Niemtzow while on active duty in the United States Air Force in 2001. Dr. Niemtzow discovered that a very specific sequence of needles inserted into the ears would provide rapid and highly effective relief of many types of pain. Over the past 10 years he has refined the technique and has taught it to hundreds of physicians around the world.

Will BFA Help Me?

Dr. Niemtzow's experience suggests approximately 80% of people will have pain symptoms reduced by BFA. For reasons that we have not yet discovered, a small percentage of people will not respond to the BFA protocol. There is no way to determine who will respond and who will not prior to treatment. Some patients obtain permanent relief of pain with a single treatment, some patients receive only brief relief. The majority of patients can expect to have several days of relief with the first treatment, and subsequent treatments often extend the period of symptom reduction.

How Can I Optimize My Treatment?

On the day of your treatment, avoid strenuous exercise, heavy housework, or yard work. Avoid alcohol and intercourse for a minimum of 6 hours before and after treatment. Eat a healthy, moderate diet all day, to include a light meal before receiving your treatment.

Where Can I Get More Information?

This Battlefield Acupuncture brochure was adapted from the Womack Army Medical Center, Interdisciplinary Pain Management Clinic 2018 Battlefield Acupuncture Protocol Book.

More information can be found in the full BFA Patient Information Handout. Please ask your provider.

The American Academy of Medical Acupuncture
http://www.medicalacupuncture.org

Acupucture Today
http://acupuncturetoday.com

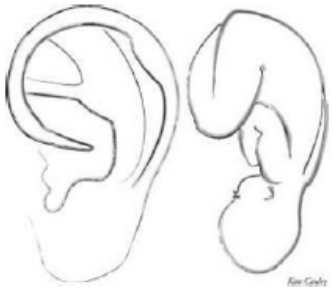
Battlefield Acupuncture

Clark Health Clinic
Bldg. 5-4257 Bastogne Street
Fort Bragg, NC 28310

Annex F: Patient Information Brochure (continued).

What is Battlefield Acupuncture?

Battlefield Acupuncture (BFA) is a form of acupuncture in which needles are placed only on the surface of the ear. The theory behind ear acupuncture is that the entire body and all its functions are represented on various points on the ear. There is scientific evidence which confirms connections between regions of the ear and distant body functions, and research confirms therapeutic benefit when needles are inserted in the ear region corresponding to areas of illness or pain.



Modern research has shown that stimulating acupuncture points results in the release of various body chemicals which participate in a cascade of events which can treat illness and reduce pain. It is important for you to understand that we do not fully understand exactly how acupuncture works.

BFA needles are inserted in a specific sequence, beginning on one side, then alternating to the corresponding point on the opposite ear. The five points are: *Cingulate Gyrus*, *Thalamus*, *Omega-2*, *Point Zero*, and *Shen Men*.

What Needles Are Used?

BFA uses tiny, sterile, micro-needles with a 1mm point and a shiny gold disk. They are inserted into the skin of the outer surface of the ear at five distinct points.

Most patients will experience minor discomfort when these needles are placed, and the discomfort will decrease or completely resolve in a short amount of time. The needles remain in place for 2-4 days, at which they will fall out on their own.

Is BFA Right for Me?

Over many years, the BFA technique has proven to be safe and effective for a broad variety of patients and pain conditions.

Consider BFA if you have...

- Acute or chronic pain
- An interest in participation
- The ability to observe for rare instance of inflammation
- Available to follow-up by phone or visit

BFA may NOT be right for you if you...

- Are pregnant or may be pregnant
- Have a bleeding disorder
- Take medications that promote bleeding
- Have an aversion to needles

Are There Side Effects?

All medical procedures carry the risk of side effects. Acupuncture has a long history of safety and side effects are rare. The risks of acupuncture (all uncommon) include: discomfort or pain at the needle sites, bleeding or bruising, infection, broken needles, feeling dizzy or nauseated, fainting or feeling euphoric or lightheaded.

Annex G: Referral Slip

Referred to: Clark Clinic Walk-In Battlefield Acupuncture Tuesday and Thursday 0700 – 1130 In the Freedom Hallway	Referred to: Clark Clinic Walk-In Battlefield Acupuncture Tuesday and Thursday 0700 – 1130 In the Freedom Hallway
Referred to: Clark Clinic Walk-In Battlefield Acupuncture Tuesday and Thursday 0700 – 1130 In the Freedom Hallway	Referred to: Clark Clinic Walk-In Battlefield Acupuncture Tuesday and Thursday 0700 – 1130 In the Freedom Hallway

Annex H: Provider Pre and Post Survey

Job Title: _____

Location of Work (Clinic): _____

Date: _____

LOW BACK PAIN MANAGEMENT

1. The current VA/DoD guidelines recommend offering all of the following for the treatment of chronic low back pain in the absence of red flags EXCEPT
    a. stress reduction
    b. x-rays or MRI
    c. acupuncture
    d. provider-directed exercise program
    e. spinal manipulation
    f. cognitive behavioral therapy

2. Health Effectiveness Data Information Sets (HEDIS) suggest refraining from imaging for newly diagnosed low back pain in the absence of red flags until at least
    a. 2 weeks after initial diagnosis
    b. the second visit for the same complaint
    c. 6 months after initial diagnosis
    d. physical therapy proved ineffective
    e. 28 days after initial diagnosis

3. Red flags for low back pain include all of the following EXCEPT:
    a. history of IV drug use
    b. pain affecting performance of activities of daily living (ADLs)
    c. spinal infection
    d. trauma
    e. suppressed immune system
    f. accompanying neurological deficits

4. When performing acupuncture in the clinic setting, the appropriate CPT code is
    a. 99281
    b. 20999
    c. 97124
    d. 97810

5. Risk factors for an acute low back pain becoming chronic include
    a. comorbid mental health diagnosis
    b. adverse MRI results
    c. recent pregnancy
    d. mechanism of injury was repeated poor body mechanics
    e. use of NSAIDs lasting >30 days

Annex H: Provider Pre and Post Survey (continued).

The following questions are for those <u>NOT CERTIFIED</u> to perform auricular acupuncture.

1. I believe that battlefield acupuncture is an effective treatment for non-traumatic low back pain

Strongly disagree										Strongly agree
0	1	2	3	4	5	6	7	8	9	10

2. I can confidently refer patients for battlefield acupuncture treatment for pain within my clinic

Strongly disagree										Strongly agree
0	1	2	3	4	5	6	7	8	9	10

3. There are no barriers for me to refer patients for battlefield acupuncture

Strongly disagree										Strongly agree
0	1	2	3	4	5	6	7	8	9	10

4. MTF leadership supports the use of battlefield acupuncture for pain

Strongly disagree										Strongly agree
0	1	2	3	4	5	6	7	8	9	10

5. Patients respond positively when battlefield acupuncture is suggested as part of a treatment plan

Strongly disagree										Strongly agree
0	1	2	3	4	5	6	7	8	9	10

6. Do you perceive barriers to performing BFA? What are they?

_____

_____

_____

_____

_____

Annex H: Provider Pre and Post Survey (continued).

The following questions are for those <u>CERTIFIED</u> to perform auricular acupuncture.

1. I believe that battlefield acupuncture is an effective treatment for non-traumatic low back pain

Strongly disagree										Strongly agree
0	1	2	3	4	5	6	7	8	9	10

2. I feel confident in my ability to perform battlefield acupuncture

Strongly disagree										Strongly agree
0	1	2	3	4	5	6	7	8	9	10

3. Performing battlefield acupuncture does not adversely impact my clinic flow

Strongly disagree										Strongly agree
0	1	2	3	4	5	6	7	8	9	10

4. MTF leadership supports the use of battlefield acupuncture for pain

Strongly disagree										Strongly agree
0	1	2	3	4	5	6	7	8	9	10

5. Patients respond positively when battlefield acupuncture is used as part of a treatment plan

Strongly disagree										Strongly agree
0	1	2	3	4	5	6	7	8	9	10

6. I have the supplies I need to perform battlefield acupuncture

Strongly disagree										Strongly agree
0	1	2	3	4	5	6	7	8	9	10

7. The use of battlefield acupuncture has enhanced my practice

Strongly disagree										Strongly agree
0	1	2	3	4	5	6	7	8	9	10

8. I have been taught how to chart battlefield acupuncture to receive maximum RVUs

Strongly disagree										Strongly agree
0	1	2	3	4	5	6	7	8	9	10

9. Do you perceive barriers to performing BFA? What are they?

_____

_____

_____

_____

Appendix I: Provider In-Service

Increasing the Use of BFA for Non-Traumatic Low Back Pain

USUHS DNP Project

USU
Uniformed Services University

Agenda

- Pre-Course Survey
- Introduction
- Background
- LBP Guidelines/Knowledge Update
- Clark Health Clinic Statistics
- BFA Evidence
- Project Description
- Plan for Implementation

Team Introduction

MAJ Amber Ritter MAJ Angelyn Brown MAJ Diana Coats MAJ Vonya Gibbons MAJ Marita Prince

Background

- From 2010-2014, there were **>8 million** outpatient visits for LBP by service members and LBP encounters increased by **34%**
- LBP is the second most common reason for seeking healthcare in active duty service members, affecting more than **160,000** annually
- LBP is a leading cause of medical evaluation boards and medical discharges from the Army with lifetime compensation
- **11.2%** of injuries from airborne operations at Fort Bragg involve LBP

Clark Health Clinic Statistics

- Over 4,000 low back pain encounters annually
- Retrospective chart review (September-November 2018)
- **28%** patients placed on temporary profile (average length 61 days)
- 26% had X-rays performed
- 8% had MRIs performed
- <1% prescribed opioids
- 32% prescribed muscle relaxants
- 13% offered BFA
- **8%** had BFA performed

LBP Guidelines

- The VA and DoD CPGs provide instruction for the care of LBP at Fort Bragg
- VA and DoD CPGs consistent with the American College of Physicians CPG for the treatment of LBP
- All support the use of acupuncture as a non-pharmacologic and non-invasive therapy to reduce pain in patients with chronic low back pain

Appendix I: Provider In-Service (continued).

Low Back Pain Pearls

- Most individuals will improve without intervention
  - About 31% of people will have pain lasting longer than 6-months
  - Risk for chronicity increases with:
    - Advanced age
    - Male
    - Significant disability at onset
    - Jobs involving heavy labor
    - Low job satisfaction
    - Receipt of work-related compensation
    - Low education
    - Low socio-economic status
    - Comorbid depression
  - Psychosocial, demographic, and occupational risks for chronicity are **greater** than characteristics of the spinal condition

Low Back Pain Pearls cont.

- Advice to patients
  - Stay active
  - Return to normal activity as soon as possible
  - Avoid aggravating movements
- NSAIDs are a good first line pharmacological treatment
  - Muscle relaxants may be effective for greater severity of pain, evidence suggests primary benefit is in the first 7-14 days
- Heat may be helpful within the first 5 days

BFA Evidence

- Current evidence review started in September 2017
  - Body of evidence continues to grow
  - Referenced in literature pertaining to auricular acupuncture
- Overall, BFA is a safe and effective treatment for LBP
  - Reduces pain
  - Improves function
- May be performed in any setting
- Requires minimal equipment
- Spectrum of healthcare providers can administer BFA
  - CPT code: 97810
- BFA often integrated with other therapies
  - Exercise, physical therapy, NSAIDs

Implementation Plan

- Walk-in Clinic
  - Freedom Hallway
  - September and October (every Tuesday and Thursday 0700-1130)
  - Obtain consent and demographics forms
  - Generate patient encounter and perform BFA
- Appoint eligible patients with LBP
  - Not pregnant
  - No aversion to needles
  - No active infection
  - Not on special duty/flight status with restriction to BFA

Project Goals

- Increase the use of BFA in the treatment of non-traumatic LBP in ADSMs
- Increase return to duty rate by lowering number and duration of profiles
- Decrease CNS depressant prescriptions
- Reduce early imaging (<28 days)
- Increase satisfaction and confidence with BFA
- Improve provider knowledge related to VA/DoD CPGs for LBP
- Gather data to support continued use
- Improve readiness across the force

Questions?

Annex J: Pre and Post Chart Review Tool

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Team	Month	Date	CHART #	Age	Sex	BFA Offered	BFA Performed	Pain Score	Medications	Imaging Type	New Profile During Encounter	Profile Type	Existing Profile	Existing Profile Type	Duration of Profile
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
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Annex K: BFA Clinic Intake Form

BFA Clinic Intake Form

Patient Information

Date_____

Age: ____ Gender: M ☐ F ☐

Officer ☐ Enlisted ☐ Duty Status: Active ☐ AGR ☐

Ethnicity: White ☐ Hispanic or Latino ☐ Black or African American ☐ Native American or American Indian ☐

Asian or Pacific Islander ☐ Other ☐

Are you currently a student? Y ☐ N ☐

Are you currently on flight status? Y ☐ N ☐

Are you currently assigned to Clark Health Clinic? Y ☐ N ☐

Is this your first time at the BFA clinic? Y ☐ N ☐ If no, date(s) you previously attended _____

If you answered "no" to the previous question, have you seen your PCM for low back pain in between these BFA visits? Y ☐ N ☐ If yes, date(s) of your appointment(s) _____

Do you have any other pain today besides low back pain? Y ☐ N ☐ If yes, please describe_____

What was the mechanism of your initial low back injury?

Jump Related ☐ Physical Training ☐ Weight Lifting ☐ No Specific Injury ☐ Other _____

How long have you been experiencing low back pain? _____

What treatments have you tried for low back pain? (Select all that apply)

Physical Therapy ☐ Stretching ☐ Yoga ☐ Heat Application ☐ Massage ☐ Joint Manipulation ☐

Transcutaneous Electrical Nerve Stimulation (TENS) Unit ☐ Steroid Injection ☐ BFA ☐

Muscle Relaxants ☐ Pain Medications ☐ (Specify) _____

Have you ever been on profile for low back pain? Y ☐ N ☐

Do you have an aversion to needles? Y ☐ N ☐ History of vaso-vagal response to needles? Y ☐ N ☐

Do you have a history of bleeding disorders? Y ☐ N ☐

Is there a possibility you may be pregnant? Y ☐ N ☐

Pain rating today (circle) 0 1 2 3 4 5 6 7 8 9 10

No Pain Moderate Pain Severe Pain

*Pain score after BFA*_____

Annex L: BFA Consent Form

Battlefield Acupuncture Protocol

Womack Army Medical Center
Interdisciplinary Pain Management Center

Patient Name: _____ Last four:_____ DOB: _____

Auricular Acupuncture

The patient's identity, the procedure to be performed and the specific site of the procedure was verified in accordance with MEDCOM 40-17 dated Mar 03.

This patient is presenting today for BFA as noted.
Counseling regarding BFA was provided.

Prior to proceeding the patient was counseled to the risks and benefits to include bleeding, infection, nerve damage, worsening pain, no change in pain, headache, allergic reaction, and very rare devastating complications. Then, prior to the detection and stimulation of pertinent acupuncture points and subsequent insertion of acupuncture needles time out was taken to verify correct patient: full name and date of birth, site of pain. The patient agreed to proceed after written informed consent obtained.

_____ _____
Soldier Signature / Date Provider Signature / Date

Procedure Note: Informed consent was obtained. The patient was positioned comfortably. The patient was then prepped in a sterile fashion with **Alcohol.** There was no evidence of infection at the site of needle insertions. ASP needles were placed at relevant acupuncture points: Cingulate Gyrus, Thalamic, Omega 2, Point Zero, and Shen Men using 0.9mm Gold ASP acupuncture needles. A period of 60 seconds was provided in between points and new pain levels were noted. The procedure was tolerated without complication.

	Pain Level (0-10)
Initial pain	
Cingulate Gyrus	
Thalamus	
Omega 2	
Point Zero	
Shen Men	

15-30 min were spent inserting ASP needles and following the BFA CC-TT-OO-PP-SS protocol. CPT Code: 97810 (initial 15 minutes), 97811 (additional 15 minutes)

The patient was given discharge instructions (no sex, no cold fluids, no bamboo shoots, no intense exercise for 24 hours and verbalizes understanding.

The patient tolerated the procedure well and was discharged.