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Mindfulness and the Veteran:  
Increasing Veteran Participation in Mindfulness Programs  
at a VA Medical Center

Presented to the Faculty of the

Department of Nursing

West Chester University

West Chester, Pennsylvania

In Partial Fulfillment of the Requirements for the

Degree of

Doctor of Nursing Practice

By

Cynthia Lang-Groening

May 2022

## Dedication

I dedicate the last 4 years to patience, an attitudinal foundation of mindfulness practice.

Patience is a form of wisdom. It demonstrates that we understand and accept the fact that sometimes things must unfold in their own time. A child may try to help a butterfly to emerge by breaking open the chrysalis. Usually, the butterfly doesn't benefit from this. Any adult knows that the butterfly can only emerge in its own time, that the process cannot be hurried. (Kabat-Zinn, 2013, p.23)

## Acknowledgements

I would like to thank Dr. Cheryl Schlamb for her help and support during this past year. Her guidance throughout the process to complete this project was invaluable. I would also like to thank my daughters Kaitlin, and Kelsey for all their love and support during the past 4 years. But, most of all a great big “Thank you” and love to my husband, Steve, for supporting my dream of a DNP degree with patience and understanding, and who endured many nights alone while I went upstairs to read, write and “work on my project”.

## Abstract

The U.S. Department of Veterans Affairs (VA) supports the use of mindfulness-based therapies for the medical and mental health treatment of veterans. The Wilmington, Delaware VA Medical Center (VAMC) offers mindfulness-based programs in guided imagery, tai chi and mindful meditation; however, the veterans who receive primary care services do not participate in these programs to their full potential. The purpose of this quality improvement (QI) project was to increase veteran participation in the mindfulness-based programs at the Wilmington VAMC. Based on a retrospective chart review of veterans' electronic medical records (EMR), mindfulness-based program referral and enrollment patterns were analyzed, and recommendations produced to increase primary care referrals and veteran participation in mindfulness-based programs. The findings of this QI project confirmed the low participation of veterans, identified characteristics of both veterans who participated in mindfulness-based programs and the primary care providers who wrote referrals, and identified the limitations to veteran participation in mindfulness-based programs. Recommendations were made to provide education to primary care providers and veterans on the medical and mental health benefits of mindfulness, change mindfulness-based staff hiring practices, and provide alternative scheduling of the mindfulness-based programs. This study adds to the available body of knowledge and evidence supporting the use of mindfulness practices among military veterans.

*Keywords:* mindfulness, depression, anxiety, stress, military veterans

## Table of Contents

List of Tables .....	vi
List of Figures.....	vii
Chapter 1: Introduction and Background.....	1
Chapter 2: Literature Review.....	7
Chapter 3: Methods.....	21
Chapter 4: Results.....	30
Chapter 5: Discussion .....	38
References.....	47
Appendices.....	61
A. Letter of Approval from West Chester University Institutional Review Board .....	61
B. VA Research vs. Non-Research Operations Evaluation Form .....	62
C. Whole Health Brochure.....	64

## List of Tables

1. Demographic Characteristics of Study Sample .....	54
2. Mental Health and Medical Comorbidities of Study Sample .....	55
3. Referrals by Primary Care Providers to Mindfulness-Based Programs.....	56
4. Provider Consults to Mindfulness-Based Programs.....	57
5. Number of Consults Per Provider.....	58
6. Outcomes of Mindfulness-Based Program Referrals.....	59

List of Figures

1. QI Project Process Using an Appreciative Inquiry Approach..... 60



Mindfulness and the Veteran:  
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At a VA Medical Center

**Chapter 1**

**Introduction and Background**

Since the mid 2010's, the United States Department of Veterans Affairs (VA) has given increasing support for the use of complementary and integrative health (CIH) therapies in the health care of veterans. Veterans have also shown increasing interest in the use of non-pharmacologic therapies for the treatment of common conditions such as chronic pain, anxiety, and depression (Taylor et al., 2019). In 2017, meditation and mindfulness-based practices including mindfulness-based cognitive therapy (MBCT), mindfulness-based stress reduction (MBSR) and guided imagery became part of the Veterans Health Administration (VHA) evidence-based benefits package available to all veterans. The Wilmington, Delaware VA Medical Center (VAMC) offers CIH programs in guided imagery, a mindfulness introduction class, and a mindfulness-based stress reduction program called VA-CALM. However, these programs are not used to their full potential by veterans who obtain outpatient primary health care through the Wilmington VAMC.

**A Paradigm Shift in Health Care**

The focus of health care in the United States is shifting away from physician managed, disease-centric care to an approach that is patient-centered and looks to increase patient's engagement in self-care. This paradigm change can be traced back to 2001 with the publication of the Institute of Medicine's "Crossing the Quality Chasm: A Health Care System for the 21<sup>st</sup> Century" (IOM, 2001). This landmark report named patient-centered care as one the 6 pillars of

quality care. The IOM (2001) characterized patient-centered care as respectful of and responsive to individual preferences, needs, and values, and ensured that the patient's values guided all clinical decisions.

The VA has been transitioning to a patient-centered approach since the mid 2010's. The VA patient-centered approach, called whole health, prioritizes personalized, proactive and patient-driven care (Krejci et al., 2014; Marchand et al, 2020). The whole health approach encourages veterans to take charge of their life by exploring and connecting with whatever motivates them toward health. The foundation of the whole health approach is based on three principles: 1) health care should align with an individual's biopsychosocial characteristics; 2) health care should use strategies that strengthen the person's innate ability to improve and support health; and 3) health care should be based on and driven by what is important in the person's life and aligns with their goals (Krejci et al., 2014). The whole health approach emphasizes the use of CIH modalities in addition to traditional medical therapies to achieve outcomes that are sustainable because they are important to the veteran.

The VA's transition to the whole health approach to medical care accelerated in 2016 with the passage of the Comprehensive Addiction and Recovery Act (CARA) which provided increased federal funding for expanded substance abuse education and treatment programs due to the opioid epidemic (United States Government, 2016). Title IX, Section 932 of CARA required the VA to develop plans to improve effective CIH services for veterans. Since the passage of CARA, the VA has focused efforts on providing veterans with accessible CIH practices for preventative and chronic mental health care.

Respondents to a survey conducted between August 2017 and July 2018 about CIH therapies offered within the VA, identified 1,568 CIH programs at 289 VA medical centers and

community-based outpatient clinics (CBOCs). Most VA sites provided 5 or more approaches with relaxation techniques, mindfulness, guided imagery, yoga, and meditation as the top five most frequent offered therapies (Farmer et al., 2021). Pain management and stress reduction were the most common reasons veterans gave for using CIH approaches with mindfulness as the third most frequent modality used by veterans after massage therapy and chiropractic care (Taylor et al., 2019).

### **Impact of Stress, Depression, and Anxiety on Health**

Untreated and undertreated mental health conditions are associated with physical and emotional pain and suffering. Somatic complaints related to stress such as headaches, back pain, gastrointestinal reflux disease, irritable bowel, and chest discomfort are common conditions for which people seek medical care. Studies have shown a strong association between heart disease and depression. Hare et al. (2014) showed that patients with depression and cardiovascular disease (CVD) have a worse outcome than patients with CVD that were not depressed. Studies have also shown that depression and anxiety negatively affect quality of life. A systematic review of longitudinal studies by Hohls et al. (2021) showed participants' quality of life was compromised before they became symptomatic of anxiety or depression. This finding supports the need for early identification and treatment for anxiety and depression.

Among veterans, stress, anxiety, and depression are prominent risk factors for suicide (Dobscha et al., 2014; Fanning & Pietrazak, 2013; Pfeiffer et al., 2009). According to the Department of Veterans Affairs (2020) annual suicide report, in 2018, the most recent year data is available, veteran suicide accounted for 13.8% of total suicides in the United States while veterans made up only 8% of the adult population. The age adjusted suicide rate for male veterans was 1.3 times higher than for non-veteran males, and 2.1 times higher for women

veterans than non-veteran women. By race, white veterans accounted for 87.3% of veteran suicides in 2018, while African Americans accounted for 5%, and the remainder divided among veterans of Asian, Native Hawaiian, Pacific Islander, American Indian and Alaskan Native descent. The veteran suicide rate in 2018 was 27.5 per 100,000 after adjusting for sex and age which was an increase from 18.5 per 100,000 in 2005 the first year the VA collected and reported suicide statistics (U. S. Department of Veterans Affairs, 2020).

Stress related illnesses are known drivers of health care use. By 2012, costs attributed to stress related disorders such as anxiety and depression were >80 billion dollars per year (Stahl et al., 2015). Mindfulness-based therapies, however, may influence medical costs. At a large medical center in New England, patients who took part in a 7-week mindfulness-based stress reduction program had a 43% reduction in billable encounters for lab, imaging, procedures, specialty clinics, and the emergency department during the year following participation in the program (Stahl et al., 2015). Therefore, in addition to relieving emotional suffering and pain caused by stress, anxiety, and depression mindfulness-based therapies also have the potential to reduce use of health care resources and decrease health care expenses.

### **Effect of Mindfulness-Based Therapies on Health**

Mindfulness-based therapies have been recognized as beneficial for mental and physical health. The American College of Physicians Clinical Practice Guidelines recommend MBSR as an evidence-based therapy for the treatment of non-radicular low back pain (Denberg et al., 2017). A meta-analysis of 47 randomized control studies totaling 3,315 participants with diverse medical and mental health diagnoses showed that meditation-based interventions including mantra, transcendental meditation, mindful meditation, MBSR, and MBCT decreased levels of anxiety and depression at 8-week, 3-month and 6 -month follow-up evaluations compared to

groups using traditional approaches (Goyal et al., 2014). Querstret et al. (2020) conducted a meta-analysis of 49 studies totaling 4,733 adults 18 years old and older without a clinical mental health diagnosis and found subjects who took part in a MBCT program showed reductions in stress, anxiety, depression, and improved quality of life and well-being.

Among veterans, mindfulness-based therapies have shown to be safe and reduce stress, anxiety, and depression. Studies have shown MBSR to be safe for veterans with post-traumatic stress disorder (PTSD), and improve indicators for PTSD, depression, and quality of life (Kearney et al., 2012; Polusny et al., 2015). In a group of veterans with non-psychotic mental-health conditions, participation in an 8-week MBSR program reduced scores on the Perceived Stress Scale (PSS) and the Beck Depression scale (Kluepfel et al., 2013). In addition to improved measures for anxiety and depression, Serpa et al. (2014) showed MBSR reduced suicidal ideation among veterans. Contrary to findings in the mental health literature, however, a systematic review by the Evidence-based Synthesis Program Center at the West Los Angeles VA Medical Center (Hempel et al., 2014) did not find a statistically significant effect of mindfulness-based therapies on stress or PTSD. However, the study did find mindfulness-based therapies were effective to reduce depression symptoms.

### **Purpose/Aims/Objectives/Stakeholders**

Although studies in the mental health literature have shown that mindfulness-based therapies are effective and safe for the treatment of anxiety, depression, and stress, mindfulness programs at the Wilmington VAMC remain under-utilized. A preliminary review by this writer of whole health consults ordered by Wilmington VAMC primary care providers between August 1, 2021, and October 31, 2021, showed that primary care providers infrequently referred veterans to mindfulness-based programs and that the veterans did not schedule appointments to the

referred programs. Therefore, I determined that an effective strategy to increase referrals and veteran participation in mindfulness-based programs at the Wilmington VAMC was needed.

I conducted a retrospective chart review and analysis of referral and enrollment patterns to the mindfulness-based programs at the Wilmington VAMC and developed a set of recommendations to increase primary care referrals and veteran enrollment in mindfulness-based programs. I reviewed whole health consults entered in the Wilmington VAMC EMR between August 1, 2021, and Dec 31, 2021. The purpose of this quality improvement (QI) project was to increase veteran participation in mindfulness-based programs offered by the Wilmington VAMC. The aims of the project were: 1) to conduct a chart review and analysis of referral and program enrollment patterns, and 2) produce a set of recommendations to increase primary care referrals and veteran enrollment in the mindfulness-based programs. Stakeholders for this QI project were the veterans who receive primary care at the Wilmington VAMC and its aligned CBOCs, the clinical and administrative staff and the primary care and behavioral health providers.

## Chapter 2

### Literature Review

This chapter includes a description of the theoretical framework for this QI project, a review of the study area's demographic data, a review of the literature related to the impact of stress, anxiety and depression on physical and mental health, and the documented benefits of mindfulness-based programs on the mental health of veterans. Enrollment barriers to mindfulness-based programs faced by veterans is also reviewed, as well as a description of the mindfulness-based programs currently available at the Wilmington VAMC. I also present a brief review of the literature search.

#### Definitions

For the purposes of this paper, the following definitions apply:

**Mindfulness.** Paying attention in a particular way (sic), on purpose, in the present moment, and non-judgmentally (Kabat-Zinn, 1994, p.4).

**Mindfulness-based stress reduction (MBSR) program.** An 8-week, standardized approach to teaching mindfulness that includes meditation, the body scan, and gentle yoga in a class setting with daily home practice (Serpa et al., 2014).

**Mindfulness-based cognitive therapy (MBCT).** A treatment modality that combines mindfulness with cognitive techniques (Goldberg et al., 2018).

**Guided imagery.** A form of silent meditation using all the senses to relax and promote healing (Wilmington VAMC Whole Health Consult, retrieved 2/13/22).

**Tai chi.** A type of mindfulness-based exercise that uses slow, gentle movements that combine martial arts, meditation, imagery, and deep breathing (Sharma & Haider, 2015).

**Whole Health.** A personalized, proactive, and patient driven approach to health care that prioritizes the veteran and their values, and partners with them to create a personalized strategy to optimize their health, healing, and well-being (Krejci et al., 2014).

**Depression.** A mood disorder that causes a persistent feeling of sadness, loss of interest, and hopelessness which affects how an individual thinks, feels, and behaves leading to emotional and physical problems (Mayo Clinic, n.d., retrieved 9/27/20, <https://mayoclinic.org>).

**Anxiety.** A mood disorder characterized by excessive worry, inability to relax, feeling restless, and difficulty concentrating (Mayo Clinic, n.d., retrieved 9/27/20, <https://mayoclinic.org>).

**Stress.** The result of a mismatch between demands posed by a personally threatening event or its consequences, and the coping options to deal with the event or its consequences (Bosmans et al., 2017).

## **Theoretical Framework**

The goal of this QI project was to enact systems change at the Wilmington VAMC which would increase referrals from primary care providers to mindfulness-based programs and increase veteran participation in those programs. I used Appreciative Inquiry (AI) as the theoretical framework for this change. Appreciative Inquiry focuses on a pre-determined area of need and addresses that need by using individuals, teams, and organizations to create change by reinforcing positive practices (Ruhe et al., 2011).

The first stage of the AI process is Discovery. During the Discovery stage, participants interested in process change identify and analyze what currently works. In this QI project, the Discovery stage aligned with my first aim: to conduct a chart review and analysis to determine



which primary care providers are placing referrals to mindfulness-based programs and identify providers and veterans more engaged in those programs. In this way, I hoped to document the level of participation by primary care providers in the referral process, the strengths of the current primary care referral process, and use those strengths as the foundation for my second aim, the production of a set of recommendations to increase primary care referrals and veteran enrollment. The second aim of my project aligned with both the second stage of AI, to Dream what could be, and the third stage to Design or formulate action plans for process change. During the final stage Destiny, the new, enacted strategies are evaluated and modified to ensure the new process changes continue. AI aligns well with the VA whole health approach because both focus on achieving sustainable outcomes using a process that takes into consideration past successes and what is important to individuals. Figure 1 is a graphic illustration of this project's process change using the AI approach.

### **Literature Search**

The primary literature search for this project occurred from November 2021 through January 2022. I continued to search journals for new, impactful research until manuscript submission. I only considered studies published in English. Search databases included Medline, Psych info, CINAHL, and PubMed. Keywords used were depression, anxiety, stress, military veterans, mindfulness, complimentary and integrative health, and whole health. When database searches proved insufficient, I conducted a hand search of studies referenced in keeper articles.

I only considered articles published between 2010 to the present. It was about 2010 that the negative impact of opioids and benzodiazepine medications on veteran mental and physical health was acknowledged by VA leadership and the use of CIH approaches for the treatment of mood disorders and pain were becoming more widely supported by the VA. Consequently, from

2010 to the present, increased research was conducted to establish the evidence-base for the use of CIH practices such as mindfulness-based therapies in medical and mental health care.

I initially identified thirty articles for use in this study. Inclusion criteria to obtain the final group for the literature review included studies published between 2010-2021, studies published in the English language, studies related to stress, anxiety, depression, mindfulness, and United States military veterans. Exclusion criteria consisted of studies done for PhD dissertations, conference proceedings, abstracts, unpublished studies, and studies published in non-peer reviewed literature.

Many of the studies included in the literature review were from the fields of psychiatry and psychology. Several articles described the implementation of mindfulness programs for United States military veterans. Most of the studies used a cross sectional study design which limited the ability to determine causality. As I was not able to find a meta-analysis evaluating the use of mindfulness programs specifically among military veterans, I included two sentinel meta-analysis studies: one evaluated the use of mindfulness-based stress reduction in non-clinical study populations, and the other study evaluated the effectiveness of meditation programs, including mindfulness, in non-veteran populations. I included two systemic review articles which looked at the effectiveness and safety of tai chi as an intervention for treatment of anxiety and depression; one was a qualitative review of quantitative studies conducted between 1989 to March 2014, and the other was a meta-analysis of thirty-seven randomized control trials and five quasi-experimental trials that studied the effects of tai chi on psychological well-being. Finally, I added articles that reviewed whole health concepts and the implementation of the whole health approach within the VA.

## **Demographics**

The population sample for this study consisted of veterans actively enrolled in the Wilmington VAMC and its aligned CBOCs in Delaware and southern New Jersey. The study catchment area extends from the southern Brandywine River Valley and southern Delaware River Valley to the Atlantic coastal regions of southern New Jersey and Delaware. The southern and western portions of Delaware border the eastern shore area of Maryland. The Delaware River forms the eastern border of Delaware and the western border of New Jersey. Southern New Jersey extends eastward from Delaware Bay to the Atlantic Ocean.

Delaware consists of three counties: New Castle County in the northern third of the state; Kent County in the middle third of the state; and Sussex County in the southern third of the state. The counties in southern New Jersey that fall within the Wilmington VAMC catchment area are Cumberland County, Cape May County and Atlantic County. As of July 1, 2021, Delaware's population estimate was 1,003,384 residents with New Castle County having 571,708 residents, Kent County with 184,149 residents and Sussex County with 247, 527 residents (U.S. Census Bureau, n.d.). Wilmington, a moderate size city with a population of 70,898 as of April 1, 2020 (U.S. Census Bureau, n.d.), is situated in the northern portion of the state near the Pennsylvania border. In southern New Jersey, as of April 1, 2020, the estimated population of Cumberland County was 154,152; Cape May County was 95, 263, and Atlantic County was 274, 584 (U.S. Census Bureau, n.d.).

The U.S. Census Bureau (n.d.) defines veterans as men and women 18 years of age and older who have served, but are not currently serving, on active duty in the U.S. Army, Navy, Air Force, Marine Corps, or the Coast Guard. Based on data accumulated between 2016 and 2020, residents who identified as veterans in each of the three counties in Delaware are as follows:

New Castle County 30, 066 or 5.3% of the county populations; Kent County 17,242 or 9.5% of the county population; and Sussex County 17, 757 or 7.5% of the county population, The total veteran population in Delaware, therefore, was 65, 065 or 6.5% of the state’s population in 2020 (U.S. Census, n.d.). Likewise, based on data accumulated between 2016 and 2020, Atlantic County had 11,470 veterans or 7.5% of the county population, Cape May County had 6,732 veterans or 7.0% of the county populations and Cumberland County 6, 118 veterans or 7.5% of the county population (U.S. Census, n.d.).

Both Delaware and southern New Jersey are ethnically and racially diverse. According to the most recent published statistics (April 1, 2020), 61.7% of the residents of Delaware identified as White, not Hispanic or Latino and 23.2% identified as Black/African American, with the remaining population identified as Asian, Hispanic, Hawaiian or Pacific Islander (U.S. Census Bureau, n.d.). In Atlantic County, New Jersey, the percentage of residents who identified as White, not Hispanic or Latino was 56% of the county population and those residents who identified as Black/African American alone was 17.1% of the county population. In Cape May County, New Jersey, residents who identified as White alone, not Hispanic or Latino was 85% of the county population and as Black/African American was 4.8% of the county population. In Cumberland County, White alone, not Hispanic or Latino was 45.4% and Black/African American was 21.9%. The remaining percentages in all areas was composed of residents of Asian or Pacific Islander race (U.S. Census Bureau, n.d.).

### **Impact of Chronic Stress on Physical and Mental Health**

When used in everyday language, the word “stress” implies the grind of day-to-day life. People say they feel “stressed out” when presented with a challenging situation. From a biologic perspective, stress also means the physical or psychologic stimuli that precipitates a

neurobiological response (McEwen & Stellar, 1993). The “fight-or-flight” response is the classic example of this type of stress and occurs when a real or perceived threat (called a stressor) causes increased blood levels of the stress hormones cortisol and epinephrine resulting in increased blood pressure, heart rate and glucose metabolism in preparation for a strenuous activity (McEwen, 2007). Stimulation of the autonomic nervous system by a stressor causes release of neurochemical mediators from hypothalamic-pituitary-adrenal axis (HPA) which triggers release of epinephrine and cortisol from the adrenal glands. This response is usually temporary. Once the stressful stimulus has resolved a negative feedback pathway from the adrenal glands to the brain causes a reduction in epinephrine and cortisol secretion and the individual returns to a homeostatic state (McEwen, 2007).

Stimulation of epinephrine and cortisol secretion from the adrenal glands by the autonomic nervous system and the HPA axis is a positive neuroendocrine adaptation to ensure survival. However, prolonged exposure to a stressor can lead to a malfunction in this feedback mechanism causing a delay turning off increased epinephrine and cortisol secretion leading to maladaptive changes (McEwen, 2007). For example, chronic stress caused by prolonged exposure to stress hormones that increase heart rate and blood pressure can also cause atherosclerosis and result in strokes and myocardial infarctions (McEwen, 2007). Chronic stress has also been identified as a risk factor for the development of Type II diabetes, gastrointestinal disorders, cancer, and as a significant contributor to poor outcomes during the aging process (McEwen & Stellar, 1993; McEwen, 2007).

Stress hormones can also exert damaging effects on mental and behavioral health when secreted unchecked over an extended period. This is due, in part, to the ability of cortisol, a glucocorticoid hormone, to cross the blood-brain barrier and impact cognitive and affective

processes (Lupien et al., 2018). Three structures in the brain have been shown to have high concentrations of glucocorticoid receptors: the hippocampus, the pre-frontal cortex, and the amygdala (Lupien et al., 2018). The hippocampus is involved in learning and memory and has the highest density of glucocorticoid receptors. The prefrontal cortex is involved in cognitive control functions which influence attention, impulse inhibition, prospective memory, and cognitive flexibility. The amygdala is involved in processing fearful and threatening stimuli, detection of threat and activation of appropriate fear-related behaviors in response to threatening or dangerous stimuli. These structures play a crucial role in the brain's interpretation of a situation as stressful and in the selection and inhibition of responses (Lupien et al., 2018).

As noted above, chronic stress causes elevations in blood levels of cortisol which can result in overactivation of the HPA axis. Dysregulation of the HPA feedback loop results in continued cortisol secretion which negatively affects the hippocampus, prefrontal cortex and the amygdala causing memory impairment, cognitive issues, emotional instability, and depression (McGinn & Pahng, 2017). In animal studies, genetically engineered mice with increased glucocorticoid receptors in the forebrain were noted to display anxiety-like and depression-like behaviors (Wei et al., 2012).

Increased anxiety and depression have been linked to chronic stress due to the COVID-19 pandemic among general populations (Qi et al., 2021), and has raised concerns that COVID-19 related stress may cause increased suicides (Reger et al., 2020; Sher, 2020). According to Bruce McEwen, a leading authority on stress biology:

...affective disorders, including major depression (MDD), bipolar disorders, anxiety and panic disorder, and post-traumatic stress disorder (PTSD) can be seen as (sic) stress disorders where key neural circuits that regulate stress reactivity are (sic) not functioning

optimally. This dysregulation might include enhanced reactivity to threatening stimuli, decreased ability to terminate the stress response, and/or suboptimal coupling between internal affective states and external environment (McEwen & Akil, 2020, p. 17).

Dr. McEwen recommends individuals participate in regular moderate physical activity, learn tools to maintain a healthy lifestyle, improve sleep quality and quantity, and maintain a positive outlook on life to combat the negative effects of chronic stress on mental and physical health (McEwen, 2017). Mindfulness-based practices are ideal therapies individuals can learn to counteract the negative effects of chronic stress and reduce anxiety and depression.

### **Mindfulness-Based Interventions**

The practice of mindfulness comes from Buddhist tradition that is 2500 years old. According to Buddhist teachings, our normal waking state of consciousness limits us to the full reality of our lives and condition. Mindfulness and mindful meditation help us to break the constraints of consciousness to become fully awake so we may live in harmony with ourselves and with the world (Kabat-Zinn, 1994). Jon Kabat-Zinn, PhD popularized mindfulness in the 1970s when he incorporated mindfulness meditation practice into the Mindfulness-Based Stress Reduction (MBSR) program he started at the Stress Reduction Clinic at the University of Massachusetts in 1979. Today, MBSR programs are now available all over the United States and around the world.

Therapeutic programs based on mindfulness have demonstrated positive short-term and long-term effects in the treatment of depression, anxiety, and stress. Goyal et al. (2014) conducted a meta-analysis of forty-seven randomized control studies totaling 3,315 participants with diverse medical and mental health diagnoses. Groups using meditation-based interventions including mantra, transcendental meditation, mindful meditation, MBSR, and MBCT were

compared to an active control group utilizing traditional and alternative approaches including massage, relaxation, and cognitive behavioral therapy. The participants in mindfulness meditation programs had decreased anxiety and depression symptoms at the 8-week, 3-month and 6-month follow-up evaluations compared to the participants using traditional approaches. Stress did not improve using mindfulness meditation programs. However, when study investigators combined stress with depression and anxiety as a domain of negative effect, a small increased benefit of the mindfulness programs was noted (Goyal et al., 2014). This outcome indicates the interconnectedness of stress, depression, and anxiety on an individual's psychological well-being.

The effectiveness of MBSR and MBCT on psychologic health was also studied in the general population. Querstret et al. (2020) analyzed forty-nine studies with a total study population of 4,733 adults 18 years old and older without a clinical mental health diagnosis to determine if MBSR and MBCT could be used as a public health strategy to reduce stress, depression, anxiety, and improve well-being. Study subjects who participated in MBCT had significant reductions in symptoms of stress, depression, anxiety, and had improved quality of life/well-being compared to subjects who participated in the MBSR programs. The authors pointed out that many of the MBSR programs included in the meta-analysis differed in program length, training of facilitators and delivery format which may have contributed to the unexpected results. Additional well-developed randomized control studies are recommended to determine the optimal format for MBSR programs.

Evidence maps are a form of evidence synthesis that identify research gaps and future research needs for broad topics (Freeman et al., 2019). Evidence maps are drawn based on the results of a systematic search of a field of research and provide a visual representation of the



body of literature. In the VA, evidence maps are used to guide and support decision making about treatment modalities. Evidence maps do not provide definitive conclusions about benefits of a treatment modality because the analysis relies on past systemic reviews and not on recently published trials (Freeman et al., 2019). Evidence maps, therefore, provide only “broad strokes” regarding benefits of the interventions that are analyzed.

The VA Evidence-Based Synthesis Program (Feeman et al., 2019) conducted a literature search of the effectiveness and harms of guided imagery among diagnostic populations. A limitation of the analysis was that the definition and scope of guided imagery varied across the study populations. The reviewers noted guided imagery decreased anxiety and depression among cancer patients and had a positive effect on pain levels among a group with osteoarthritis and rheumatoid arthritis (Freeman et al., 2019). Overall, however, the VA Evidence-Based Synthesis Program reviewers had a low level of confidence for the benefit of guided imagery due to the heterogeneity of the studies, risk of bias in the studies, and limited generalizability in some populations studied (Freeman et al., 2019). The review did not include studies with veterans.

Tai chi is a mind-body discipline that incorporates mindfulness into an exercise program. Tai chi blends Chinese martial arts, meditative movements, and deep breathing to improve physical balance and promote healing of the mind and body (Wang et al., 2013). Systematic reviews of effectiveness of tai chi to reduce symptoms of anxiety (Sharma & Haider, 2015) and depression (Wang et al., 2013) have been favorable with statistically significant results. Although tai chi is a frequent offering at VA medical centers across the country, there have been few studies examining the effects of tai chi as monotherapy for mental health issues among veterans. This may be a topic for future research.

## **Mindfulness-based Programs Within the VA**

In the early 2010's, MBSR programs were conducted at several sites within the VA system. The intent of the MBSR programs were to offer veterans alternative therapies for the treatment of PTSD, depression, perceived stress, and anxiety (Kearney et al., 2012; Kleufel et al., 2013; Serpa et al., 2014). Studies showed that MBSR programs were an acceptable treatment option for affective mood disorders and, when combined with usual care, reduced measures of PTSD, depression, anxiety, perceived stress (Kearney et al., 2012; Kleufel et al., 2013; Serpa et al., 2014) and reduced suicidal ideation (Serpa et al., 2014).

Studies have shown mental health measures improved after participation in an MBSR program. Kearney et al., (2012) conducted a prospective, longitudinal study of a group of veterans who received mental health care at a large, urban VA medical center in northwestern United States. Study participants attended an 8-week face -to- face MBSR program that was an adjunct to their usual care which included trauma-based therapies such as prolonged exposure therapy (PE) and cognitive processing therapy (CPT). The study participants had a variety of mental health diagnoses including a substantial number with PTSD. Veterans with active psychotic disorders, poorly controlled bipolar disorder, personality disorder, or active suicidal or homicidal ideation with intent were excluded from the program. Study participants were evaluated for PTSD symptoms, depression, functional status, behavioral activation, experimental avoidance, and mindfulness at the start of the program and 2 and 6 months later. Study participants showed continued improvement in all variables over the 6-month post-MBSR period. The study also showed MBSR was not harmful to veterans with PTSD.

The Wilmington VAMC offers a 2-hour introduction to mindfulness class during which veterans are taught mindfulness meditation to reduce stress and promote health and wellness.

After completion of the 2-hour mindfulness introduction class, participants can register for the 6-week VA -CALM program. VA- CALM is the VA version of a MBSR program. Veterans can also enroll in guided imagery classes. Guided imagery classes are virtual conducted in a group format using a telehealth video platform. The Wilmington VA whole health catalogue also offers three tai chi programs: tai chi for arthritis, tai chi for rehabilitation, and tai chi for energy. The primary care provider orders the program using the whole health consult in the EMR order package.

### **Summary**

During the past 10 years, there has been growing interest in the use of CIH practices for the treatment of mental health issues by both the VA administration and veterans. Mindfulness meditation practice has been identified as one of the top 3 CIH approaches used by veterans to manage stress, symptoms of depression and anxiety, and provide veterans with a sense of control over their own health (Goldberg et al., 2019). A study by Goldberg et al (2019) showed that participation in mindfulness-based modalities was highest among female veterans, veterans of Hispanic ethnicity, veterans between the ages of 35-49 and those who are divorced, widowed, or separated. Mindfulness-based practice was lowest among veterans aged 65 and older and married veterans (Goldberg et al., 2019).

Although growing in popularity, mindfulness programs within the VA are not utilized to their full potential. Veterans have identified barriers to enrollment in MBSR programs including lack of time, schedule conflicts, and aversion to participating in groups (Martinez et al., 2015). Also, veterans attend mindfulness programs outside the VA because they do not know the VA provides classes or the classes are at inconvenient times (Goldberg et. al., 2019). Furthermore,

female veterans exposed to sexual trauma in the military do not want to participate in face-to-face MBSR classes with males (Martinez et al., 2015).

In 2016, the United States federal government passed the Comprehensive Addiction and Recovery Act (CARA) which provided increased federal funding for expanded substance abuse education and treatment programs due to the opioid epidemic (United States Government, 2016). Title IX, Section 932 of CARA required the VA to develop plans to improve effective CIH services for veterans. Since the passage of CARA, the VA has focused efforts on providing veterans with accessible CIH practices for preventative and chronic mental health care. Complimentary and integrative health practices such as mindfulness meditation and mindfulness-based stress reduction are used by veterans for management of stress, anxiety, and depression with documented benefits. However, some veterans attend MBSR programs outside the VA or report difficulty attending VA mindfulness-based programs.

An initial review of whole health consults at the Wilmington VAMC, indicated the mindfulness-based programs are underutilized. The purpose of this QI project was to increase veteran participation in mindfulness-based programs offered by the Wilmington VAMC. The aims of this project were:

1. To conduct a chart review and analysis of referral patterns by primary care providers and mindfulness program enrollment patterns at the Wilmington VAMC and its aligned CBOCs.
2. To produce a set of recommendations to increase primary care referrals and veteran enrollment in mindfulness-based programs at the Wilmington VAMC.

## **Chapter 3**

### **Methods**

#### **Project Design**

This QI project used a descriptive, quantitative approach to analyze data retrieved from a retrospective chart review. One aim of this project was to conduct a review of electronic referrals, also called “consults,” to mindfulness-based programs ordered by primary care providers. Data from past consults to mindfulness-based programs was extracted from veterans’ EMRs. Based on data analysis, referral patterns were identified upon which a set of recommendations were made to increase future referrals and veteran participation in mindfulness-based programs.

A list of whole health consults written by primary care providers at the Wilmington VAMC and the five aligned CBOCs between August 1, 2021, and December 31, 2021, was forwarded to my government issued, password protected computer in a secure, encrypted emailed from the Wilmington VAMC primary care practice manager. Consults from the women’s health nurse practitioner (NP) were also included as primary care health services are provided by the women’s health NP and women’s health is administratively aligned under the Primary Care department. The whole health consult list included veterans’ names, the names of the providers who ordered the consults, the dates the consults were written, and whether the requested mindfulness program(s) were scheduled. I reviewed veterans’ charts in the EMR to identify the whole health program(s) that were requested. Only data from referrals to mindfulness-based programs was extracted and used in this project. A government issued computer was used for data collection and all study related information was kept in a locked office.

## **Project Setting**

The Department of Veterans Affairs medical centers are organized into 18 separate Veterans Integrated Service Networks, or VISNs. Each VISN is identified by a number and provides administrative and clinical oversight for the medical centers under its supervision. The Wilmington VAMC is part of VISN 4 which also includes all the medical centers in Pennsylvania.

The Wilmington VAMC is a level 2 health care facility located in Wilmington, Delaware and provides inpatient and outpatient care to veterans in Delaware, southern New Jersey, and a small portion of southern Chester and Delaware counties in Pennsylvania. The Medical Center provides a wide range of services including mental health, primary care, specialty care, surgery, and long-term care. During fiscal year (FY) 2021, which was between October 1, 2020, through September 30, 2021, the Wilmington VAMC's annual operating budget was \$234 million (Wilmington VA Medical Center, n. d.). Total mental health encounters during FY 2021 were 18,702.

Five CBOCs are administratively and clinically aligned with the Wilmington VAMC providing medical care to veterans in Delaware and southern New Jersey: these CBOCs are Cumberland County CBOC in Vineland, New Jersey; Atlantic County CBOC in Northfield, New Jersey; Kent County CBOC in Dover, Delaware; Cape May County CBOC in Rio Grande, New Jersey; and Sussex County CBOC in Georgetown, Delaware. During FY 2021, the Wilmington VAMC and its five aligned CBOCs served 39,593 veterans including 5,247 female veterans and performed 233,247 total outpatient visits (Wilmington VA Medical Center, n.d.). Fifty-two percent of Wilmington VAMC veterans receive care at one of the CBOCs (Wilmington VA Medical Center, n.d.). The Wilmington VAMC serves more female veterans than the average at

other VA medical centers: 11% of veterans served by the Wilmington VAMC are women compared to the national average of 8% (Wilmington VA Medical Center, n.d.).

The Wilmington VA Medical Center embraces technology to increase access to care. During FY 2021, the Wilmington VAMC staff conducted 47,711 telehealth encounters and 31,946 VA Video Connect encounters (Wilmington VA Medical Center, n.d.). VA Video Connect is the VA platform used to schedule and conduct virtual face-to-face patient visits using telehealth technology.

On a national level, the VA is making efforts to bridge the technologic inequity for veterans who lack the electronic devices required to participate in VA telehealth services. On a local level, clinicians at the Wilmington VAMC can order VA-issued iPads for veterans who do not have the technological resources to connect virtually to their health care team. However, in some areas, there is limited connectivity to the internet. The Wilmington VAMC mindfulness programs are provided using the group VA Video Connect platform. The VA nationally and on a local level does not provide pre-paid hot spots for veterans in areas underserved by broad band access. Lack of high-level connectivity may limit access to the mindfulness-based programs for some veterans in the study area, especially those veterans in rural southern Delaware.

### **Stakeholders**

Many people were involved and had an interest in the success of this QI project. The Associate Chief of Staff for Primary Care was instrumental in allowing access to the Primary Care whole health consults. Equally important was the Clinical Director of Whole Health who approved this QI project. Additional stakeholders were the Primary Care and Behavioral Health communities within and outside the VA because this study added to the body of knowledge in

support of mindfulness as an evidence-based practice and increase access to the mindfulness-based programs at the Wilmington VAMC.

### **Project Sample**

This QI project looked only at retrospective data. The sample frame was all whole health consults written by primary care providers, including the women's health provider, at the Wilmington VAMC and the aligned CBOCs between August 1, 2021, through December 31, 2021. I reviewed the consults in the EMR to identify the requested whole health service(s). A single consult for a unique veteran could contain multiple referrals for mindfulness-based programs. For example, a single consult could refer a veteran to a tai chi program, the mindfulness introduction class, and the whole health introduction class. Data from referrals to the mindfulness introduction class and the tai chi program would be extracted. The referral to the whole health introduction class would not be included in the project sample because the whole health class is not a program based on mindfulness.

The study cohort was obtained by convenience sampling. The inclusion criteria were male and female veterans referred by their primary care providers at the Wilmington VAMC or one of the aligned CBOCs between August 1, 2021, and December 31, 2021, to the mindfulness-based classes including guided imagery, the introduction to mindfulness class, or one or more of the tai chi classes. Exclusion criteria were veterans referred to other whole health programs including battlefield acupuncture, the pain self-management group, and the whole health for tobacco cessation group, as these programs involve education, exercise or pain management activities not based in mindfulness or mindful meditation. Referrals for yoga were also not included as the program description in the whole health consult stressed balance and stretching exercises and not mindfulness. Furthermore, consults for om practice and power breath



workshop were also not included because these programs are conducted off the Wilmington VAMC grounds by non-VA agencies, and as such, veteran participation could not be confirmed in the VA computer system.

I extracted data from the whole health mindfulness-based program consults and entered the data onto an Excel spreadsheet on my government issued computer. I used the first initial of the veteran's last name and the last 4 numbers of their social security number to access data in the EMR. The veteran's personal identifying information (PII) was not entered onto the Excel spreadsheet. I assigned a number to each veteran. This number was entered on the spreadsheet. Findings were reported in the aggregate without identification of PHI (personal health information) or PII. The list of veterans' names and their assigned numbers, and all data on the Excel spreadsheet was kept on my government issued, password protected computer that is in a locked office. I was the only person with access to veteran PHI, PII, and to the list of names stored on my government computer.

### **Consents**

Signed informed consents from the veterans whose data was included in this project was not needed as this was a QI project which used retrospective data. Personal health information and PII were not used in data collection or analysis. This study was approved by the West Chester University Institutional Review Board on February 22, 2022 (Appendix A). The Wilmington VAMC research and development staff identified this project as a QI project and not research on December 15, 2021, and therefore did not require Institutional Review Board (IRB) review and approval (Appendix B).

## **Data Collection**

An Excel spreadsheet containing whole health consults written by primary care providers at the Wilmington VAMC and the aligned CBOCs between August 1, 2021, and December 31, 2021, was forwarded to Ms. Lang-Groening in a secure encrypted email from the Wilmington VMC primary care practice manager. The spreadsheet included veterans' names, social security numbers, the name of the provider who wrote the consult, the date the consult was written, and whether the consult was active, canceled or completed. I reviewed veterans' charts in the EMR to identify the whole health service requested in each consult. Only data from consults containing referrals to mindfulness-based programs were used in this project.

I used an Excel program provided by the VA to create a spreadsheet to manage the extracted data. I accessed the veteran's chart in the EMR using the first initial of the veteran's last name and last 4 digits of their social security number. After determining the veteran's consult met the inclusion and exclusion criteria, I assigned a number to that veteran and entered the number on the Excel spreadsheet. I created a master list containing the veterans' names and assigned numbers. This list was stored on my secure, government issued, password protected computer in a locked office. The following deidentified data was extracted and recorded on the Excel spreadsheet: the veteran's age, birth sex, race, ethnicity, mental health co-morbidities of stress, anxiety, PTSD, and depression, and medical comorbidities of chronic pain, heart disease, lung disease and cancer; the name of the referred mindfulness-based program, the practicing profession of the practitioner who wrote the referral, their location (Wilmington VAMC or CBOC), and if documented, a reason the veteran declined to participate in the program. All data was coded and uploaded to the IBM Statistical Package for the Social Sciences (SPSS) Version 24 for analysis. Data was analyzed using descriptive statistics. All variables, except age, are

categorical and were analyzed in terms of sum and percentage. Age is a continuous variable and, therefore, was analyzed in terms of mean and standard deviation.

Data was un-linked to the veteran by the substitution of a number for the veteran's last initial and last four of their social security number. Data collection tools for this project were the spreadsheet containing all whole health consults ordered by primary care providers, the Excel spreadsheet created for data collected from the study sample, and the master list containing veterans' names and assigned numbers. There were no surveys or questionnaires, flyers or advertising materials associated with this project. All data collection tools were kept on a government issued password protected computer. I was the sole planner and investigator for this project. Dr. Cheryl Schlamb, West Chester University advisor, and the West Chester University Institutional Review Board had access to un-linked, aggregate data contained in this final report.

### **Timeline and Budget**

Below is a detailed list of the steps involved in this project:

1. Created an Excel spreadsheet that was stored on a government issued password protected computer located in a locked office.
2. Reviewed each whole health consult written by primary care providers between August 1, 2021, through December 31, 2021, and identified the consults containing referrals to guided imagery, Introduction to Mindfulness, and the tai chi classes.
3. Extracted the following deidentified data from referrals to guided imagery, introduction to mindfulness class, tai chi for energy, tai chi for arthritis and tai chi for rehabilitation: the date the referral was written, the administrative status of the consult in the EMR and the profession of the provider who wrote the referral (PA, NP, MD, DO).

4. Extracted the veteran's age, birth sex, ethnicity, race, mental health comorbidities of stress, anxiety, PTSD and depression, and medical comorbidities of chronic pain, heart disease, lung disease, and cancer and entered this data on the Excel spreadsheet
5. Assigned a number to each veteran whose data was included in this analysis and entered the number and name on a master list stored in a secure file on my government issued password protected computer. I was the only person with access to the list.
6. All collected data was entered into IBM SPSS version 24 for analysis. Prior to data analysis, the software data base was created followed by entry of the survey data. All test assumptions related to parametric testing were examined. There were no missing data values. Reverse coding variables and dummy-coding variables was not required.
7. All project variables were analyzed using descriptive statistics.
8. Referral patterns and participation patterns were identified based on the analysis of study variables.
9. Strategies to increase consults to mindfulness-based programs from primary care providers and to increase veteran enrollment in mindfulness-based programs were developed.
10. A report describing the data collection process, data analysis and recommendations to increase the number of consults to and veteran participation in the mindfulness-based programs was written and provided to the Whole Health Clinical Director at the Wilmington VAMC.

Success of this project was dependent upon the number of consults and referrals reviewed, and the quality of the data collected. I expected this project to take 7-8 weeks which was calculated from February 22, 2022, the date West Chester University's Institutional Review

Board approved the project. I submitted the final project report to the Department of Nursing at West Chester University in mid-April 2022. I did not create a budget because the VA provided the computer equipment and software for this project.

## **Chapter 4**

### **Results**

This chapter presents the results of the data analysis including the study sample's demographic data, medical and mental health comorbidities, primary care provider referral patterns to mindfulness-based programs, referring provider medical profession, provider location (Wilmington VAMC or CBOC), and veteran enrollment patterns. Data collection and analysis occurred between March 9, 2022, and March 13, 2022. All statistical analysis was performed using IBM SPSS Statistics Version 24.

I conducted a retrospective chart review of all whole health consults written between August 1, 2021, and December 31, 2021. I extracted data from the Electronic Medical Record (EMR) of veterans identified as having a consult that referred the veteran to one or more of the mindfulness-based classes: introduction to mindfulness, guided imagery, tai chi for energy, tai chi for arthritis and tai chi for rehabilitation. Deidentified demographic data for each veteran was extracted from the patient inquiry section in the veteran's EMR. Categorical data from all veterans in the study sample were combined and analyzed for measures of frequency and central tendency and are reported here in the aggregate. The categories of race and ethnicity are the same as those used by the Department of Veterans Affairs and as documented in the patient inquiry section in the veteran's EMR.

Initially, I only intended to include in this analysis referrals to the introduction to mindfulness class, the VA-CALM program, and the guided imagery group. However, early in the chart review process I noted that there were few referrals to the introduction to mindfulness class and the VA-CALM program during the months of August and September 2021. This was probably due to the requirement that veterans had to be referred by the Whole Health Clinical

Director to the VA-CALM program after attending the introduction to mindfulness class. The next introduction to mindfulness class did not start until November 2021. Referrals to the introduction to mindfulness class began to appear in whole health consults written in late September 2021 and after. Therefore, I added veterans referred to tai chi classes to the study sample to increase the sample size and to include additional mindfulness-based offerings in the analysis.

### **Demographics and Clinical Characteristics**

One-hundred and forty-eight whole health consults were written between August 1, 2021, and December 31, 2021. Forty-one consults, or 28% of all whole health consults written during the study period, included referrals to mindfulness-based programs. Each of the forty-one consults was written for a unique veteran; there were no duplicate or multiple consults for a unique veteran in the study sample.

Of the forty-one unique veterans included in the study sample, about two-thirds (68.3%) identified as male, and slightly less than one-third (31.7%) identified as female. In terms of race, the same number of veterans (19 or 46.3%) identified as Black/African American as identified as White. One veteran was identified from each of the following categories: Native Hawaiian/Pacific Islander, American Indian/Alaska Native, and Asian. Thirty-seven veterans identified as Not Hispanic or Latino (90.2%); two veterans identified as Hispanic/Latino (4.9%) and two veterans identified as of unknown ethnicity (4.9%). The veterans ranged in age from 30-79 years old. The mean age was  $56 \pm 13.1$  years. Table 1 provides the descriptive statistics of the study population (N=41).

The EMR of each veteran in the study sample was reviewed for mental health co-morbidities of stress, anxiety, PTSD, and depression. A veteran was identified as having one or

more of these comorbid variables if stress, anxiety, PTSD, or depression was written on the problem list in the EMR or was mentioned in their last primary care progress note. During the nursing assessment portion of every primary care visit, a licensed practical nurse (LPN) asks the veteran if they are experiencing stress. The LPN informs the provider of all positive responses for further evaluation by the provider during the visit. Veterans who reported feeling stress or discussed feeling stress during the provider visit were included in the stress comorbid variable category. Veterans with a diagnosis of panic disorder or general anxiety disorder were included in the anxiety comorbid variable category. Veterans with a diagnosis of major depression or depression were included in the depression comorbid variable category.

Almost half (48.8%) of the study sample had a diagnosis of depression. Anxiety was the second most frequent diagnosis with 31.7%, and PTSD was the third most frequent diagnosis (17.1%). Only two veterans (4.9%) identified as feeling stress. Eleven veterans (27%) were identified as having more than one mental health comorbid diagnosis and eleven (27%) did not identify or carry any mental health diagnosis.

Medical comorbidities included in this analysis were broad categories of chronic pain, heart disease, lung disease, and cancer. Veterans with any type of pain were included in the variable category of chronic pain. Most veterans reported low back pain or joint pain. One veteran had a diagnosis of congestive heart disease on their problem list and, therefore, was included in the heart disease comorbid variable category. Four veterans were assigned to the lung disease category: one had a history of lung transplant due to interstitial lung disease and the remainder had a diagnosis of asthma. The medical comorbid variable of cancer was removed from the analysis because no veteran in the study sample had an active diagnosis of cancer or



were currently under treatment for cancer. Table 2 provides the mental health and medical clinical comorbidities of the study sample.

### **Mindfulness-Based Program Referrals**

Each of the forty-one consults contained one or more referrals to mindfulness-based programs. Introduction to mindfulness is a single 2-hour virtual mindfulness introductory class from which veterans can elect to continue into the six-week cohort-based VA-CALM program. The Whole Health Clinical Director writes the referrals to the VA-Calm program and not the primary care providers, therefore, VA-CALM referrals were not included in this study. Guided Imagery Group is a virtual weekly reoccurring class. Three virtual tai chi classes are offered: tai chi for energy, tai chi for arthritis and tai chi for rehabilitation. A veteran can be referred to one or more of these classes through the whole health consult written by their primary care provider. In total fifty-nine referrals were written to mindfulness-based programs. Table 3 presents the type of referrals made by primary care providers to mindfulness-based programs.

The providers who wrote consults for mindfulness-based programs were primarily female. Only one of the two male primary care NPs at the Wilmington VAMC referred veterans to mindfulness-based programs. Twenty-three consults were written by medical doctors (MDs) who were all female. Although there are male MDs on the primary care staff at the Wilmington VAMC and at the CBOCs, no referrals for mindfulness-based programs were written by male doctors. One female Doctor of Osteopathic Medicine (DO) wrote a consult to the mindfulness-based programs. Thirty-two consults were written by providers (MDs and NPs) in the Primary Care Clinic at the Wilmington VAMC with the remainder (9) written by providers working at one of the CBOCS. At the beginning of this project, I had intended to include physician assistants (PAs) in the provider analysis and mentioned this intent in the Methodology chapter.

However, during the study period August 1, 2021, through December 31, 2021, PAs were not working in the Primary Care Clinics at the Wilmington VAMC or in the CBOCs. Therefore, I did not include PAs in this analysis.

Table 4 presents the distribution by profession and practice location of the providers who wrote consults to mindfulness-based programs. Fourteen providers wrote consults for 41 veterans. However, sixty-five percent of all referrals to mindfulness-based classes were written by 5 providers. Table 5 presents the number of consults written by each provider.

### **Outcome of Mindfulness-Based Program Referrals**

Most referrals to mindfulness-based programs were either not scheduled or not attended by the veterans. Fifty-nine referrals were written to mindfulness-based programs. Per VA policy, an appointment scheduler must try to contact a veteran twice by telephone and once by letter requesting the veteran contact the scheduler to schedule an appointment. If the scheduler cannot contact the veteran or the veteran does not respond to the phone calls or the letter, the consult is cancelled due to “failed mandated scheduling effort.” Fifteen referrals were cancelled due to failed mandated scheduling effort.

Three veterans were no shows (did not attend a scheduled class or appointment) for their first mindfulness class appointment and were not rescheduled. The consults were subsequently cancelled after 90 days because they were not scheduled per VA policy. Veterans declined to schedule an appointment for 18 referred mindfulness-based programs when contacted by the scheduler. Most of the consults in the EMR did not document the reason(s) veterans did not want to schedule the appointment. Four veterans, however, were documented to decline because class times conflicted with their work schedules. Eight referrals were cancelled by the veteran after

scheduling. One veteran stated she was unable to attend a scheduled tai chi program due to conflict with her work schedule. This veteran was given a reference to an on-line tai chi program.

Nine veterans attended the first session of ten scheduled programs which was 16.9% of the total referrals. Four veterans, accounting for 5 referrals, were scheduled into the introduction to whole health program by the Whole Health Clinical Director rather than the referred mindfulness programs. This seems to have been done following a discussion between the Whole Health Clinical Director and the veterans in which the veterans agreed that introduction to whole health was the more appropriate program. Table 6 provides the scheduling outcomes for the mindfulness-based program referrals.

## **Summary**

Analysis of the study sample's demographic data and primary care provider data yielded interesting findings. First, equal numbers (N=19 or 46%) of White veterans and Black/African American veterans were included in the study sample. This represents a lower percentage of people who identify as White and a higher percentage of people who identify as Black/African American than found in the study area composed of Delaware and southern New Jersey as noted in the Demographic section of Chapter 2. I believe these numbers reflect the racial differences of veterans who choose the Wilmington VAMC and the aligned CBOCs for health care. A higher percentage of Black/African American veterans compared to White veterans use the Wilmington VAMC for primary health care.

In terms of birth sex, two-thirds of the study sample identified as male, and one-third identified as female. As noted in Chapter 2, the Wilmington VAMC and the aligned CBOCs served 39, 593 veterans in 2021 of which 5,247 were female or 13.25% of veterans seen. A higher percentage of females were included in the study sample than the percentage seen at the

Wilmington VAMC and the CBOCs. Furthermore, 6 out of the 9 (66.6%) veterans who attended mindfulness-based programs were female compared to 3 out of the 9 (33.3%) male attendees. I believe this reflects more interest and motivation among the female veterans in the mindfulness programs compared to the male veterans.

Ninety percent of the study sample identified as Not Hispanic or Latino and only two veterans identified as Hispanic/Latino or 4.9% of the sample population. This was a surprising finding. In a previously cited study, Goldberg et al. (2019) noted participation in mindfulness program was highest among veterans of Hispanic ethnicity. This finding could reflect this projects catchment area which may have a lower proportion of veterans with Hispanic ethnicity than was found in the Goldberg study.

Finally, there was a surprising finding in terms of the gender of the providers who ordered mindfulness-based program referrals; female providers wrote most of the referrals. Another interesting anecdotal finding was that the three female MDs who wrote almost one-third of all referrals to mindfulness classes were of southeast Asian heritage. At the time of this study, there were two male physicians working in the Primary Care Clinic at the Wilmington VAMC. However, there were no consults written by male physicians at the Wilmington VAMC or the CBOCs. As previously noted, only one of the two male NPs in the Primary Care Clinic at the Wilmington VAMC wrote referrals for mindfulness-based programs. Another point of interest was that all the NP referrals came from the Primary Care Clinic at the Wilmington VAMC and none from the CBOCs. This is of note because there is a mental health NP at one of the CBOCs who is male but who did not write any referrals. This strong association between female doctors and mostly female NPs writing mindfulness-based program referrals and male doctors and male NPs not writing mindfulness-based program referrals may indicate that female primary care

providers are more holistic in their approach to mental health issues and embrace CIH practices more than their male counterparts. This is an area that warrants further investigation.

## **Chapter 5**

### **Discussion**

In 2017, mindfulness meditation and mindfulness-based practices became part of the VHA evidence-based benefits package available to all veterans. The Wilmington VAMC offers mindfulness-based programs in guided imagery, tai chi, and an introduction to mindfulness class that leads to admission to a mindfulness-based stress reduction program called VA-CALM. However, as shown in this study, these programs are not attended by veterans referred by their primary care providers. The purpose of this QI project, therefore, was to increase veteran participation in the mindfulness-based programs offered at the Wilmington VAMC.

I conducted a retrospective chart review of one-hundred forty-eight whole health consults written by primary care providers at the Wilmington VAMC between August 1, 2021, and December 31, 2021. I identified forty-one consults that referred veterans to mindfulness-based programs. I used descriptive statistics to analyze veteran demographic data, and medical and mental health comorbidities, as well as to analyze data related to provider medical profession, provider practice location and scheduling outcomes/veteran attendance to the referred programs. The key findings of this study were that few veterans attended the mindfulness-based programs to which they were referred, only a few of the eligible primary care providers wrote referrals to mindfulness-based programs, and most of the referrals were written by female primary care providers.

Another interesting finding was that few veterans identified as feeling stress. I thought more veterans would report feeling stress due to the current COVID-19 pandemic. This finding may be due to the impact of high COVID-19 immunizations among veterans in the study area and the decline in COVID-19 hospitalizations. The three most frequent diagnoses in the study

sample were chronic pain, depression and anxiety which was expected as these are common diagnoses among veterans. Seventeen percent of the sample population had a diagnosis of PTSD which is consistent with the national prevalence of PTSD among veterans. Studies have shown that among veterans with a history of combat, PTSD and chronic pain are frequent comorbid conditions with a bi-directional relationship meaning that one frequently precipitates the other. (Benedict et al., 2020).

### **Study Findings Framed by Theoretical Framework**

The aims of this study were: 1) to conduct a chart review and analysis of referral program enrollment patterns, and 2) produce a set of recommendations to increase primary care referrals and veteran enrollment in mindfulness-based programs. Appreciative Inquiry was used as the theoretical framework to guide my journey through this project. The retrospective chart review and data analysis aligned with the Discovery stage of AI. The study results showed that the strengths of the mindfulness-based referral process are the female providers in the primary care clinics. Their commitment and support of mindfulness-based therapies and CIH practices should be emulated by all primary care providers. The Dream stage, or the vision for the future, are the recommendations included in this report to increase referrals from primary care providers and veteran enrollment in mindfulness-based programs. The next stage of this project, the Design stage in AI terminology, should focus on the creation of an education program for primary care providers and veterans based on the findings of this study. To sustain the outcomes that result from this study, I recommend selection of a mindfulness program champion(s) from the primary care staff who would act as a liaison between the primary care providers and the whole health program. The primary care whole health liaison(s) would attend VA outreach activities and

provide education on the benefits of mindfulness practice to veterans and the Wilmington VAMC staff.

## **Implications of Study Findings**

### ***Practice***

Although reasons for veterans' refusal to schedule mindfulness classes or for cancelling scheduled appointments were not documented on most referrals, five veterans indicated that they could not attend classes because class times interfered with their work schedules. Even though the tai chi classes, guided imagery classes, the introduction to mindfulness class and the VA-CALM program are conducted virtually, the classes are scheduled during the day which is inconvenient for working veterans. Alternative class and provider schedules would improve access and participation in mindfulness programs. Across the VA, most employees' work schedule, also called "tour of duty", is from 8AM to 4:30 PM. The tour of duty can be adjusted to start later in the morning and end later in the day with permission of a supervisor. Employees conducting the mindfulness-based classes could adjust their tour of duty so classes could be held later in day when veterans are not working.

Since practice within the VA is not limited by state boundaries or state license, the Wilmington VAMC can hire employees from western areas of the United States to provide virtual classes later in the day or early evening; the employee can still work within their normal tour of duty and the veteran can attend a class in the evening after work. I work in a telehealth program for the Wilmington VAMC providing long term virtual medical care to veterans throughout Pennsylvania, southern New Jersey, and Delaware. There are also two NPs in my program who live in western United States; one lives in Wyoming and the other in Las Vegas, Nevada. These providers were hired to see veterans virtually later in the day or in the early



evening when veterans in the East are home from work. A similar hiring practice could be used for providers of the mindfulness-based programs.

Mindfulness-based classes can also be given by providers who work on a fee for service basis. These providers could conduct classes in the evening and be paid per veteran who attends the class. For example, a provider can present a virtual mindfulness meditation class in the evening and be financially compensated on a per diem rate for the class or according to the number of veterans who attend.

Finally, veterans cannot receive incentives to attend any VA sponsored programs or therapies. However, providers can be prompted to engage patients in a discussion about programs and therapies. This can be accomplished by adding an electronic reminder in the EMR that alerts the provider to include a discussion of mindfulness-based therapies when discussing pain management or treatment for anxiety and depression. Flexible scheduling and hiring practices would make mindfulness-based programs more accessible to veterans and electronic prompts in the EMR would help to increase referrals.

### ***Education***

I suspect knowledge deficits by both primary care providers and veterans regarding the medical and mental health benefits of mindfulness-based practices are contributory to the small number of referrals and scheduled mindfulness-based classes. The Whole Health Clinical Director created a brochure describing whole health programs available to veterans (Appendix C). Copies of the brochure are available in public areas of the medical center for veterans to take for their information. The Whole Health Clinical Director also speaks about the mindfulness-based programs at provider facing meetings and veteran facing townhalls (personal communication, April 5, 2022). Classes in tai chi and guided imagery are available to employees

during work hours. Providers can take these classes for personal enrichment and to attain experiential familiarity with the programs. The primary care providers can use these experiences to better inform veterans about the mindfulness programs. Few primary care providers, however, have time during their workday to take a class. The current outreach and education modalities used by whole health are acceptable, but don't reach enough veterans or providers to increase referrals or veteran participation.

I recommend an alternative approach which would use the VA secure messaging platform to distribute information about the medical and mental health benefits of mindfulness-based programs to veterans. Secure messaging distribution groups can be created on any provider desk top computer. The Whole Health Clinical Director or designee can create multiple distributions groups. Information about the health benefits of mindfulness -based therapies, class and registration information can be distributed electronically to large numbers of veterans at one time. By using secure messaging, veterans would also be able to self-refer to the programs by simply responding to the secure message.

I also recommend virtual mindfulness classes in the evening to enhance education, experience and enjoyment for providers who are not able to attend classes during the day. An electronic survey to assess providers' knowledge, beliefs and attitudes about mindfulness practice can be conducted. Based on the results of the survey, an education program for primary care providers should be developed. This program can be given by the mindfulness champion(s) and would address provider knowledge deficits and biases.

### ***Policy***

Currently, the mindfulness-based programs at the Wilmington VAMC are restricted to veterans who receive care at the Wilmington VAMC and the aligned CBOCs. I would like to see

mindfulness-based programs become available on the VISN level so they could be accessible to veterans outside the Wilmington VAMC catchment area. This would allow veterans from remote areas of VISN 4, such as upstate or western Pennsylvania, or areas that have less mindfulness-based program offerings, to participate in a wider variety of programs. A virtual class might only have a few participants from the Wilmington VAMC catchment area but could have more in attendance if enrollment was opened to veterans throughout the VISN 4.

Veterans should also be allowed to self-refer to these programs. To ensure veteran safety and appropriateness for the mindfulness-based programs, the mindfulness program provider should have access to veteran's EMRs and discuss veteran's mental health with the local primary care providers and mental health specialists. To allow a veteran to self-refer to a mindfulness-based program outside of their respective VA medical centers would require a policy change at the VISN level. The provider would need clearance from multiple medical centers to allow access to their EMRs.

To contribute to the success of the mindfulness-based programs and demonstrate benefit to the veteran, program outcomes need to be identified and measured. For example, participants could complete satisfaction surveys upon completion of the mindfulness-based program. Positive responses by program participants would provide convincing evidence of the benefits of the program to support continuation.

Financial benefit to the VA on a local level or VISN level would also provide a strong incentive to continue the mindfulness-based programs. As noted previously, reductions in billable encounters at a medical center in New England was noted for patients following participation in a MBSR program (Stahl et al., 2015). Identification of reductions in the health

care costs for veterans following participation in a mindfulness-based program would provide data to support continuation of the program.

Increased revenue to a VA medical center as a result of mindfulness-based programs is another way to ensure program sustainability. Currently, VA medical centers pay other VA medical centers for services that are not available at their site. If veterans from remote areas who receive care from other VAs attend the virtual mindfulness programs, their medical center would pay the Wilmington VAMC for the class which would generate income to the Wilmington VAMC. Changes in policies to improve access to care and financial incentives would contribute to sustainability of the mindfulness-based programs at the Wilmington VAMC.

### ***Research***

In 2016, the federal government passed the Comprehensive Addiction and Recovery Act (CARA) which included Title IX, Section 932 that required the VA to provide accessible CIH practices for preventative and chronic mental health care. As mentioned previously, a key finding in this QI project was that most of the referrals to mindfulness-based programs were written by female providers. Although the VA, has developed many CIH programs, including mindfulness-based programs, lack of knowledge and biases on the part of primary care providers throughout the VA may limit referrals and thus veterans' access to these programs. I would like to expand this study to multiple medical centers with more diverse provider staff to determine if this was a local trend or a more widespread phenomenon. Identifying referral patterns and characteristics of providers more prone to refer veterans to mindfulness programs will help the development and focus of provider education programs, improve veteran access to care and contribute to the evidence-based literature supporting mindfulness therapies.

## **Limitations**

I initially attempted a larger more robust project but was unable to secure enough veterans that would attend a 21-hour MBSR program and maintain participant confidentiality. This required a revision to my original QI project. This revised project was a first step to increase veteran participation in mindfulness-based programs offered at the Wilmington VAMC. The convenience sampling technique, small sample size and narrow focus prevents generalization or application of the study results to other CIH therapies or mindfulness-based programs within and outside the VA. The study population is at risk for sampling bias as I was the only investigator reviewing the consults and selecting the mindfulness-based referrals to include in the study. This could have been prevented had another person been involved in the study to review my selections. Finally, bivariate analysis was conducted using four independent variables (female, depression, tai chi arthritis, ethnicity Not Hispanic/Latino) and one dependent variable (classes attended), however no statistically significant relationship was noted. This was probably due to small sample size and small number of participants who attended mindfulness-based classes.

## **Conclusion**

This study confirmed the limited participation of both primary care providers and veterans in mindfulness-based programs at the Wilmington VAMC. The small number of mindfulness-based program referrals and class attendance by veterans points to the need for increased buy-in to the benefits of mindfulness -based therapies by both providers and veterans. For veterans to receive the evidence-based mental health and medical benefits of mindfulness practice, there needs to be alternative class schedules, increased education, and more effective marketing to veterans and to providers. The use of technological applications available at the VA are recommended to improve the spread of information about mindfulness and expand

availability of mindfulness classes to accommodate veterans' schedules and needs. Mindfulness-based therapies have sufficient evidence in the literature and in clinical practice to warrant more widespread use in the veteran population. It is the responsibility of primary care providers to use all available mechanisms to improve access to mindfulness-based programs for veterans at the Wilmington VAMC and throughout the VA.

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**Table 1***Demographic Characteristics of Study Sample (N=41)*

Demographic characteristic	n	M $\pm$ SD or %
Age	41	56 $\pm$ 13.1
Male	28	68.3
Female	13	31.7
White	19	46.3
Black/African American	19	46.3
Native Hawaiian/Pacific Islander	1	2.4
American Indian/Alaska Native	1	2.4
Asian	1	2.4
Not Hispanic or Latino	37	90.2
Hispanic or Latino	2	4.9
Unknown ethnicity	2	4.9

*Note.* All percentages and standard deviation rounded to nearest tenth percent.

**Table 2***Mental Health and Medical Comorbidities of Study Sample (N=41)*

Comorbidity	n	%
Stress	2	4.9
Anxiety	13	31.7
Post-traumatic stress disorder	7	17.1
Depression	20	48.8
Chronic pain	29	70.7
Heart disease	1	2.4
Lung disease	4	9.8

*Note.* All percentages rounded to nearest tenth.

**Table 3***Referrals by Primary Care Providers to Mindfulness-Based Programs (N=59)*

Mindfulness-Based Program	n	%
Introduction to Mindfulness	15	25.4
Guided Imagery	16	27.1
Total referrals to Tai Chi programs	28	47.4
Tai Chi for Energy	8	13.5
Tai Chi for Arthritis	12	20.3
Tai Chi for Rehabilitation	8	13.5

*Note:* All percentages rounded to nearest tenth.



**Table 4***Provider Consults to Mindfulness-Based Programs (N=41)*

Provider	n	%	Wilmington	CBOC
Nurse Practitioner	17	41.5	17	0
Medical Doctor (MD)	23	56.1	15	8
Osteopathic Doctor (DO)	1	2.4	0	1

*Note:* All percentages rounded to nearest tenth.

**Table 5***Number of Consults Written for Mindfulness Program Per Provider (N=41)*

Primary Care Provider	Number of Consults
NP 1	8
NP 2	6
NP 3	3
MD 1	5
MD 2	4
MD 3	4
MD 4	3
MD 5	2
MD 6	1
MD 7	1
MD 8	1
MD 9	1
MD 10	1
DO	1

**Table 6***Outcomes of Mindfulness-Based Program Referrals (N=59)*

Scheduling Outcome	n	%
Number of referrals in which:		
Veteran was no show for scheduled appointment	3	5.0
Veteran declined to schedule appointment *	18	30.5
Failed Mandated Scheduling Effort	15	25.4
Veteran cancelled scheduled appointment **	8	13.5
Veteran attended at least one class of mindfulness-based program	10	16.9
Veteran scheduled into alternative whole health offering-Introduction to Whole Health	5	8.5

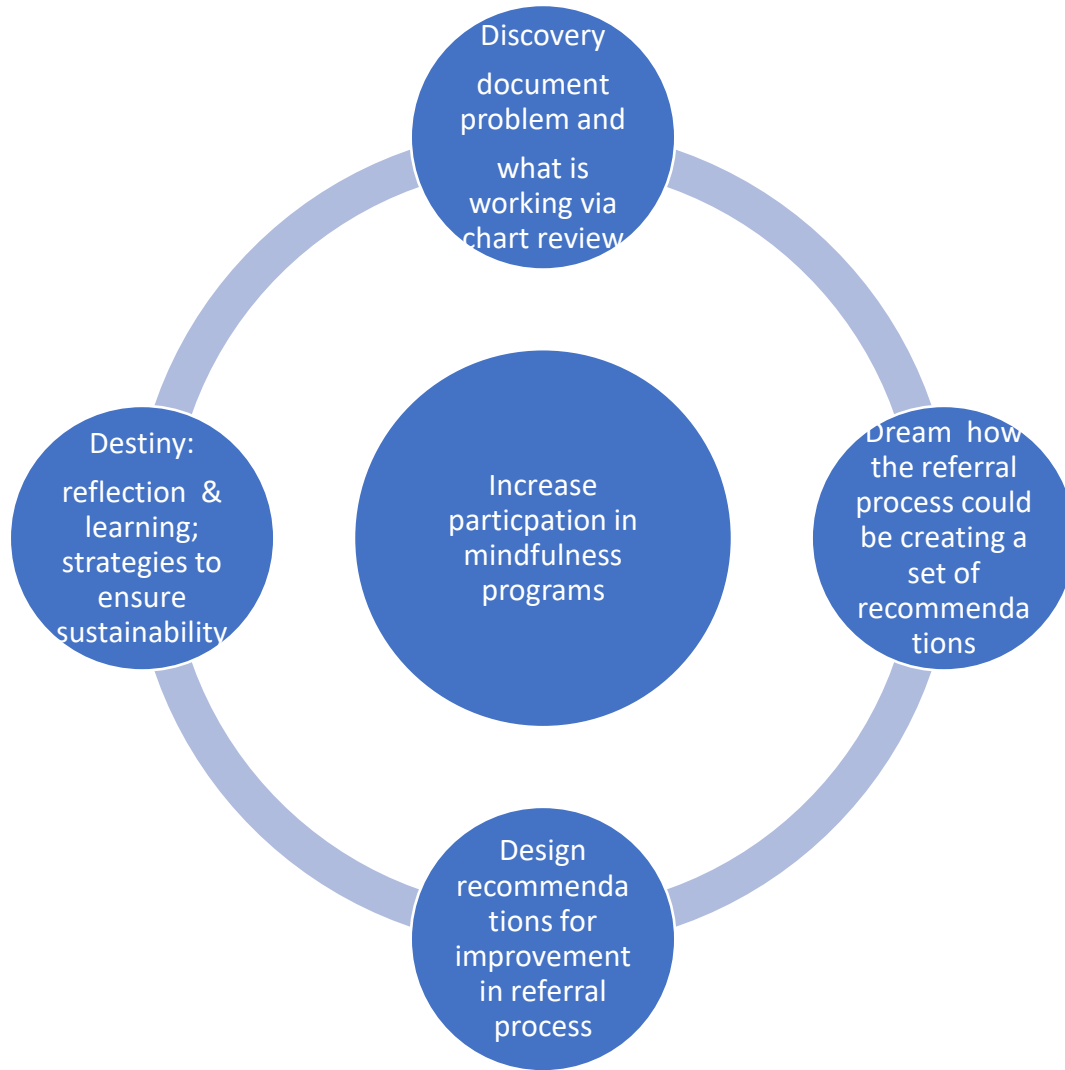
*Note:* All percentages rounded to nearest tenth.

\*Four veterans declined to schedule because class times conflicted with work schedule.

\*\* One veteran cancelled due to conflict with work schedule.

**Figure 1**

*QI project process utilizing Appreciate Inquiry approach*



Appendix A



Office of Research and Sponsored Programs | West Chester University | Ehinger Annex  
West Chester, PA 19383 | 610-436-3557 | [www.wcupa.edu](http://www.wcupa.edu)

Feb 22, 2022 9:57:51 AM EST

To: Cynthia Lang-Groening  
School of Nursing, Nursing

Re: Expedited Review - Initial - IRB-FY2022-176 Whole Health Mindfulness-Based Program Improvement

Dear Cynthia Lang-Groening:

Thank you for your submitted application to the WCUPA Institutional Review Board. Since it was deemed expedited, it was required that two reviewers evaluated the submission. We have had the opportunity to review your application and have rendered the decision below for Whole Health Mindfulness-Based Program Improvement.


Decision: Approved

Selected Category: 5. Research involving materials (data, documents, records, or specimens) that have been collected, or will be collected solely for nonresearch purposes (such as medical treatment or diagnosis).

Sincerely,  
WCUPA Institutional Review Board

# Appendix B

## VA Research vs. Non-Research Operations Evaluation Form

 U.S. Department of Veterans Affairs Veterans Health Administration		Research vs. Non-Research Operations Evaluations	
<p><b>Instructions:</b> In accordance with 3845 Program Guide 1000.21, "VA Operations Activities That May Constitute Research," VA employees may conduct certain operations activities which may or may not constitute research. Whenever the research versus non-research status of an operations activity may be in question, a determination of the status must be made.</p> <p>Form must be completed, signed and submitted electronically to one of the following:                      Coatesville VAMC: <a href="mailto:dean.mcclellan@va.gov">dean.mcclellan@va.gov</a>      Wilkes-Barre VAMC: <a href="mailto:janey.funk@va.gov">janey.funk@va.gov</a>                      Wilmington VAMC: <a href="mailto:stephen.usack@va.gov">stephen.usack@va.gov</a></p> <p>Please reference the <b>VA Operations Activities That May Constitute Research</b> decision tree for an overview of how a decision between research and non-research activities is determined.</p>			
<b>Project Title</b> Whole Health Mindfulness-Based Program Improvement			
<b>Project Lead</b> Corinne Long-Groening			
<b>Email &amp; Phone</b> c.long@va.gov; 302-325-2000			
<b>Facility</b> Wilmington VAMC		<b>Department/Service</b> Chronic Resource Unit	
<b>Reason for Project</b> <input type="checkbox"/> VHA/VISN Directive <input checked="" type="checkbox"/> Other (reason): <input type="checkbox"/> Local Directive            Support implementation of local Whole Health services			
<p><b>Research:</b> A systematic investigation (including research development, testing and evaluation) designed to develop or contribute to generalizable knowledge. Research may be defined as a systematic investigation designed to produce information to expand the knowledge base of a scientific discipline (or other scholarly field of study).</p> <p><b>Systematic Investigation:</b> An activity that is planned in advance and that uses data collection and analysis to answer a question. NOTE: Although research must include systematic investigation, non-research operations activities also include systematic investigation to ensure reliable outcomes. Systematic investigation does not, in and of itself, define research.</p> <p><b>Generalizable Knowledge:</b> Information that expands the knowledge base of a scientific discipline or other scholarly field of study. Systematic investigations designed to develop or contribute to generalizable knowledge constitute research. Thus, systematic investigations designed to produce information to expand the knowledge base of a scientific discipline or other scholarly field of study constitute research.</p>			
<p><b>Complete this form for determination of Research vs. Non-Research</b></p>			
1. Is the project designed and/or implemented for internal VA purposes in support of the VA mission? <input checked="" type="checkbox"/> Yes - Please explain below and answer question. <input type="checkbox"/> No -		This Activity May Constitute As <b>RESEARCH</b>	
No program improvement project attempts to increase veteran participation in the Whole Health mindfulness-based programs offered by the Wilmington VAMC. In 2017, mindfulness-based programs became part of the VHA's evidence-based health benefits.			
2. Are the activity's findings designed to be used by and within VA (or by others) responsible for increasing the VA?			
No program improvement project will identify and analyze patterns of consult and referral by primary care providers to the Whole Health mindfulness-based programs. Referrals will be otherwise analyzed for veteran participation in these programs. Analysis results will be used to:			
3. Is the activity designed for the purpose of contributing to generalizable knowledge (i.e., expanding the knowledge base of a scientific discipline or scholarly field of study)? <input type="checkbox"/> No - Please explain below and answer question. <input checked="" type="checkbox"/> Yes -			
No program improvement project will attempt to increase referrals from primary care providers to Whole Health mindfulness-based programs at the Wilmington VAMC.			
0202, Research vs. Non-Research Determination <span style="float: right;">Page 1 of 4</span>			
4. Is the activity funded or supported as research? <input type="checkbox"/> No - Please explain below and answer question. <input type="checkbox"/> Yes -		Research & Development Committee and Appropriate Subcommittee Approval is Required	
The project is not receiving any monies from VA or non-VA sources.			
5. Is the activity a clinical investigation as defined under the Federal & Drug Administration (FDA) regulations? (administration, dispensing and/or use of any drugs, devices and/or biologics.) <input type="checkbox"/> No - Please explain below and answer question. <input type="checkbox"/> Yes -			
None are not drugs, devices or biologics associated with this project.			
6. Does the activity involve design characteristics typically reflective of research, e.g.: • Double-blind interventions • Use of Placebo controls • Prospective patient-level randomization to clinical interventions not tailored to individual benefit? <input type="checkbox"/> No - Please explain below and answer question. <input type="checkbox"/> Yes -			
The program improvement project will use a retrospective chart data analysis of Wilmington VAMC electronic health records.			
7. Has the activity been supplemented or modified before, during, or after implementation in order to produce information to expand the knowledge base of a scientific discipline or scholarly field of study or otherwise contribute to generalizable knowledge? <input type="checkbox"/> No - Please explain below and answer question. <input type="checkbox"/> Yes -			
The project has not been conducted in the past. It will for the first time produce information to be used by Wilmington VAMC for program improvement purposes.			
8. Has the purpose of the activity changed so that it is now designed or intended to expand the knowledge base of a scientific discipline or scholarly field of study or otherwise contribute to generalizable knowledge? <input type="checkbox"/> No - Please explain below and answer question. <input type="checkbox"/> Yes -			
Not the first time this project will be conducted.			
<b>PROJECT DESCRIPTION</b>			
In the following fields, please provide enough information about the proposed project that a reviewer understands why and how the work will be performed. Please define all acronyms. Failure to address the following will delay determination of your project.			
I. <b>Objective(s):</b> What is the purpose of the project? What are the issues/questions being addressed and why?			
Purpose: The purpose of this program improvement project is to increase veteran participation in the Whole Health mindfulness-based programs offered by the Wilmington VAMC. The specific aims are to: 1) conduct a chart review and conduct an analysis of referral and program enrollment patterns and 2) produce a set of recommendations to increase provider referrals to and veteran enrollment in the Whole Health mindfulness-based programs offered by the Wilmington VAMC.			
Background: By DC, section 332 of the Comprehensive Addiction and Recovery Act (CARA) required the Department of Veterans Affairs (VA) to improve complementary and integrative health (CIH) services for veterans. Since the			

## Appendix B, continued

**How the work will be conducted including data collection and analysis.**

**Who will be involved:**  
 All of the work will be performed by Cynthia Lang-Groening APRN, NP-C. Ms. Lang-Groening will be the only person with access to the protected health information (PHI) and personal identifiable information (PII) data. The project is being conducted by Ms. Lang-Groening, in part, for completion of a Doctor of Nursing Practice (DNP) degree from West Chester University. Dr Cheryl Schantz and the West Chester University Institutional Review Board will have access to coded and uncoded (de-identified) aggregated data.

**How will the work be conducted/data collection:**  
 Retrospective data of Whole Health consults entered in CPRS between 8/1/21 to 12/31/21 will be extracted. Review and analysis will be conducted using a government-issued, FIV protected computer. The computer is located in a locked server room in a locked server office.

**3. Impact/Significance: What will be done with the resulting information?**  
 The Whole Health Clinical Director at the Wilmington VAAMC will receive a report of recommendations to increase provider referrals to and patient enrollment in the Whole Health nonpharmacologic programs offered by the Wilmington VAAMC.

**Provide any supporting documentation with this determination, if applicable.**

**Project Lead Signature:** Cynthia Lang-Groening 167449  
(Signature)

Digitally signed by Cynthia Lang-Groening 167449  
 Date: 2021.12.09 22:08:04 -0500

As the Supervisor/Care Line Manager for the staff member above, I support this activity.

**VA Supervisor/Care Line Manager Signature:** ROMINA THOMAS  
(Signature)

Digitally signed by ROMINA THOMAS  
 Date: 2021.12.14 07:40:36 -0500

**Form must be signed with VA electronic signature.**

**FOR RESEARCH OFFICE USE ONLY:**

- Not Research** - It has been determined that based on the responses above and the proposed project description approval by an IRB or other review committee is not needed. The project is considered to be non-research VHA operations activity. If the results of this project are presented or published, they cannot be presented as research, nor does it have research approval.
- Research** - As designed, this project requires review by an IRB or RDC prior to initiation. Please contact Research Office for more information.
- Additional information is needed to make a determination.** See Comments below.

**M-S IRB Reviewer Signature**

**Matthew F. Alfonso 143952**  
(Signature)

Digitally signed by Matthew F. Alfonso 143952  
 Date: 2021.12.13 10:27:58 -0500

This decision of non-research status was made in compliance with [VHA Program Guide 1200.21](#). Documentation of non-research status is (i) required prior to peer-reviewed publication, and (ii) encouraged whenever non-research activity status may be questioned. This form serves as documentation of non-research status for this activity. This form may be provided post-review publication, if required.

It is the responsibility of the Project Lead to retain a copy of this form signed by the ACCS/R&D for a minimum of 6 years after publication and in accordance with any applicable records retention schedules. A copy will also be retained by Research Services.

**ACCS/R&D or CR&D Signature**

**Suzanne A. Milbourne 3332465**  
(Signature)

Digitally signed by Suzanne A. Milbourne 3332465  
 Date: 2021.12.13 10:30:08 -0500

**Form must be signed with VA electronic signature.**

## Appendix C

### Whole Health Brochure

#### Guided Imagery

Guided Imagery is a form of silent meditation using all the senses to relax and promote healing. It has been shown to be beneficial for lowering anxiety & pain.

**Mondays 11:30 AM (VVC)**



#### Yoga

We offer 3 levels of yoga. *Yoga Stretch* is a 30 minute seated class suitable for all levels. *Chair yoga* is a 60 minute class blending seated and standing poses using the chair for balance.

*Vinyasa yoga* is a 60 minute class for

beginner/intermediate students. **Yoga Stretch:**

**Wednesdays 11am (VVC)**

**Chair Yoga: Mondays 2:30pm (VVC) Vinyasa:**

**Wednesdays 3pm (VVC)**

#### Whole Health for Tobacco Cessation

4- Week group focused on learning skills for quitting tobacco while highlighting what matters most to you. Medication assistance for quitting available as part of the group.

for quitting available as part of the group.

**Mondays 2pm (VVC)**

**Whole Health Introduction Groups**

During this class you will take part in a discussion about your well-being, healthy lifestyle choices and learn ways to identify and reach your goals. Great place to learn more about the other wellness offerings as well.

**1<sup>st</sup> Wednesdays 10am, 2<sup>nd</sup> Tuesdays 2pm, 4<sup>th</sup> Tuesdays 1pm (VVC)**



#### VA-CALM Mindfulness Group

The mindfulness group focuses on learning mindfulness meditation skills and help vets live more fully in the moment. Mindful practices can help reduce stress and promote health and wellness. This is a 6-week cohort based group.

**Mondays 11am-12:30pm (Webex)**

#### Taking Charge of My Life and Health Group

Peer-led group education 9 week series exploring the 8 domains of proactive self-care. Assists veterans to explore what matters most and what they want their health for. Support given for goal setting and self-directed action towards those goals.

**Thursdays 10:30am-12pm (VVC)**

## Whole Health

## Wellness Offerings



**VA HEALTH CARE** Defining EXCELLENCE in the 21st Century

Wilmington VA Medical Center

1601 Kirkwood Highway

Wilmington, DE 19805

**All Classes available via Whole Health Consult**

#### Tai Chi:

Join us for a Tai Chi class! We offer Paul



## Appendix C, continued

Both the Tai Chi for Arthritis and Tai Chi for Rehabilitation & Tai Chi for Energy. Both the rehab and arthritis classes are focused on learning the fundamentals of the Sun style of tai chi which is centered around slow, purposeful movements coupled with deep breathing techniques. The Tai Chi for Rehabilitation Class teaches 6 side to side movements- a perfect beginners class. The Tai Chi for Arthritis class teaches 12 more complex movements as you hone your skills! Tai Chi for Energy is more complex, but can be learned by all!



**Tai Chi for Rehabilitation: Tuesdays 1pm**

**Tai Chi for Arthritis 1: Tuesday 11am;  
Thursday 3:30pm**

**Tai Chi for Arthritis 2: Tuesday 3:30pm**

**Tai Chi for Energy: Thursday 11am**

**All available VVC or in person Room 7070**

includes an introductory session, followed by seven weekly active sessions. Each session is 60 minutes in length. The program will work on a cohort basis to limit each class size, ensuring individual attention to each participant. Participants must be willing to attend all sessions in a given cohort.



### Sessions

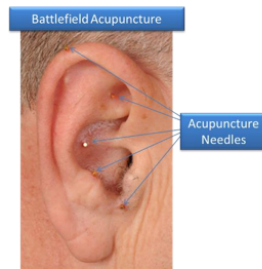
Introductory Class Physiology of Pain/  
Introduction to Exercise for Pain Coping  
with Pain  
Nutrition for Pain  
Medication for Pain  
Stress Management  
Tai Chi  
Yoga

**Thursdays 9:30am (VVC)**

#### **Battlefield Acupuncture Clinic**

Over the years research has shown that

reduce pain. This works by suppressing pain transmission at the spinal cord as well as releasing chemicals to reduce the feeling of pain. It has been proven a safe and effective way to treat pain over thousands of years.



#### *What is Battlefield Acupuncture?*

While traditionally you may think of acupuncture as many needles all over the body, Battlefield Acupuncture is just in the ear. The theory is that the entire body is represented in the ear and by placing small needles in the surface some of the