

Provider Perspectives of Battlefield Acupuncture

Advantages, Disadvantages and Its Potential Role in Reducing Opioid Use for Pain

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Objectives: Nonpharmacological options to treat pain are in demand, in part to address the opioid crisis. One such option is acupuncture. Battlefield acupuncture (BFA) is an auricular needling protocol currently used to treat pain in the Veterans Health Administration. We aimed to identify the advantages and disadvantages of BFA from providers' perspectives.

Methods: We rely on an inductive qualitative approach to explore provider perceptions through thematic analysis of semistructured interviews with 43 BFA providers across the nation.

Results: We identified the following themes. Disadvantages included: (1) clinical guidelines are insufficient; (2) patients often request multiple BFA visits from providers; (3) BFA can be uncomfortable; (4) BFA may not be

an effective treatment option unless it can be provided "on demand"; and (5) BFA can promote euphoria, which can have deleterious consequences for patient self-care. Perceived advantages included: (1) BFA can simultaneously effectively control pain while reducing opioid use; (2) BFA may alleviate the pain that has been unsuccessfully treated by conventional methods; (3) BFA gives providers a treatment option to offer patients with substance use disorder; (4) BFA helps build a trusting patient-provider relationship; (5) BFA can create the opportunity for hope.

Conclusions: Providers perceive BFA to have many benefits, both clinical and relational, including ways in which it may have utility in addressing the current opioid crisis. BFA is easy to deliver and has potential clinical and relational utility. Efforts to better understand effectiveness are warranted.

Key Words: pain, auricular acupuncture, battlefield acupuncture, complementary and alternative medicine

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An estimated 89 million American adults use prescription opioids annually.¹ Over the course of the multiple decades, providers were encouraged to prescribe opioids for many types of pain, including for pain types where little effectiveness data existed.² Widespread efforts to address the current opioid crisis have now led to declines in rates of opioid prescribing, however, rates of prescription opioid misuse have remained stable over the past decade and opioid-related death rates continue to increase.³ Veterans are particularly impacted by the opioid risks because they experience disproportionately high rates of chronic pain⁴ and some substance use disorders (SUDs) than the general population.⁵ With rising rates of SUD among Veterans,⁵ they are particularly in need of nonopioid options to effectively treat pain.

New guidelines encourage nonpharmacological therapies as a first-line treatment for various types of pain.^{6–8} One such nonpharmacological option is acupuncture, which has evidence of effectiveness for various painful conditions^{9–16}; it also has few known side effects and limited adverse reactions.^{10,12,14,15,17,18} Multiple studies have found various types of acupuncture to have potential efficacy in reducing opioid use,^{10,19} with some even finding it superior for pain relief than opioid medications.^{10,20–22}

VA and active military settings have implemented battlefield acupuncture (BFA), a rapid auricular acupuncture protocol that involves inserting semipermanent needles on 5 specific points.^{23–25} Anecdotal and early scientific evidence has demonstrated that BFA can significantly and immediately reduce pain symptoms^{26–28} and is effective for treating both chronic and acute pain.²⁷ However, research on BFA's impact on pain is limited to a few studies with small sample sizes.^{27,28} Because of the simplicity of the protocol, it is easy to administer and can be performed by multiple types of providers.^{24,25,27} On the basis of early scientific evidence, starting in 2016, the Veterans Health Administration (VHA) has trained over 2800 providers to deliver BFA.²⁹

Our previous work evaluating the implementation of BFA in the VHA identified implementation challenges and opportunities associated with BFA.³⁰ One was the status of the evidence which is being addressed in another study. Another such opportunity was that some providers perceived BFA could effectively address pain and have the potential to reduce opioid use. Given that BFA is implemented throughout the VA nationally, we set out to gain a deeper understanding of provider perspectives on BFA's advantages and disadvantages.

METHODS

We conducted this analysis as one component of a larger study to understand BFA implementation in the VHA.³⁰ Since our intention was to generate hypotheses, we relied on an inductive qualitative approach to explore provider perceptions of BFA's potential utility for managing pain. All study procedures received a determination of nonresearch for quality improvement from the Institutional Review Boards at the VA Greater Los Angeles Healthcare System and the VA Palo Alto Healthcare System with the understanding that interviews were conducted for VHA quality improvement purposes and any learnings would only be reported externally in aggregate. Participants were informed verbally about the study, its purpose and of the possibility, the results would be published.

Participant Recruitment

Overall, 43 interviews were conducted, 23 in an initial first round of interviews and 20 in the second round of interviews. Round 1: We used a targeted, criteria-based recruitment strategy followed by snowball sampling to recruit and interview 23 BFA providers from VHA medical facilities in diverse locations across the nation. As noted in our parent study,³⁰ we first obtained a list of 49 BFA providers from our VHA operational partner in the quality improvement effort who were trained as BFA instructors and sent them a recruitment email. These providers are VHA clinicians (eg, doctors of chiropractic, acupuncturists, primary care physicians) trained to deliver BFA and train other VHA providers regionally. Of the 49, 14 agreed to participate in a 30-minute, semistructured, individual telephone interview. Subsequently, we used snowball sampling to recruit an additional 9 VHA providers by asking for names of additional providers trained to deliver BFA. We conducted the first wave of semistructured interviews between June 2017 and January 2018. Interviews lasted 20–65 minutes and we obtained verbal consent to record at the start of interviews. We audio-recorded and transcribed all interviews verbatim and removed any identifying data. We asked

providers about their experiences using BFA and specifically for examples of the advantages and disadvantages of BFA as a pain management strategy.

Round 2: To follow-up on the initial thematic analysis on the wave 1 data, we conducted a second round of 20 rapid interviews where we probed BFA providers at 6 high-performing sites (defined as having multiple BFA clinical encounters where pain score reductions were achieved using BFA) about how they perceived BFA and how they would improve BFA implementation. The high-performing sites were located in multiple regions across the country and represented both urban and rural population centers. BFA providers interviewed represent disciplines across the board from home health registered nurses to physician medical directors. Since the follow-up wave interviews were brief (10–21 min), we wanted rapid turnaround time on analysis, we chose not to record and transcribe; instead, 1 team member (P.E.A.) conducted the interview and 1 (J.H.) took detailed (often verbatim) notes.

Data Analysis

Our study team comprised health services researchers, qualitative methodologists, and BFA experts. Two members (K.F.G. and J.H.) analyzed the interview transcripts using a combination of deductive (a priori)³¹ and inductive (grounded theory-informed method of constant comparison)³² content analyses. First, we applied a priori codes for: (1) advantages and (2) disadvantages to sort the content. We applied these high-level domains to all wave 1 transcripts and wave 2 notes. Next, we use an inductive approach to identify themes under each domain. Themes are only included if they came up by at least 3 different providers. Four research team members (K.F.G., J.H., P.E.A., and S.L.T.) discussed any discrepancies in tagging themes and theme definitions until consensus was reached.³³ We discussed the preliminary results among the entire project team. We used a combination of Atlas.ti (a priori codes) and Microsoft excel (clustering) to organize the data in a shared server folder during the analysis. We shared the analysis results with 2 BFA providers and 2 leaders as a member check.³³ We shared our results in writing and incorporated feedback on a phone call. We did not change the results based on their input but did allow their input to influence our emphasis in the discussion on relational utility.

Results: Below we report emergent themes organized by 2 domains: provider perspectives of (1) disadvantages and (2) advantages.

Domain 1: Disadvantages of Battlefield Acupuncture

Insufficient Guidelines on When to Administer Battlefield Acupuncture

Providers are unclear about the clinical guidelines or research on the effectiveness of BFA. Some providers expressed frustration about not having clinical guidelines.

So we don't know what the real indication of the treatment is. We don't have guidelines. We don't have data. We don't really know what the patient response is because we only know what patients tell us if they return to us. And if you treat someone and they feel better and then they don't feel better and they decide

not to come back, there's no information. So the void of what is this therapy and what does it actually do. We've got the thrill of, hey, that guy who was hurting a lot isn't hurting so much right now but we don't really have a plan as to how we're supposed to use it. How the hell can we disseminate something that we don't really know what we're doing with?

Patients Often Request Multiple Battlefield Acupuncture Visits

To administer BFA for pain management over multiple weekly visits represents a huge time cost to providers.

Most practitioners that I know don't have [clinic] spots to see everyone, to see patients weekly. They certainly don't have spots to see someone weekly for the rest of the person's natural life.

Many patients seem to require weekly visits over the long term, which is not feasible for many of the providers we interviewed.

Do I use BFA? Yes, I use it every day on at least a fraction of my patients but it's not something that I can do for them every week. Most of my patients are really, really chronic. They don't just have headaches. They have a lot of musculoskeletal issues along with PTSD and insomnia. And I think, personally, they probably need acupuncture every week for the rest of their lives and they're on a ton of meds.

Battlefield Acupuncture Can Be Uncomfortable

Some providers admitted hesitance to offer BFA when they feel the procedure is going to be uncomfortable for patients.

... the procedure is taught with the ASP needles [one type of needle that can be semi permanent and is used for auricular acupuncture] and it's not comfortable and we [BFA providers] do it on each other and it hurts. So, I think when you think the procedure is not actually going to be comfortable for a patient, there's some reluctance to offer it. So I think that was a little bit of a barrier for some people.

Battlefield Acupuncture May Not Be an Effective Treatment Option Unless It Can Be Provided "On Demand"

Providers noted that their patients are receptive to BFA if they can receive their first treatment the day it is discussed, but often will not follow-up if the first session is scheduled for a future date.

If you have a service that is not available when they need it, you will not succeed. Giving an appointment in a month for BFA won't work. So we needed a walk in clinic.

Battlefield Acupuncture Can Promote Euphoria, Which Can Have Deleterious Consequences for Patient Self-care

Some providers view the euphoric state of BFA as an addiction. A patient experiencing sensational bliss may neglect self-care behaviors and solely depend on BFA.

The pitfall is that essentially ... point zero are addicting points. Those are the points that are most associated with that feeling of euphoria, the feeling of deep relaxation and the people they then become compelled to seek that out in and of itself. When that happens they block their self-care behaviors and depend on the BFA to do the work for them. And this is one of the reasons why we had to limit the number of sessions that people got because, you know, we had people who were coming back for 30 or 40 sessions and that was not functional.

Domain 2: Advantages of Battlefield Acupuncture

Battlefield Acupuncture Can Effectively Control Pain While Simultaneously Reducing Opioid Use in Some Cases

Providers believe "BFA is definitely seen as an intervention that can help with the opioid crisis" because it can manage pain and reduce opioid use.

With our clinic trying hard to get our patients off narcotics and BFA being so helpful with that, we have no concerns about the BFA clinic going away. We're trying to push it further actually so there will be more folks who can benefit from it.

We present sample quotes in Table 1, about how providers have used BFA to help Veterans with opioid tapers and how BFA can be used as part of an integrated whole health strategy to reduce opioid use for pain (Table 1).

Battlefield Acupuncture May Alleviate Pain That Has Been Unsuccessfully Treated by Conventional Methods

The providers in our study are compelled by patient testimonies about how effectively BFA treats pain. The following is an example of BFA relieving pain that had been unsuccessfully treated with traditional medications/procedures.

I had one lady that had two or three back surgeries ... And she said, "I'd like to try it but I'll let you know I really am not going to get any relief." And I said, "Okay, well, you don't have to try it." And she said, "No, I want to because they keep telling me how great it is but I'm just telling you I've had this pain for 12 years." The first needle and she got this funny look on her face. I said, "Are you okay?" She said, "Yeah, yeah. I'm fine." She walked down the hall and she came back and I said, "Do you want to go on?" She said, "Yeah." So I ended up putting I believe a total of three needles in and she said, "Okay, that's enough ..." She goes, "Yeah, I don't believe this because I don't believe this," I'm like, "Okay, why?" "My pain is gone." And I'm like, "Cool!" She said, my pain was almost gone after the first needle but I didn't think you were going to believe me.

One provider even presented anecdotal evidence of where BFA worked better than the alternative, more invasive therapy (an epidural, which needs to be delivered by a specialist) for 1 patient:

TABLE 1. Provider Examples of How BFA Was Helpful for Reducing Opioid Use

Theme	Example	Provider Quotes
Providers have used BFA to help veterans taper down or off opioid medications	Providers credit BFA as a reason for a reduction in opioid use among patients at their site	<p>“That was a big selling point in the [clinic site]. Our numbers related to opioids in [clinic site] are impressive. In 2014 25% of our patients were on opioids, but now it is down to 11% of our patients on opioids. ER injection of opioids for one of our providers dropped by 31% from 2017-2018 because she was doing BFA. We are reducing opioids use and offering an alternative. In 2014 when we tried to cut back on opioids, veterans would say “what else can you offer me?” and we didn’t have any alternative, but now we have BFA. Nothing is as convincing as numbers, and we have that.”</p> <p>“Especially with the opioid safety initiative, we’ve been able to successfully take 400 people off opiates.”</p>
	Providers have successful individual patient full taper stories	<p>“I can mostly say that once I started doing BFA, word got out and spread like wildfire, and we were getting good results, getting people weaned off their opioids.”</p> <p>“I had a Female Veteran on high dose hydrocodone and with the help of the pain clinic, she is now totally off hydrocodone.”</p>
	BFA might be help with navigating possible “lower limits” of opioid medications	<p>“It [BFA] is very successful, especially for people who are weaning off opiates, and that’s a big problem we’re seeing all over the country right now. It has helped out quite a number of people.”</p> <p>“... trying to get them down off of their meds to figure out what is truly—where is that lower limit that we can do as far as medications and then also other treatments.”</p> <p>“I’ve had a few people say to me they’ve been able to cut back [on opioids], many people saying they want to cut back, so they’re hopeful this [BFA] will work.”</p>
BFA can be used as part of an integrated whole health strategy to reduce opioid use for pain	Using an interdisciplinary approach including BFA to treat pain may reduce opioid use	<p>“Over the last couple years we’ve noticed a downward tick in opiate use in our patients and in the pain clinic we’re taking the highest risk patients on high dose opiates and blend a bunch of things together using an interdisciplinary approach.”</p>
	BFA can aid patients who are tapering off of opioids in trying new therapies	<p>“Well, the thing is, they are on pain pills right now and hopefully, with the BFA, they have to take their pain pills less and also, to make it a whole health or mind/body thing, we do a one-hour what we call mindful breathing, mindful breathing and some simple yoga exercises that they can do sitting down and standing up, nothing major with that.”</p>
	By supporting patients with tapering off opioids, while still experiencing adequate pain control, BFA may “open up a window to try other treatments.”	<p>“I had a gentleman yesterday in clinic who walks with a support and he was saying he used to be on pretty heavy doses of narcotics and has come down off of that due to the acupuncture, really feels like this is effective and wanted to hear about some of the other classes. Lots of people saying because the pain comes down, they’re trying yoga and so on and so forth. So I think it really is a gateway to opening your mind.”</p>

BFA indicates battlefield acupuncture; ER, emergency room.

... one patient of mine, he gets an epidural every three months or every month. He said... it [BFA] works way better than his epidural

In another example, BFA alleviated the pain that was not adequately treated with multiple surgeries.

My question is when do you stop doing BFA, especially when it helps their pain so much. I have a patient who has had 3 back surgeries, and he has BFA every 28 days and his pain scale will go from a 10 down for a 1 or a 2 and he just has Tylenol with codeine that he takes really infrequently, so when it works so well, how do you stop providing that for people? It’s very difficult for me to say no.

BFA providers report that many of their patients are “tired” of traditional treatments for pain management and expressed a desire to use alternative treatments for pain management.

... by the time they come to us [BFA providers], the majority of them are tired of the conventional approach and a lot of them won’t... as far as alternative and they’re looking at possibly just—probably a lot of them are like me and they don’t like the side effects of medications, especially narcotics.

Battlefield Acupuncture Gives Providers a Treatment Option to Offer Patients With Substance Use Disorder

BFA may provide a safe pain management option for patients with SUD.

We’re living in the land of woo. This is what we do. These are people who are addicted to drugs and you can’t do what you would conventionally do to treat their pain so you kind of have to be outside the box thinkers [e.g. use BFA] in order to [treat] them/their pain efficiently.

BFA could be helpful for patients who need pain management, but for whom opioids are inappropriate.

Our clinic is the residential wellness center. It's how BFA really took off here. We have a lot of patients coming off of drugs who have SUD and they really need some relief but can't have opioids so we provide them with BFA instead.

Battlefield Acupuncture Helps Build a Trusting Patient-Provider Relationship

Providers have reported that the act of the provider “laying hands” on the patients creates a more meaningful patient-provider interaction, which helps build trust.

They become believers [of BFA] right then and there. They trust you because they're like, “Wow, there's something to this.” There is something about putting hands on a patient that increases that relationship and that trust, which is so needed especially in the Veteran population.

BFA gives the provider an opportunity to develop a connection with their patients through touch and camaraderie.

One of the things that I've noticed with the BFA, even if it is placebo effect, just having that extra time with the Veteran and getting close to them and touching them and laughing with them and letting them share their stories while they're walking in between each needle puncture, it's really nice. That, in and of itself, is therapeutic.

BFA can facilitate open communication, by providing real-time pain relief, may empower patients to open up to providers.

... they're [veteran] not going to talk to you. And I've had patients tell me that. They're like, “You are the first provider that I've been able to talk to.” And then it's amazing when you put those needles in how much they open up.

Battlefield Acupuncture Can Create the Opportunity for Hope

When BFA successfully alleviates persistent pain, providers witnessed their patients getting out of a despairing “pain hole” and having a sense of hope.

It changes the conversation in the moment. It totally gets them out of their pain hole and allows them to see that there is hope, that there's something that can be done.

DISCUSSION

Providers reported multiple advantages and disadvantages of BFA. The disadvantages of BFA included that patients often request multiple BFA visits from providers and that it may not be a realistic treatment option for many patients unless it can be provided “on demand.” In addition, providers noted that BFA can be uncomfortable for some and can promote euphoria for others, which they thought may negatively impact patient self-care. Providers also perceived the lack of clinical practice guidelines and nascent scientific evidence of effectiveness impeded BFA's implementation, a notion noted elsewhere.³⁴

While acupuncture has the broadest evidence base of any nonpharmacological therapy for both pain and addiction treatment,^{10,35} research focused specifically on BFA is only emerging. A recent immediate pre-post examination of BFA effectiveness showed 82% of Veterans reported an immediate decrease in pain.^{36,37} Further, a randomized clinical trial was recently conducted on BFA's effect on pain and found BFA superior to controls. This study lends further support to the providers' perspectives of the advantages of BFA, noting that “benefits of using auricular acupuncture include the need for few supplies, cost-effectiveness (compared with medications), minimal side effects, and the ability to train various health care providers through a brief training curriculum to administer BFA safely in a variety of clinical and field settings.”²⁷ While more evidence is needed, providers in our study viewed BFA as a potential important option, particularly for patients who have not achieved success with other therapies and for patients who risks of using opioids clearly outweigh any benefits—as in the case of SUDs.

BFA may have a particularly meaningful impact on pain in the Veteran population by mitigating several barriers to accessing nonpharmacological treatments for pain found in the VA. Central barriers identified in previous work on Veterans seeking nonpharmacological pain management therapies for managing pain include local availability, time, lack of provider knowledge/referral, distance, scheduling flexibility, enrollment, and reimbursement.^{38–40} Bringing a rapid nonpharmacological therapy approach into the VA minimizes enrollment and reimbursement challenges. It can also be scheduled at another appointment visit thus minimizing transportation and distance challenges.

These findings bring to light several new insights that may prove important to approaching the widespread problem of chronic pain in the Veteran population. First, by improving patient-provider trust and communication, BFA may be an effective approach to improving patient-centered pain care, which has been describe in recent literature as central to improving patient experience and outcomes because it improves patient engagement in decision making and motivates self-management as well as considers patients' emotions and the need to keep them informed during treatment.⁴¹ By promoting improved communication between patients and providers, patients benefit from better outcomes such as medication adherence and overall satisfaction.⁴¹ In addition, the fact that BFA may facilitate improved trust between patients and providers can be highly beneficial to effective pain care. Given that trust may be crucial to discussions of pain and adherence to providers' pain management recommendations, by improving levels of patient-provider trust, BFA may be able to improve open, honest dialog about pain and lead to patients following provider care plans for treating their pain, which may lead to improved patient pain outcomes.

Limitations

At the time of data collection, we set out to understand BFA implementation in the VHA and did not specifically probe about opioids. However, we believe this may actually be a strength of our study in that all the content about opioids emerged without being solicited. Providers were not primed to discuss opioids and yet it came up in over half of the round 1 interviews. Since it was the most discussed advantage in the interviews, we explored provider

perceptions of BFAs potential role in reducing opioid use in detail (see advantages theme 1 and Table 1). We would also like to note that we did not specify pain type in interviews which is a limitation. Further work should expand this analysis to focus on specific types of pain as well as include the patient perspective and quantitatively assess potential disadvantages and advantages.

CONCLUSIONS

Providers perceive BFA to have multiple advantages and disadvantages. In the context of early evidence, it is premature to find equipoise and compare risk versus benefit. Since opioid use and chronic pain are 2 of the most widespread epidemics affecting Americans and BFA offers as easy to deliver, low-risk (in comparison to opioid analgesics) intervention, efforts to better understand effectiveness are warranted. Providers suggested that BFA may have not only clinical but also relational utility. Specifically, having an in-office therapy that allows providers to help their patients experience immediate relief allows for patient-provider relationship development including openness and trust. Developing this relationship may support patient openness to opioid tapering. Future studies could test this hypothesis.

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