U.S. Department of Veterans Affairs
Department of Veterans Affairs
Office of Patient Centered Care and Cultural Transformation

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Complementary and Integrative Health Evaluation Center

QUERI Complementary and Integrative Health Evaluation Center Partnered Evaluation Initiative:

The Effectiveness and Implementation of Battlefield Acupuncture in the VA

Implementation Team:
Lead: Stephanie Taylor, PhD, Los Angeles
Princess Ackland, PhD, Minneapolis
Karleen Giannitrapani, PhD, Palo Alto
Jesse Holliday, MSW, Palo Alto

Effectiveness Team:
Lead: Steve Zeliadt, PhD, Seattle
Eva Thomas, MPH, Seattle
Stephanie Taylor, PhD, Seattle

Funded by: VHA Office of Patient Centered Care & Cultural Transformation and the VA Quality Enhancement Research Initiative program (PEC 16-354)

Feb. 5, 2019

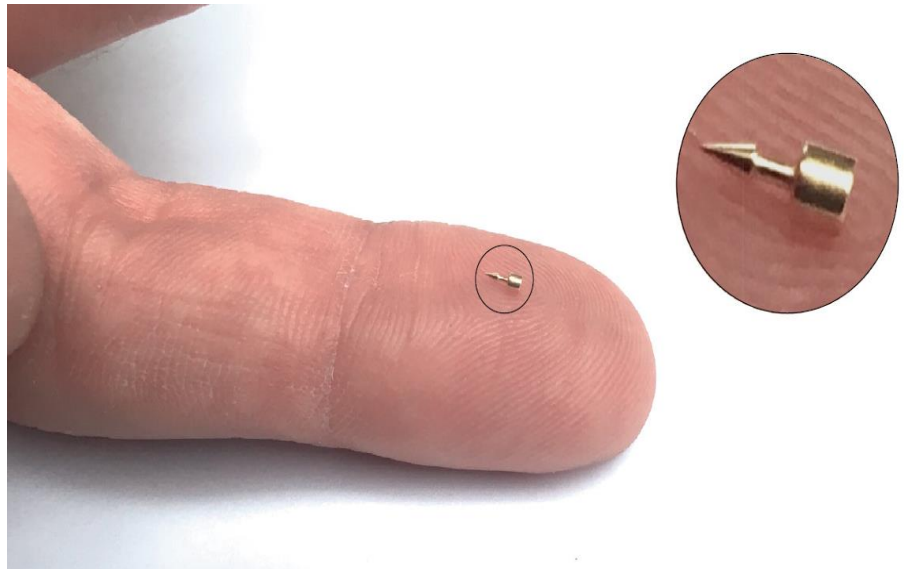
Battlefield Acupuncture Background

Battlefield acupuncture (BFA):

- Is a rapid, five-point (10 needle), auricular-therapy protocol for pain, using semi-permanent needles.
- Was developed by Dr. Richard Niemtzow in 2007 and initially used among injured military personnel.
- Is noted for its ease of administration and ability be learned by a wide variety of providers to administer without requiring training in comprehensive acupuncture techniques.

Niemtzow, R., Belard, J. & Acupuncture, N. R. Battlefield acupuncture in the US military: a pain-reduction model for NATO. (2015). doi:10.1089/acu.2014.1055

Acupuncture, N. R. Battlefield acupuncture. (2007). doi:10.1089/acu.2007.0603



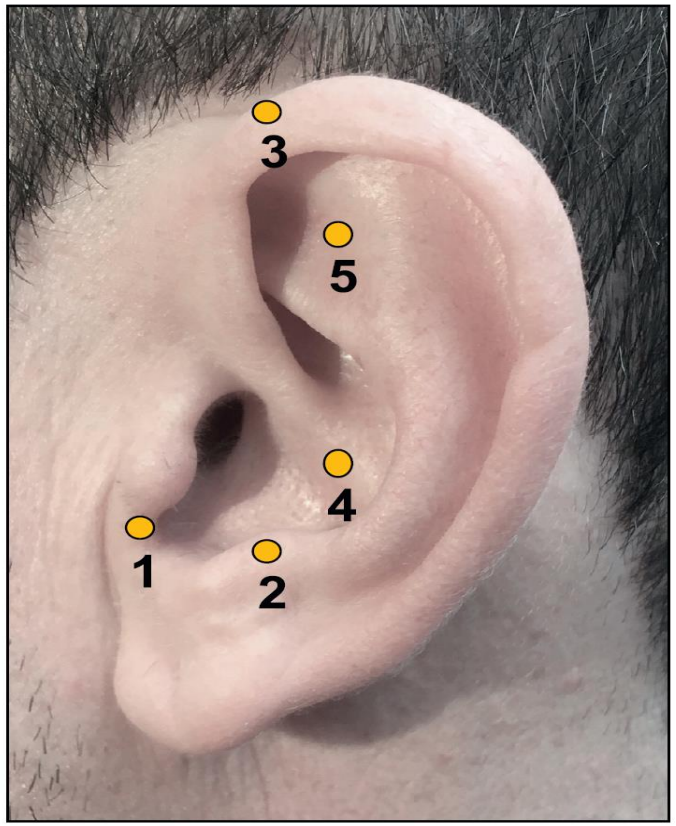


Image taken from Fox LM, Murakami M2, Danesh H, Manini AF. Battlefield acupuncture to treat low back pain in the emergency department. Am J Emerg Med. 2018 Jun;36(6):1045-1048. doi: 10.1016/j.ajem.2018.02.038. Epub 2018 Feb 27.

Battlefield Acupuncture Background

- Although BFA has been used in the Department of Defense (DoD) for 15+ yrs, it was introduced to the VA only a few years ago.
- First trained 49 providers in a “train-the-trainer” program, who then trained additional providers in their geographic areas.
- To-date, 2,400+ providers have been trained to deliver BFA in accordance with their state licensures.
- Providers include MDs, DOs, PAs, NPs, physical therapists, etc.
- Initial training was available through a joint incentive fund grant to the VA and DOD to train future BFA trainers.
- The OPCC&CT now supports ongoing implementation of BFA.

4 Aims of Our Project

<u>Effectiveness</u>

Aim 1. Assess the effectiveness at: a) one high-performing site and
b) across sites (Steve Zeliadt)

<u>Implementation</u>

Aim 2. Understand the challenges providers experience implementing BFA and any successful strategies they used to overcome these challenges (Stephanie Taylor)

Aim 3. Deeper assessment of provider perceptions of BFA (Karleen Giannitrapani)

Aim 4: Assess successful operational and clinical practices at <u>high-performing</u> facilities (Princess Ackland)

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Aim 1. Assess the Effectiveness at One High-Performing Site and Across Sites

Steve Zeliadt, PhD
Assoc. Dir., VA Seattle HSR&D Center
Steven.Zeliadt@va.gov

Summary of Evidence

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Annals of Internal Medicine REVIEW

Nonpharmacologic Therapies for Low Back Pain: A Systematic Review for an American College of Physicians Clinical Practice Guideline

Roger Chou, MD; Richard Deyo, MD, MPH; Janna Friedly, MD; Andrea Skelly, PhD, MPH; Robin Hashimoto, PhD; Melissa Weimer, DO, MCR; Rochelle Fu, PhD; Tracy Dana, MLS; Paul Kraegel, MSW; Jessica Griffin, MS; Sara Grusing, BA; and Erika D. Brodt, BS

Background: A 2007 American College of Physicians guideline addressed nonpharmacologic treatment options for low back pain. New evidence is now available.

Purpose: To systematically review the current evidence on nonpharmacologic therapies for acute or chronic nonradicular or radicular low back pain.

Data Sources: Ovid MEDLINE (January 2008 through February 2016), Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, and reference lists.

ings regarding the effectiveness of yoga (SOE, moderate). Evidence continues to support the effectiveness of exercise, psychological therapies, multidisciplinary rehabilitation, spinal manipulation, massage, and acupuncture for chronic low back pain (SOE, low to moderate). Limited evidence shows that acupuncture is modestly effective for acute low back pain (SOE, low). The magnitude of pain benefits was small to moderate and generally short term; effects on function generally were smaller than effects on pain.

Limitation: Qualitatively synthesized new trials with prior meta-

- **Brief overview acupuncture - 49 trials; 20K+**
- **(Chou et al 2017)**

- **Chronic pain**
  - **Vs No: ↓ pain intensity: range -7 to -24 pts (0-100)**
  - **Vs Sham: ↓ pain intensity: WMD -16.8 pts (0-100)**

- **Acute pain**
  - **Vs Sham: ↓ pain intensity (2 trials): WMD -9.4 pts (0-100)**
  - **5 trials: Better than NSAIDs**

Summary of Evidence - 2

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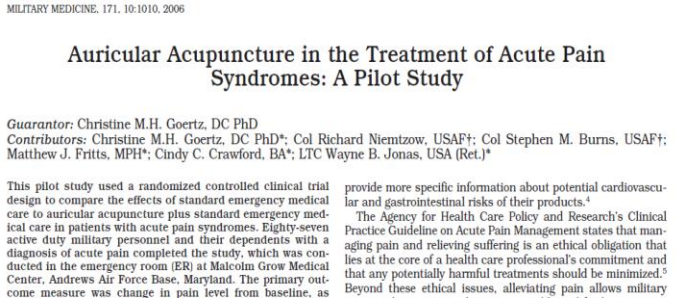
- **Auricular acupuncture (non-BFA, but similar techniques)**

- **Goertz et al (N=100); ER**
  - **Vs No: ↓ -2.2 pts (0-10) while in ER**
  - **~ -0.7 pts (0-10) 24 hrs; *not sig**

- **Review 4 Trials Jan et al (10 Trials, 2 OS)**
  - **Vs No: ↓ -2.8 (0-10) while in ER**
  - **Vs Sham: ↓ -2.5 (0-10) while in ER**



MILITARY MEDICINE, 171, 10:1010, 2006

Auricular Acupuncture in the Treatment of Acute Pain Syndromes: A Pilot Study

Guarantor: Christine M.H. Goertz, DC PhD
Contributors: Christine M.H. Goertz, DC PhD*; Col Richard Niemtzow, USAF†; Col Stephen M. Burns, USAF†; Matthew J. Fritts, MPH*; Cindy C. Crawford, BA*; LTC Wayne B. Jonas, USA (Ret.)*

This pilot study used a randomized controlled clinical trial design to compare the effects of standard emergency medical care to auricular acupuncture plus standard emergency medical care in patients with acute pain syndromes. Eighty-seven active duty military personnel and their dependents with a diagnosis of acute pain completed the study, which was conducted in the emergency room (ER) at Malcolm Grow Medical Center, Andrews Air Force Base, Maryland. The primary outcome measure was change in pain level from baseline, as

provide more specific information about potential cardiovascular and gastrointestinal risks of their products.[4]

The Agency for Health Care Policy and Research's Clinical Practice Guideline on Acute Pain Management states that managing pain and relieving suffering is an ethical obligation that lies at the core of a health care professional's commitment and that any potentially harmful treatments should be minimized.[5] Beyond these ethical issues, alleviating pain allows military

Pain Medicine 2017; 18: 351–364
doi: 10.1093/pm/pnw215

OXFORD

INTEGRATIVE MEDICINE SECTION

Review Article

Ear Acupuncture for Immediate Pain Relief—A Systematic Review and Meta-Analysis of Randomized Controlled Trials

M. Murakami, DO,* L. Fox, MD,†,‡ and Marcel P. Dijkers, PhD§

When work was completed, *Department of Rehabilitation Medicine, Icahn School of Medicine at Mount Sinai NY, NY USA, †Department of Anesthesiology at University of California San Diego San Diego, CA USA, ‡Department of Emergency Medicine, Icahn School of Medicine at Mount Sinai

calculated. The Physiotherapy Evidence Database (PEDro) scoring system was used to assess study quality. Meta-analysis was performed for two primary outcomes measures—pain intensity score and analgesic requirements.

Results. Ten studies met inclusion criteria. Quality per PEDro scores: four excellent, four good, two fair. Based on their primary outcome measures, six studies showed EA being superior to its comparator,

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REVIEW

Does Ear Acupuncture Have a Role for Pain Relief in the Emergency Setting? A Systematic Review and Meta-Analysis

Andrew L. Jan, MBBS, FACEM, BA, FAMAC, MPhil,[1] Emogene S. Aldridge, BHlthSc,[1] Ian R. Rogers, MBBS, FACEM,[1,2] Eric J. Visser, MBBS, FANZCA, FFPMANZCA,[3] Max K. Bulsara, PhD, MSc, BSc,[2] and Richard C. Niemtzow, MD, PhD, MPH[4,5]

ABSTRACT

Objective: Ear acupuncture might be the form of acupuncture best suited to improving acute pain management in the emergency department (ED). The primary aim of this review was to assess the analgesic efficacy of ear acupuncture in the ED. Secondary outcomes included measures of patient satisfaction, adverse effects, cost, administration techniques, and reduction of medication usage.

Summary of Evidence - BFA

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- **BFA**
- **Experience of Col Niemtzow & 100s of VA/Military providers**
  - **Compelling stories from thousands of patients**
- **Little published data on BFA**
  - **Fox et al 2018**
    - **Trial N=30**
  - **Federman et al 2018**
    - **High performing Site/Group BFA**

Battlefield acupuncture: Opening the door for acupuncture in Department of Defense/Veteran's Administration health care

Patricia Hinton Walker, PhD, RN, FAAN, PCC[b,*], Arnyce Pock, MD, COL (Ret), USAF, MC[c], Catherine G. Ling, PhD, FNP-BC, FAANP[c], Kyung Nancy Kwon, CPNP, MSN, CCRP[d], Megan Vaughan, BSN, RN, CCRP[e]

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ABSTRACT

Battlefield acupuncture is a unique auricular acupuncture procedure which is being used in a number of military medical facilities throughout the Department of Defense (DoD). It has been used with anecdotal published positive impact with warriors experiencing polytrauma, post-traumatic stress disorder, and traumatic brain injury. It has also been effectively used to treat warriors with muscle and back pain from carrying heavy combat equipment in austere environments. This article highlights the history within the DoD related to the need for nonpharmacologic/opioid pain management across the continuum of care from combat situations, during evacuation, and throughout recovery and rehabilitation. The article describes the history of auricular acupuncture and details implementation procedures. Training is necessary and partially funded through DoD and Veteran's Administration (VA) internal Joint Incentive Funds grants between the DoD and the VA for multidisciplinary teams as part of a larger initiative related to the recommendations from the DoD Army Surgeon General's Pain Management Task Force. Finally, Uniformed Services University of the Health Sciences School of Medicine and Graduate School of Nursing faculty members present how this interdisciplinary training is currently being integrated into both schools for physicians and advanced practice nurses at the Uniformed Services University of the Health Sciences. Current and future research challenges and progress related to the use of acupuncture are also presented.

American Journal of Emergency Medicine 36 (2018) 1045–1048

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journal homepage: www.elsevier.com/locate/ajem

Brief Report

Battlefield acupuncture to treat low back pain in the emergency department

Lindsay M. Fox, MD[a,*], Mikiko Murakami, DO[b,1], Houman Danesh, MD[b,c], Alex F. Manini, MD, MS[d]

ARTICLE INFO

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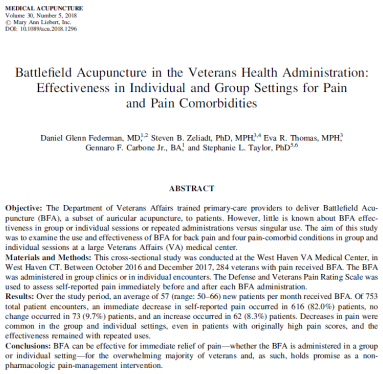
Accepted 26 February 2018

ABSTRACT

Introduction: Battlefield acupuncture (BFA) is an ear acupuncture protocol used by the military for immediate pain relief. This is a pilot feasibility study of BFA as a treatment for acute low back pain (LBP) in the emergency department (ED).

Methods: Thirty acute LBP patients that presented to ED were randomized to standard care plus BFA or standard care alone. In the BFA group, outcomes were assessed at the time of randomization, 5 min after intervention, and again within 1 h after intervention. In the standard care group outcomes were assessed at the time of randomization and again an hour later. Primary outcomes included post-intervention LBP on a 10-point numeric pain rat-



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Battlefield Acupuncture in the Veterans Health Administration: Effectiveness in Individual and Group Settings for Pain and Pain Comorbidities

Daniel Glenn Federman, MD[1,2] Steven B. Zeliadt, PhD, MPH[1,4] Eva R. Thomas, MPH[3] Gennaro F. Carbone Jr., BA[3] and Stephanie L. Taylor, PhD[5,6]

ABSTRACT

Objective: The Department of Veterans Affairs trained primary-care providers to deliver Battlefield Acupuncture (BFA), a subset of auricular acupuncture, to patients. However, little is known about BFA effectiveness in group or individual sessions or repeated administrations versus singular use. The aim of this study was to examine the use and effectiveness of BFA for back pain and four pain-comorbid conditions in group and individual sessions at a large Veterans Affairs (VA) medical center.

Materials and Methods: This cross-sectional study was conducted at the West Haven VA Medical Center, in West Haven CT. Between October 2016 and December 2017, 284 veterans with pain received BFA. The BFA was administered in group clinics or in individual encounters. The Defense and Veterans Pain Rating Scale was used to assess self-reported pain immediately before and after each BFA administration.

Results: Over the study period, an average of 57 (range: 50–66) new patients per month received BFA. Of 753 total patient encounters, an immediate decrease in self-reported pain occurred in 616 (82.0%) patients, no change occurred in 73 (9.7%) patients, and an increase occurred in 62 (8.3%) patients. Decreases in pain were common in the group and individual settings, even in patients with originally high pain scores, and the effectiveness remained with repeated uses.

Conclusions: BFA can be effective for immediate relief of pain—whether the BFA is administered in a group or individual setting—for the overwhelming majority of veterans and, as such, holds promise as a non-pharmacologic pain-management intervention.

Real World Experience of Veterans

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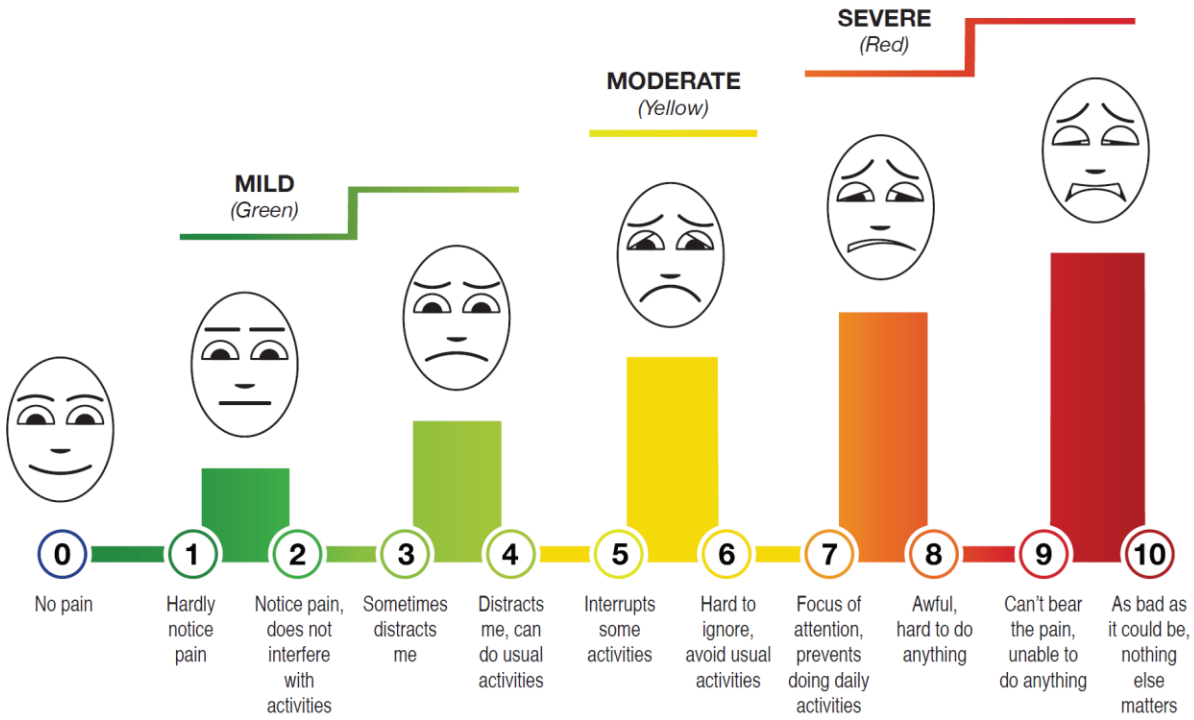
- **HealthFactor Template**
- **Capture pre and post 0-10 pain intensity**
- **BFA reason?**

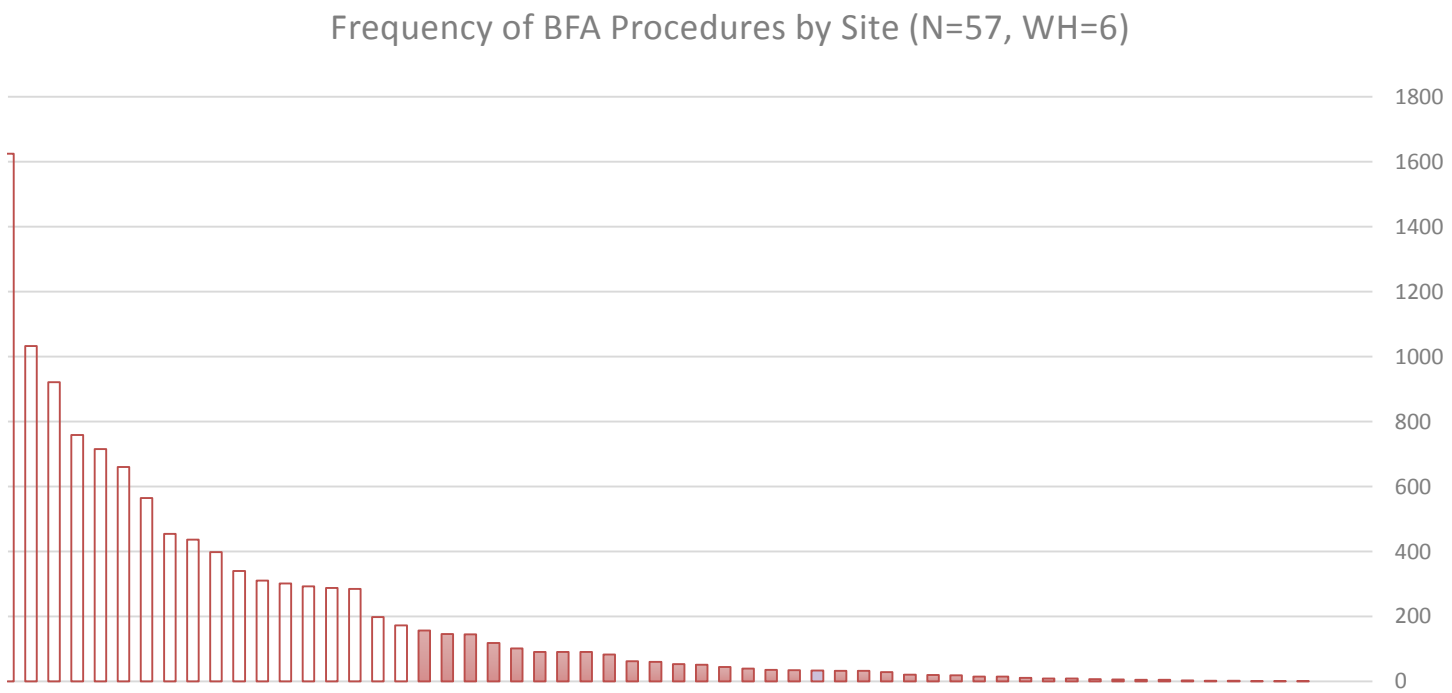
Defense and Veterans Pain Rating Scale



Bukenmaier et al. Pain Medicine 2013

BFA National Analysis

- **57 Sites used HealthFactor Template 10/1/16 – 9/30/18**
  - **11,406 Unique patients; 27,460 Visits**
  - **Only 23 sites >200 visits**



Patient Characteristics

	N	%
Age		
18 39	1,289	11.3
40 49	1,543	13.5
50 59	2,347	20.6
60 69	3,289	28.8
70 79	2,313	20.3
80+	625	5.5
Sex		
Male	9,620	84.3
Female	1,786	15.7
Marital Status		
Married	6,287	55.1
Not married	5,024	44.1
Not reported	95	0.8
Race		
White	8,354	73.4
Black	2,129	18.7
Other	280	2.5
Not reported	643	5.6
Geographic location		
Metropolitan/suburban residence	8,456	74.4
Rural residence	2,909	25.6

	N	%
Co Pay Status		
Co pay required	1,076	9.4
No co pay due to disability	6,394	56.1
No co pay due to means	3,936	34.5
Pain Type (Chronic)		
None	3,837	33.6
Back	2,413	21.2
Fibromyalgia	193	1.7
Joint	492	4.3
Neck	384	3.4
Osteoarthritis	134	1.2
More than one	3,953	34.7
Opioid use		
None within 30 days prior to visit	7,743	67.9
Fills within 30 days of visit	3,663	32.1

High Performing Site

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- **Early adopter of BFA; 284 patients; 753 BFA visits**

TABLE 7A. OUTCOMES ASSOCIATED WITH TIMING OF BFA ADMINISTRATION

Results of BFA treatment	*First visit (visits = 284) (patients = 284)*	*Visits 2–3 (visits = 196) (patients = 121)*	*Visits 4–6 (visits = 133) (patients = 56)*	*Visits 7+ (visits = 140) (patients = 25)*	*Overall (visits = 753) (patients = 284)*
Pain level (pre) mean (SD)	6.8 (2.4)	6.5 (2.4)	7.3 (2.3)	7.0 (2.2)	6.9 (2.3)
Pain level (post) mean (SD)	4.5 (2.7)	4.5 (2.6)	4.9 (2.6)	5.1 (2.0)	4.7 (2.5)
Change mean (SD)	−2.3 (2.9)*	−2.1 (3.2)*	−2.4 (3.1)*	−2.0 (2.8)*	−2.2 (3.0)*

TABLE 7C. OUTCOMES ASSOCIATED WITH GROUP LOCATION

Results of BFA treatment	*Administered in group clinic (visits = 553) (patients = 178)*	*Administered during individual visit (visits = 200) (patients = 106)*
Pain level (pre) mean (SD)	7.0 (2.3)	6.6 (2.4)
Pain level (post) mean (SD)	5.4 (2.2)	2.6 (2.4)
Change mean (SD)	−1.6 (2.5)*	−3.9 (3.4)*

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Daniel Glenn Federman, MD[1,2] Steven B. Zeliadt, PhD, MPH[3,4] Eva R. Thomas, MPH[3] Gennaro F. Carbone Jr., BA[1] and Stephanie L. Taylor, PhD[5,6]

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Federman DG, Thomas ER, Carbone GF, Zeliadt SB, Taylor SL. Battlefield Acupuncture in the Veterans Health Administration: Effectiveness in individual and group settings for pain and pain comorbidities. Medical Acupuncture. 2018 Sept 5: 30(5).

BFA – All Sites - Mean Change (Pre-Post)

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	Initial Visits 11,406	All Visits Combined 27,460
Pre	7.7	7.6
Post	5.5	5.5
Change	-2.2	-2.1

Minimal Clinically Important Difference

Level of Improvement		MCID
No improvement	24.4%	
Little improvement 0.5 – 1.0	17.3%	
Some improvement 1.1 – 2.0	19.0%	58.4%
Major improvement > 2.0	39.3%	

Who Does BFA Work For?

- **Assessed variability by patient/clinical characteristics**

- **We found few factors that influenced improvements**
  - **80+ – less improvement**
  - **Married – more improvement**
  - **Service connected – less improvement**
  - **Arthritis – more improvement**
  - **Opioids within 30 days – less improvement**

Who Does BFA Work For?

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	First Visit		Second and Subsequent Visits	
	% MCID	95% CI	% MCID	95% CI
Age				
18 39	0.60	(0.55 – 0.65)	0.62	(0.56 – 0.68)
40 49	0.61	(0.56 – 0.66)	0.61	(0.56 – 0.67)
50 59	0.59	(0.55 – 0.64)	0.61	(0.56 – 0.67)
60 69	0.61	(0.56 – 0.66)	0.61	(0.56 – 0.66)
70 79	0.61	(0.57 – 0.66)	0.63	(0.57 – 0.68)
80+	**0.54**	**(0.49 – 0.60)***	**0.55**	**(0.49 – 0.62)***

Who Does BFA Work For?

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	First Visit		Second and Subsequent Visits	
	% MCID	95% CI	% MCID	95% CI
Pain Type (Chronic)				
None	0.59	(0.54 – 0.64)	0.61	(0.56 – 0.66)
Back	0.60	(0.60 – 0.65)	0.58	(0.53 – 0.64)
Fibromyalgia	0.59	(0.52 – 0.67)	0.60	(0.50 – 0.70)
Joint	0.58	(0.52 – 0.64)	0.63	(0.55 – 0.71)
Neck	0.55	(0.49 – 0.62)	0.63	(0.55 – 0.71)
Osteoarthritis	**0.68**	**(0.60 – 0.77)****	0.60	(0.49 – 0.72)
More than one	0.62	(0.57 – 0.66)	**0.62**	**(0.57 – 0.67)***
Opioid use				
None within 30 days prior to visit	0.62	(0.57 – 0.66)	0.61	(0.57 – 0.66)
Fills within 30 days of visit	**0.57**	**(0.53 – 0.62)***	0.61	(0.55 – 0.66)
Psychological comorbidity				
Depression	0.60	(0.54 – 0.66)	0.62	(0.56 – 0.67)
Mood disorders	0.60	(0.54 – 0.66)	0.63	(0.57 – 0.69)
Anxiety disorders	0.60	(0.56 – 0.65)	0.62	(0.57 – 0.67)
Alcohol use disorders	0.59	(0.54 – 0.65)	0.63	(0.57 – 0.69)
Substance use disorders	0.61	(0.53 – 0.68)	0.60	(0.52 – 0.69)
Trauma related disorders (PTSD)	0.61	(0.56 – 0.65)	0.60	(0.55 – 0.66)

Variability by Site

	Change in Pain Score	>MCID
A	-4.2	
B	-3.8	
C	-3.2	
U	-1.4	
V	-1.2	
W	-1.1	Only 1 not significant

Conclusions and Implications

Conclusions

- Many Veterans are reporting meaningful decreases in pain intensity
- Effectiveness of BFA appears to be across broad range of patients & types of pain
- Patients with current opioid prescriptions report it as effective

Implications for future research and practice

- Lack of randomized comparison group & reporting to provider are limitations
- Look at long-term effectiveness

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Aim 2. Understand the Challenges Providers Experience Implementing BFA and any Successful Strategies They Used to Overcome These Challenges

Stephanie Taylor, PhD
Assoc. Dir., VA Greater Los Angeles HSR&D Center
Dir., VA QUERI Complementary and Integrative Health Evaluation Center
Stephanie.taylor8@va.gov

Methods Aims 2 and 3

- **Approach:** Semi-structured telephone interviews with BFA providers, June 2017-January 2018
- **Subjects:** 23 VA BFA providers nationwide
- **Setting**: 20 VA facilities
- **Interview topics:** BFA knowledge and attitudes, professional roles and training in BFA, organization of BFA delivery, resources and other implementation challenges, and implementation strategies to address challenges
- **Qualitative Analysis**: Grounded theory-informed constant comparison approach

Results: 9 Main Implementation Themes

Theme 1: Providers are organizing BFA delivery in a variety of ways

Theme 2: Providers' perceptions of having insufficient time to deliver

Theme 3: Provider beliefs and knowledge about BFA

Theme 4: Time delay between training and practice

Theme 5: Leadership and administration buy-in for BFA

Theme 6: Provider self-efficacy in being able to deliver BFA

Theme 7: Lack of BFA effectiveness data

Theme 8: Written consent for BFA adds unwarranted documentation burden

Theme 9: Need for sufficient resources to deliver BFA

Provider recommendations about how to organize BFA delivery

- Provide BFA within one existing integrative health program
- Deliver BFA at several locations within a facility by providers from multiple disciplines
- Have dedicated BFA personal
- Provide BFA in group or walk-in clinics
- Utilize non-MD clinicians (nurses, pharmacists, physical therapists, psychologists) to administer BFA

Incorporate BFA into existing infrastructure

"Critical for success I think is having a program that's already set up, work this [BFA] in. You have to have a previous existing structure [e.g. pain clinic, mental health clinics] where it kind of fits the need…you have to be looking at integrative health totally and put it [BFA] in there as part of it."

Providers perceive they have insufficient time to deliver BFA

"We probably have 100 people that we've trained now and I bet 25 or 30 are actually using it. You can train a primary care doctor but unless you give them time to do this, it's probably not going to happen."

Address lack of time with group visits or walk-in clinics

Group Visits: *"…your primary care providers don't have any time to do anything extra at all. So we do most of our BFA I'd say pretty much exclusively now as group visits and the group visits are facilitated by nurses."*

Walk-in Clinics: *"…I've heard of places that kind of have drop-in/walk-in clinic once a week… with several providers who can do the protocol and people can come in and you could just serve a lot of people that way; I think that would be great."*

Theme 3 - Provider Beliefs and Knowledge About BFA

Some providers thought BFA is not effective in the long term

> ***"...****the treatment takes care of pain for about as long as the pins are in the ear, which is typically about a week. And after the week is out, it's our impression that the pain kind of comes back to baseline."*

Some providers thought BFA may not be comfortable

> *"Well, I didn't like it on me." Because part of the training, of course, is that you put the needles in someone else's ears and you get it in your own ear."*

Theme 4 - Time Delay Between Training and Practice

Providers faced delays between training and practice due to:

- Lack of awareness of state acupuncture licensing regulations
- Challenges with local human resources and scopes of practice

Additional Themes

Theme 5: Leadership and administration buy-in for BFA

One of the most important barriers to implementing anything.

Theme 6: Provider self-efficacy in being able to deliver BFA

This is typical for any new protocol.

Theme 7: Lack of BFA effectiveness data

BFA-trained providers often cited the dearth of evidence supporting its use for particular types of pain.

Theme 8: Written consent for BFA added unwarranted documentation burden

In September 2017, the VA addressed this concern by changing informed consent documentation requirements.

Theme 9: Need for sufficient resources to deliver BFA

Needles, space, time

Conclusions and Implications

Conclusions

- One BFA delivery model does not fit all situations.
- Providers believe BFA offers immediate short term pain relief.
- It is important to offer BFA as one tool in a toolkit to address patient pain.

Implications for future research and practice

- Providers have challenges implementing BFA but some have strategies to overcome them.
- Effectiveness studies are needed.

Taylor SL, Giannitrapani K, Ackland PE, Holliday J, Reddy K, Drake D, Federman DG, Kligler B. Challenges and Strategies for Implementing Battlefield Acupuncture in the VA: A Qualitative Study of Provider Perspectives. Med. Acup. Oct. 2018: 30(5).

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CIHEC
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Health Evaluation Center

Aim 3. Deeper Assessment of Provider Perceptions of BFA

Karleen Giannitrapani, PhD, MPH

Investigator, VA HSR&D Center for Innovation to Implementation (Ci2i), VA Palo Alto Health Care System Affiliated with Stanford University Medical School
Associate Director of the VA Palliative Care Quality Improvement Resource Center (QuIRC) Karleen@Stanford.edu

Results: Provider Positive Beliefs

Theme 1: BFA can be a gateway to patients trying other non-pharmacological pain management options.

Theme 2: BFA is effective in reducing pain.

Theme 3: BFA is a pain management options for patients with SUD.

Theme 4: BFA helps build a trusting patient provider relationship through a combination of touch and camaraderie.

Theme 5: BFA creates an opportunity for patients to hope their pain will be manageable.

Theme 6: BFA is easy to deliver.

Theme 7: BFA is a low risk treatment.

Themes 1 and 2

BFA can be a gateway to patients trying other non-pharmacological pain management options

"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 [BFA] 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****."*

Theme 3

BFA can be a pain management option for patients with Substance Use Disorders.

> "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 them/their pain efficiently."

Theme 4

BFA can help build a trusting patient provider relationship through a combination of touch and camaraderie.

“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.”

Theme 5

BFA creates an opportunity for patients to hope their pain will be manageable.

"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."

Results: Provider Negative Beliefs

Theme 1: Providers feel unclear about BFA clinical practice guidelines.

Theme 2: Providers don't know or believe the research on effectiveness of BFA.

Theme 3: Providers do not feel they have the time to deliver BFA as frequently as it may be required.

Theme 4: BFA can be uncomfortable.

Theme 5: BFA can promote euphoria.

Theme 1

Some providers feel unclear about BFA clinical practice guidelines.

“So we don’t know what the real indication of the [BFA] 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.”

Theme 2

Some providers don’t know or believe the research on effectiveness of BFA.

So the void of what is this therapy [BFA] and what does it actually do… How the hell can we disseminate something that we don’t really know what we’re doing with?”

Theme 3

Providers do not feel they have the time to deliver BFA as frequently as it may be required.

“Most practitioners that I know don’t have [BFA 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.”

Conclusions and Implications

Conclusions

- Many providers believe BFA offers immediate short term pain relief.
- BFA can help with building patient-provider relationship.
- BFA can foster hope that pain can be manageable.
- BFA may be a helpful strategy for reducing opioid analgesics.

Implications for future research and practice

- Providers would like more clear clinical practice guidelines.
- Additional research might explore how best to offer BFA in conjunction with other pain management therapies.

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Aim 4: Assess Successful Operational and Clinical Practices at High-Performing Facilities

Princess E. Ackland, PhD, MSPH
Center for Care Delivery and Outcomes Research (CCDOR)
Minneapolis VA Healthcare System
Princess.Ackland@va.gov

Methods

- **Sampling:** BFA note template data from FY17 to FY18 Q2
  - "High-performing" = ≥1000 BFA encounters → **7 sites**

- **Recruitment:** BFA providers who could speak to their local BFA implementation
  - Final sample: N=20 physicians, nurse practitioners, acupuncturists, etc from primary care, ER/urgent care, pain, oncology and other clinics

- **Approach:** 30-minute, semi-structured phone interviews conducted Oct-Nov 2018

- **Interview topics:** structure of BFA clinic/delivery and rationale for that structure, buy-in strategies in light of status of BFA evidence base, time and effort to implement BFA and future plans to maintain or change BFA implementation

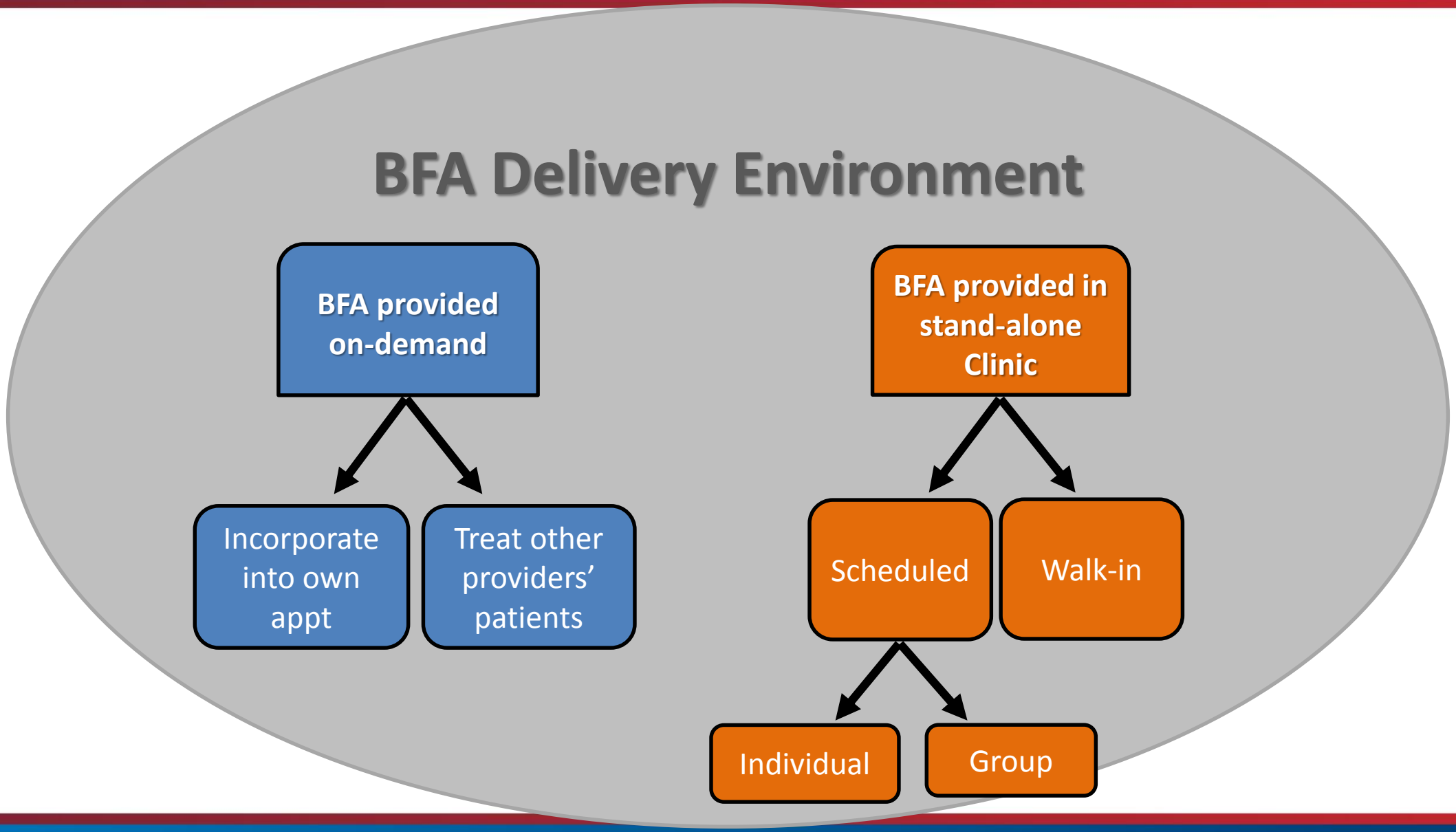
- **Analysis**: Rapid turn-around analytic approach (Hamilton 2013)

Results – Three Main Themes

- **Theme 1:** Key determinants of the structure of BFA delivery are
  - clinic needs
  - Veteran demand, and
  - time/effort required to set up BFA.

- **Theme 2:** BFA scientific evidence-base is still in progress but not an impediment to high delivery.

- **Theme 3:** Provider dedication is a possible mediating factor between leadership oversight and BFA delivery.


BFA Delivery Environment
BFA provided on-demand
Incorporate into own appt
Treat other providers' patients
BFA provided in stand-alone Clinic
Scheduled
Walk-in
Individual
Group

On-demand BFA was most widespread method of providing BFA. Used in clinics with high patient load (e.g., primary care) or that were faced-paced (e.g., ER/urgent care) since BFA can be administered in a short amount of time.

"I've been given the green light if we wanted to offer our own walk-in clinic, but it just wouldn't work in primary care because of meeting access goals."
– Primary Care Provider

On-demand is accomplished by **incorporating BFA into providers' own appointments** or **ad hoc** for patients of their colleagues.

"Because it is so quick, it is generally easy to drop everything else and go do BFA for that patient right then and there... Sometimes Veterans drive 60-80 miles just to get care, so if they are here for an appointment, it makes more sense to provide immediate services." – PACT Care Manager

Theme 1: Clinic needs, Veteran demand and time/effort impact structure

Walk-in clinics had mixed reviews—on one hand they help meet Veterans' immediate needs, but they can be resource-intensive and run the danger of turning patients away.

"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." – Service Line Chief

"Group visits and walk-in clinics were not feasible because of lack of space, lack of a dedicated nurse….I think it works better in a small clinic." – Women's Clinic Physician

Theme 1: Clinic needs, Veteran demand and time/effort impact structure

Group visits can improve access to BFA and serve multiple purposes at the patient level because old BFA users can ease "fears" of new users.

"[Groups] remove the tension. It removes the fear [in first-timers]." – ER Nurse

"What I like about the group setting is that I start with the people who have received it before and I ask them why they keep coming back and they brag about it." – Service Line Chief

Theme 2: BFA scientific evidence-base not an impediment

Providers believe BFA works and is an alternative to opioids.

"If BFA didn't work, [we] wouldn't be doing it." – Physician

"…being able to offer BFA could breathe new life into providers because they could offer this tool – it's probably one of the very best tools they can offer their Veterans in the midst of this opioid crisis." – Outpatient Advanced Nurse Practitioner

Theme 2: BFA scientific evidence-base not an impediment

Patient experience and outcomes and **word of mouth** help spread interest in and use of BFA.

"The Veterans provide the best evidence because they just rave about it. Some Veterans wrote to the [hospital] Director and Chief of Staff talking about their positive experiences and that was great." – ACOS

"Patients who have enough pain are willing to try anything to get rid of it, and when they do [BFA] and it works, they keep coming back." – Oncology Chief

Theme 3: Leadership oversight and provider dedication

Leadership oversight varied across sites (from free reign to strict guidance), but **provider dedication** to the success of BFA implementation and delivery was universal.

"I go to team huddles every week, so I'll tell them the status of the pain clinic and if there are questions from anyone, they reach out to me, but it's the constant conversations. We meet with both PACT teams and CBOCs monthly and I try to do site visits annually to make sure we're following all protocols correctly and keeping messaging and language consistent…" – Pain Clinic Coordinator

Limitations

- Sample identified using the BFA note template which is not used by all facilities and/or BFA providers.
  - Thus may have missed other high-performers

- Gathered only the experiences at sites with ≥1000 BFA visits.
  - Sites with total visits just under this cut-off may have differed

Conclusions

- Not taking a prescribed, one-size-fits-all approach allows for flexibility and adaptability in delivering BFA.
- BFA effectiveness research continues, but it seems the lived experience of providing and receiving BFA is also a key driver of high-yield implementation.
- Leadership buy-in and support of BFA are critical, but even when they vary, having providers who are dedicated to integrating BFA can contribute to high use.

Implementation Evaluation Limitations

Our BFA implementation study used a large (n=40) disparate (geography, provider type, clinic type) sample.

However,

- We interviewed only the early adopters, as BFA is still being implemented. As such, we are missing people who do not believe that BFA is effective.
- Our “high volume” interview sample relied on those who used the BFA note template, which missed about half the VA facilities providing BFA.

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