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Whole Health System of Care Evaluation – A Progress Report on Outcomes of the WHS Pilot at 18 Flagship Sites

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Executive Summary

In 2016, the US Congress passed the Comprehensive Addiction and Recovery Act (CARA)[1] to address the national opioid epidemic. The bill specifically directs the US Department of Veterans Affairs (VA) to address pain management for Veterans, and to conduct research on the implementation and impact of complementary and integrative health (CIH) and other approaches on the health and well-being of Veterans. In response, the VA's Office of Patient-Centered Care and Cultural Transformation formalized an approach to care called the Whole Health System of Care (WHS), incorporating patient-centered care and complementary and integrative health. In FY18, each Veterans Integrated Service Network (VISN) identified and funded a flagship site for a 3-year pilot implementation of the WHS.

This White Paper is a progress report on implementation of the WHS at the 18 flagship sites after 2 years. We report on 1) progress towards implementation of the WHS; 2) utilization of Whole Health (WH) services; 3) the impact of WH service use on Veterans' health and well-being; and 4) the impact of the WHS implementation on employees. Below is a summary of findings in each of these areas.

1) Progress towards implementation
   - All 18 sites made progress along the implementation continuum.
   - As of October 2019, one site reached the advanced stage of implementation, 9 early, and 8 foundational; however, most of those in foundational were close to early, and two in early were close to advanced.
   - There was variation in implementation of different components of the system – furthest along was in implementing CIH and well-being services, whereas implementation of WH clinical care was slowest to progress.
   - Key facilitators to implementation include 1) strong leadership including tangible support for WH, which is viewed as a strategy for meeting VA priorities, and 2) an organizational culture in which being a learning organization is valued.
   - Key barriers to implementation include 1) infrastructure constraints; 2) perceptions of WH as a program rather than an approach; and 3) misalignment of clinical and facility level incentives.
2) Utilization of WH services among Veterans
   - 31% of Veterans with chronic pain (up to 55% at 1 flagship) engaged in some WH services.
   - With continued investment in the WHS, we would expect 44% of Veterans with chronic pain to engage with WH services by the end of 2020.
   - Since 2017, we found 193% increase in utilization among Veterans with chronic pain, 211% increase among Veterans with mental health diagnoses, and 272% increase among Veterans with chronic conditions.
   - 26% of Veterans with chronic pain used complementary and integrative health therapies; although many of these services were delivered in the community, an increasing proportion are being delivered within VA due to hiring of CIH providers within VA at the pilot sites.
3) Impact on Veterans
   - Whole Health had a positive impact on reducing opioid use among Veterans.
     - There was a threefold reduction in opioid use among Veterans with chronic pain who used WHS services compared to those who did not. Opioid use among comprehensive WH users decreased 38% compared with an 11% decrease among those with no WH use.
   - Findings on Veteran-reported outcomes from our Veterans Health and Life Survey are preliminary, however compared to Veterans who did not use any WHS services, Veterans

who used WHS services demonstrate trends towards improvements in patient-reported health and well-being outcomes. These early findings show improvements over a 6-month period and are promising for the future.

- Compared to Veterans who did not use WH services, Veterans who used WH services reported:
  - Greater improvements in perceptions of the care received as being more patient-centered.
  - Greater improvements in engagement in healthcare and self-care.
  - Greater improvements in engagement in life indicating improvements in mission, aspiration and purpose.
  - Greater improvements in perceived stress indicating improvements in overall well-being.
- These findings were particularly strong among Veterans who were comprehensive WHS users, defined as having at least 8 visits including both core WH services and CIH services.
- Preliminary findings suggest that comprehensive WHS service use may produce pharmacy cost savings.
  - WHS service use among Veterans with mental health conditions was associated with smaller increases in outpatient pharmacy costs (3.5% annual increase) compared to similar Veterans who did not use WHS services (12.5% annual increase).
  - Comprehensive WHS service use among Veterans with chronic conditions was also associated with smaller increases in outpatient pharmacy costs (4.3% annual increase) compared to similar Veterans who did not use WHS services (15.8% annual increase).
- Data are not yet available to determine if use of WHS services results in cost savings or lower utilization of more expensive care, or helps Veterans avoid costly procedures, ER visits, inpatient admissions and other types of care.

4) Impact on Employees

- Employee involvement in provision of WH expanded from 2018-2019 in all sites.
- Variation exists in different clinical areas, with the greatest uptake in primary care, mental health, rehabilitation, and home/community care.
- Employees who reported involvement with WH also reported:
  - Their facility as a ‘best place to work’
  - Lower voluntary turnover
  - Lower burnout
  - Greater motivation
- Facilities with higher employee involvement in WH had higher ratings on hospital performance, as measured by Strategic Analytics for Improvement and Learning (SAIL).
- Facilities with higher employee involvement in WH had higher ratings from Veterans on receiving patient-centered care as measured in the Survey of Healthcare Experiences of Patients (SHEP).

In summary, these findings indicate that VA’s efforts to change the way care is delivered to be more patient-centered and incorporate CIH have had some early success. Both Veterans and employees appear to benefit from implementation of a WH approach to care, and the trends towards improvement we identified are likely to continue with further implementation and spread of WH services. Sites continue to work towards further transforming care, and with sustained investment, are likely to succeed in full implementation of the system. Further transformational efforts are necessary to achieve a true cultural change in the way care is delivered throughout the Veterans Healthcare System.

1.0 Introduction

1.1. Purpose of this evaluation

In October of 2017, 18 VA medical centers received funding to implement the Whole Health System of Care (WHS). This initiative was a response to requirements of the Comprehensive Addiction and Recovery Act (CARA), aimed in part at addressing the problems of opioid addiction and chronic pain management amongst our nation's Veterans. The bill's focus on increasing the use of complementary and integrative health (CIH) approaches dovetailed well with the VA's development of the Whole Health approach to care, which expands beyond discrete CIH therapies to provide a more comprehensive, Veteran-centered approach to care for all Veterans.

One facility in each of the 18 Veterans Integrated Service Networks (VISNs) was selected to participate in piloting the WHS. VISN directors selected sites considering several criteria outlined in the CARA legislation. The participating sites included facilities that provide polytrauma care to Veterans, facilities struggling with opioid prescribing rates, and facilities already engaged in Whole Health (WH) activities.

A key component of the CARA legislation was for the VA to conduct research on the impact of CIH on Veterans. This report presents early findings from the large-scale evaluation of the implementation of the WHS, utilization of WH services, and the impact on the health and well-being of Veterans receiving services at these 18 flagship facilities. As this is a whole system change, we also report on the impact on employees, critical to ensuring the continued engagement of high-quality employees ready to provide Whole Health care.

1.2 What is the Whole Health System of Care?

The VA Office of Patient Centered Care and Cultural Transformation (OPCC&CT) has been promoting patient-centered care through the implementation of the Whole Health System of Care. OPCC&CT defines Whole Health as an "approach to healthcare that empowers and equips people to take charge of their health and well-being and live their life to the fullest.".[2,3] The goal is to transform the organization and culture of care to a system which starts with understanding the Veteran's life mission, aspiration and purpose (i.e., what matters most to the Veteran) and then provides care to improve Veterans' overall health and well-being. WH integrates peer-led explorations of Veterans' mission, aspiration and purpose, personalized health planning, and use of WH coaches and well-being classes, with both allopathic and complementary and integrative clinical care that focuses on Veterans' goals and priorities.

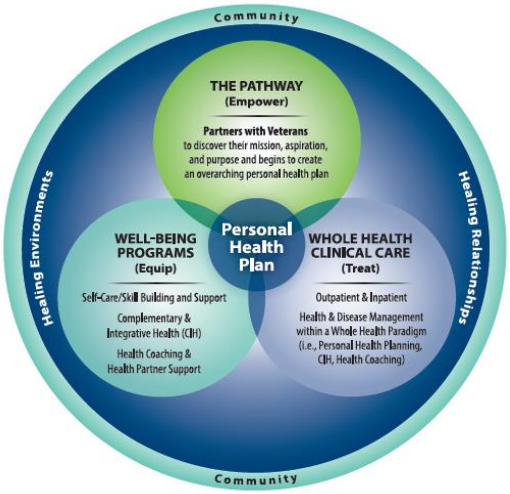

Figure 1: **The Whole Health System of Care**

The WHS is comprised of three major components: 1) Whole Health Pathway – in which Veterans are introduced, often by peers, to the concepts of WH, explore their mission, aspiration and purpose and develop a personal health plan; 2) Whole Health Clinical Care – in which Veterans receive care from providers trained to provide WH care, focusing on Veterans' personal health plan and goals aligned with their mission, aspiration and purpose as a foundation for treatment recommendations; and 3) Well-being programs in which Veterans participate in a combination

of complementary and integrative health services, health coaching and support, and other self-care and skill-building groups and processes to equip Veterans to manage their health. Figure 1 shows the WHS.

1.3 Outcomes Measured for this Evaluation

Two years into the WHS pilot at 18 flagship sites, in this progress evaluation we report on 1) extent of implementation and its cost; 2) utilization of WH services; 3) impact of WH on Veterans; and 4) impact of WH on employees. Figure 2 depicts a framework for understanding the impact of the WHS on the organization, employees and Veterans.

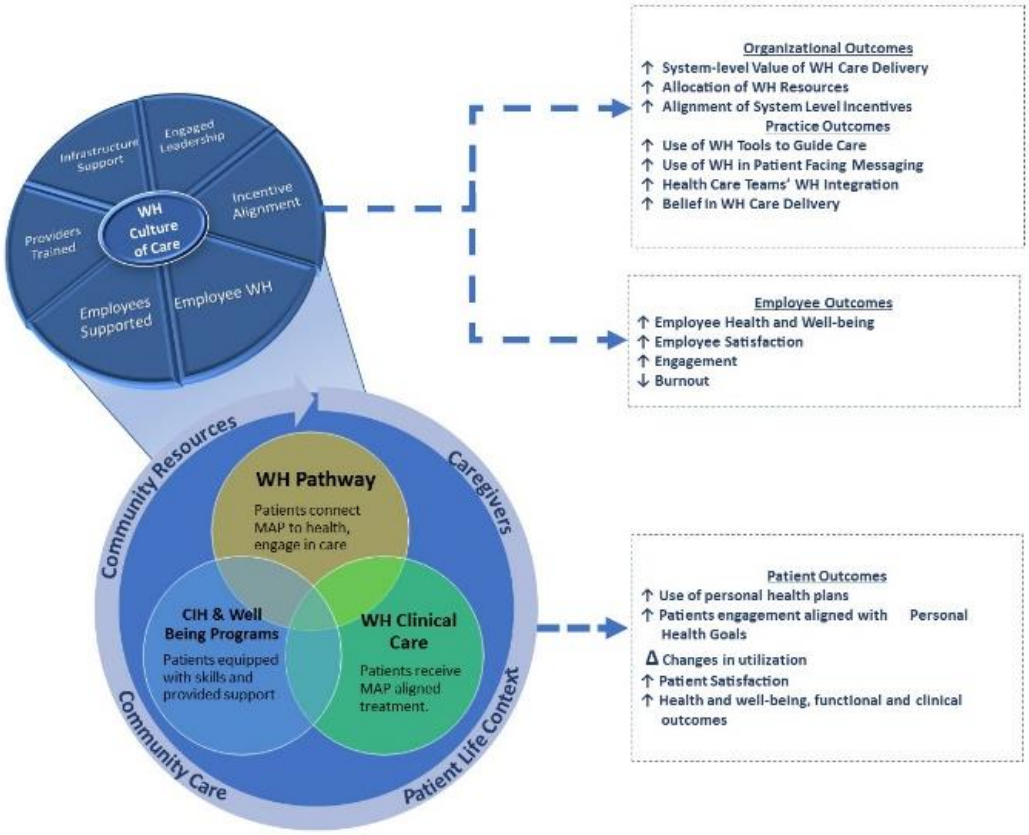

Figure 2: **Conceptual Framework for Whole Health System of Care, impact & outcomes**

1) Organizational & Implementation outcomes: First, we measure the extent to which an individual flagship facility achieved implementation of the WHS. Implementing a Whole Health System of Care across the VA requires an organizational transformation that includes not only changes in processes and systems, supported by the addition of new and innovative resources (e.g., Whole Health Coaches, Peer Partners), but also significant cultural shifts. An organizational transformation, such as the one VA is making towards Whole Health, is complex and typically requires cycles of change over 7 to 10 years. We have conceptualized the process of change as having three major phases (Table 1).

Table 1: **Phases of Implementing a Whole Health System of Care**

Implementation (1-3 Years)	• Infrastructure Development – hiring personnel, employee training, developing clinics and establishing clinical codes. • Creation of communication materials and marketing approach. • Implementation of the core components of a Whole Health System of Care in at least some sites and service lines/departments.
Integration (4-7 Years)	• Integration of all the components of a Whole Health System of Care across all sites and departments/service lines and in all approaches to care. • Ongoing training and professional development
Transformation (7-10 years)	• All sites of care and service lines use a Whole Health approach in the care of Veterans. • Clinical and system-level incentives are aligned to support the approach. • Steady improvements in Veteran and employee outcomes.

We report on the extent to which flagship sites progressed along the first major phase in this process of change, describing implementation of each individual component of the system (pathway, clinical care, well-being programs) and the system as a whole. We also report on the cost of implementation. We provide a summary of key facilitators and barriers to implementation to inform the future roll-out of the WHS in VA.

2) Utilization outcomes: We describe the utilization of Whole Health services, including core WH (personal health planning, health coaching, peer-led pathway programs) and CIH (focusing on the 9 mandated CIH modalities: acupuncture, chiropractic, meditation, massage therapy, biofeedback, clinical hypnosis, guided imagery, yoga and tai chi). Our utilization evaluation incorporates administrative data from VA and community care.

3) Impact on Veterans: Whereas the current organization of healthcare focuses primarily on clinical disease-oriented outcomes, the WHS takes an approach in which the most relevant outcomes are the extent to which Veterans can achieve their own personal health goals. A system of care that focuses on helping Veterans identify their mission, aspiration and purpose, and guiding skill-building and treatment towards reaching those goals, is expected to engage and empower Veterans to practice healthy self-care leading to better overall health and well-being, as well as improve clinical and disease outcomes.

Consequently, this evaluation first measured the following Veteran-reported outcomes: 1) Veteran perceptions of their care; 2) Veteran engagement in care; 3) Veteran engagement in life: meaning and purpose; 4) Sense of health and well-being, including functional status, and perceived stress; and 5) Pain intensity and its impact. These outcomes are measured using a patient-reported outcomes survey of Veterans with chronic pain who have utilized different levels of WH services. We sought to answer the question of how WH users do compared to those with no WH use. We report on general trends and effect sizes for each of the measures included. We also assess the impact of engagement in WH services on opioid use, using administrative data.

4) Impact on Employees: We assessed involvement in WH for clinical employees at the 18 flagship sites through a new question on the All Employee Survey (AES). We then assessed the relationship between employee engagement in WH and AES measures of drivers of

engagement, best places to work, turnover intention and burnout. Finally, we examined the relationship between employee engagement and hospital system performance as measured by the star ratings from the Strategic Analytics for Improvement and Learning (SAIL).

1.4 How to read this report

In what follows we present information on the evaluation process and key findings. It is important to note that these findings represent the progress made after only two years since initiation of the flagship pilot. Hence these findings represent early progress in a journey towards transforming the VA approach to healthcare across 18 sites that vary substantially in size, complexity, and investment in Whole Health (see Appendix 1-B for site information). We focus mostly on Veterans with chronic pain, however, we also incorporate findings on Veterans with mental health and other chronic health conditions. For more detail on methods that lead to the findings presented and more detailed data, please see the Appendix for each section.

2.0 Implementation of the Whole Health System of Care

2.1 Introduction

Implementing a system shift as complex as the WHS takes time, resources and motivation. Each flagship site selected by the VISN leadership to participate in the WHS pilot sought to utilize their resources to achieve the fullest level of implementation possible. We evaluated the stage of WHS implementation for each flagship site on a quarterly basis. The purpose for this effort was to: 1) track implementation progress; 2) provide a context for the WH service utilization and impact on Veterans and employees; and 3) to document lessons learned about system transformation that can be shared with other VA Medical Centers.

2.2 Methods

We used a Rapid Assessment, Response and Evaluation (RARE)[4] approach to assess each flagship site's stage of Whole Health Implementation at multiple time points. Rapid assessment relies on systematic data collection and analysis techniques, using a combination of complementary qualitative and quantitative data collection and rapid assessment performed by a trained team of researchers. For this study, the implementation team collected quantitative implementation data through an online tracking tool and conducted a follow-up qualitative interview with key Whole Health leaders at each site. These two data sources formed the core data set for our rapid analysis, supplemented by Whole Health training data and service utilization data, and direct observations when possible. Each quarter, the implementation team reviewed all the data collected from each site and assessed their stage of implementation based on an established rubric. The rubric was based on OPCC&CT guidance and includes criteria and milestones for each of the five stages of change that we expect to see in the 3-year Implementation phase. Note this rubric was developed in 2016, and differs somewhat from the designation model rubric currently used by OPCC&CT. The five stages include:

- **Not Started:** No planning efforts or activities have been initiated.
- **Getting Started**: Planning efforts have begun but there is little to no infrastructure or resources in place (e.g., hiring of key personnel) yet.
- **Foundational**: Key personnel are hired or identified. Planning efforts are underway, with small scale pilot testing of approaches started.
- **Early:** Whole Health approaches and service delivery has moved beyond the piloting phase and are being offered in at least the main hospital and some tertiary sites of care. The site continues to refine their approach as they roll out Whole Health approaches across their system.
- **Advanced**: Whole Health services and approaches are implemented across most sites of care and spreading to different departments/service lines. Site regularly monitors implementation and uses information to inform improvements. The focus has begun to shift from initiation to sustainment.

We assessed where flagship sites were in their stage of implementation for each component of a Whole Health System of Care (e.g., Infrastructure, Pathway, Well-Being, Clinical Care) and overall. In order to move up to the next stage of implementation, <u>all components</u> had to be in that next stage. We opted for this conservative approach given the interconnectedness of each component to the overall function of a Whole Health System of Care.

2.3 Findings

Data collection began January 2018, and culminated with a final staging in October 2019, two years after initiation of the pilot. Below we briefly describe (a) an overview of flagship sites' progress towards implementing their Whole Health System of Care; (b) the cost of this implementation; (c) barriers and facilitators to implementation; and (d) perceived impacts of Whole Health transformation from the perspective of Whole Health site leaders.

Overview of Progress Towards Implementation

Overall WHS implementation: Flagship sites did not start from the same stage of implementation; several sites had previously received funding to launch their system transformation efforts and were further along than others. Over the course of a year and a half, all flagship sites made progress towards transforming their systems of care. One site reached Advanced implementation and nine (50%) were in Early implementation. Eight sites were in Foundational stage, but most were close to Early implementation (see Figure 3).

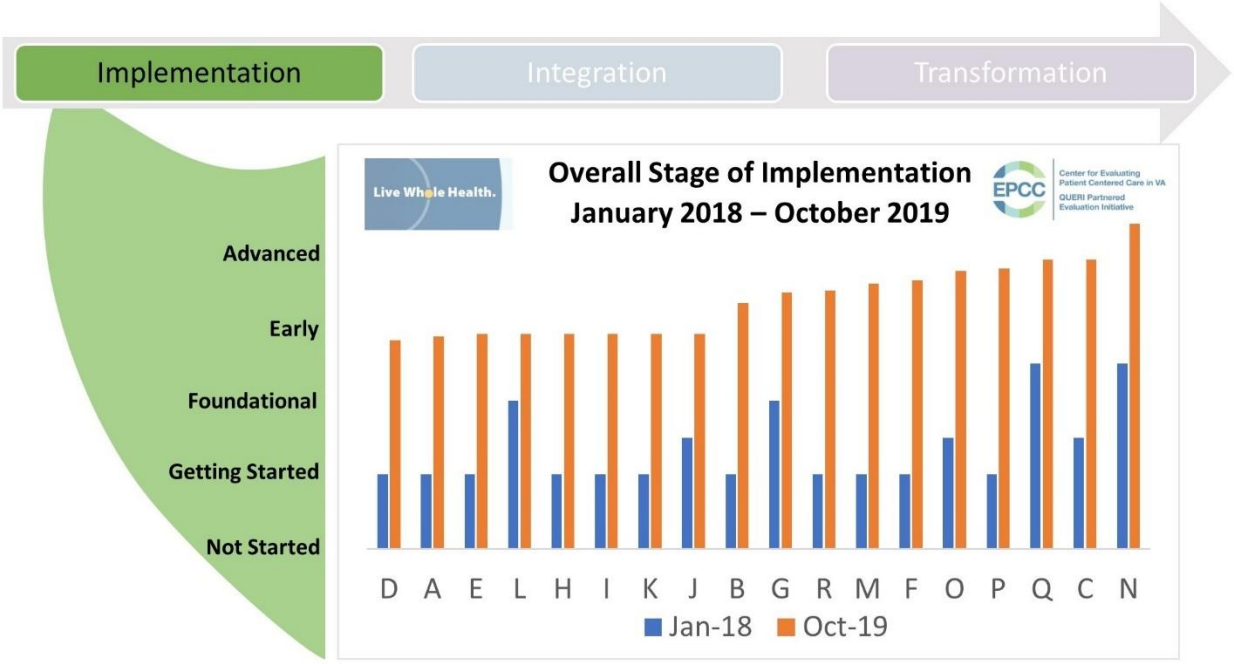

Figure 3: **Stage of Implementation at 18 flagship sites, Jan 2018 and Oct 2019**

Implementation of individual components: Whole Health System components were not developed and implemented at the same pace (see Figure 4). We found that most sites were able to initiate new services more quickly than they were able to change existing services and practices. For example, adding new Complementary and Integrative Health services, like tai chi and yoga, required hiring new staff and identifying space for classes to be held. While challenging in some sites with limited space, most were able to address these obstacles. Changing clinical practice, on the other hand, requires repeated training of busy clinicians, changes in the organization of clinical teams and processes, and a change in culture. Thus, it is not surprising that changing existing practices have posed the greatest challenges.

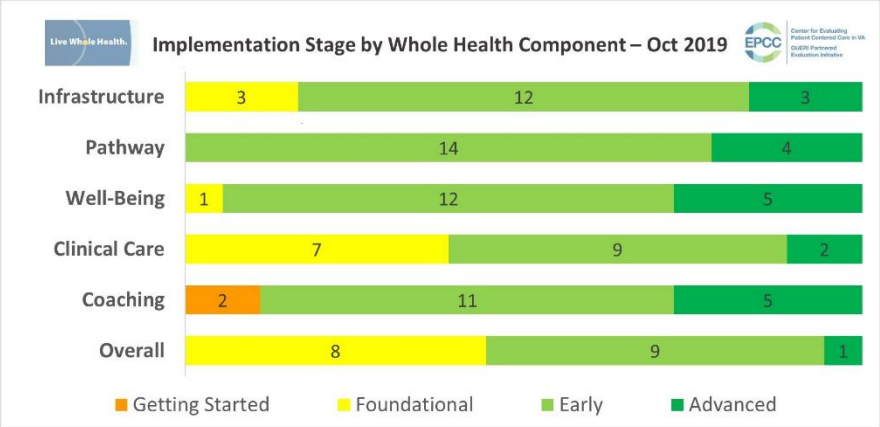

Figure 4: **Stage of implementation for individual WHS components.** Implementation of well-being was furthest along whereas clinical care was earlier on in implementation.

Implementation costs for personnel

In an effort to understand the cost of transforming a system of care, the implementation team included questions on the Implementation Tracking Tool that asked for information about the average time that key personnel spent on implementation activities in a given period, such as planning, designing, and establishing a Whole Health System of Care and educating staff about Whole Health approaches. Staff implementation costs are estimated as follows:

- 2018 average costs per site were $ 446,291 (range $ 114,319 to $ 927,102)
- 2019 average costs per site were $ 644,635 (range $ 293,549 to $ 1,434,668)

Increases in implementation costs were associated with hiring of new Whole Health core team members, training new and existing staff, developing clinics and classes, logistics to ensure clinics and classes could occur, and outreach to providers and Veterans about the available offerings. Facility size and approach to implementation are moderately related to implementation costs. These costs reflect the investment needed to implement the system of care; they do not include the cost of direct delivering WH services.

Facilitators of Whole Health System Transformation

In our interviews, Whole Health leaders identified several facilitators that have helped with system transformation. In this report we highlight two of them: 1) Strong leadership, and 2) Organizational culture.

Strong leadership, distributed across all levels of a flagship site, is one of the strongest facilitators of Whole Health system transformation. At the executive level, Medical Center Directors and Chiefs of Staff set the tone for system transformation by *"leading by example"* (e.g., they personally engage in self-care, they communicate with staff about the importance of Whole Health for employees and Veterans). They also provide *tangible support* during the early transformation phases, which includes addressing barriers to hiring staff, allowing key staff to have protected time to work on implementation activities, assistance with addressing challenges, and requiring all staff to take part in Whole Health trainings. In addition, sites with executive leaders that see Whole Health approaches as being a *strategy for meeting VA priorities* rather than being in competition with them were furthest along in their transformation efforts.

> *[Our Chief of Staff] shows up every time we do the Whole Health clinical care workshop to do the introduction, to talk about how important it is… to have a chief of a service who is very, very committed and who has influence is the key. It's not just that it's a person who is interested, but who has influence over the other service chiefs."*
>
> *(Site C, Whole Health Clinical Director)*

Whole Health leaders were critical to system transformation. System transformation cannot rely on one person; Whole Health teams with a *distributive leadership* model where all key staff (from peer partners to clinical directors) were empowered to engage staff, provide formal and informal training, and address logistical and cultural barriers to change were better able to effect change than those with a more hierarchical or limited leadership structure.

The organizational culture of flagship sites also influenced system transformation. Those with leaders that were openly committed to being a "*learning organization"* and encouraging staff at all levels to be engaged in continuous quality improvement efforts tended to be more open to change. Sites further along in their implementation tended to have thoughtful change management approaches that were shared with others. In addition, sites that have cultivated a sense of shared accountability for Veteran care (also known as an "own the moment" culture) were more likely to have staff who see system transformation as everyone's responsibility.

Barriers to Whole Health System Transformation

There are several barriers that Whole Health teams encountered during their initial phases of system transformation. The VA is a large medical system with an infrastructure that is set up to support a more *traditional, biomedical approach to healthcare*. The first few years require time, energy and strategic planning to build a new infrastructure that supports a Whole Health System of Care. Only after the building blocks have been created and put in place can sites really begin to work on integration and alignment between approach, resources, and incentives. We identified 3 main barriers to implementation: a) infrastructure constraints; b) perception of WH as a program rather than an approach; and c) misalignment of clinical and facility level incentives.

> *It is difficult – when you're doing the implementation it's hard to really focus on the integration. I could tell you that first year, it was just like, okay, are the clinics set up? Do we have a place? Where are we going to be? Is the instructor going to show up? You know, like, there was so much that we had to work out. We didn't have policies…It took us a while to get through that and I think all of us agree that now we feel a little more mature in what we're doing and that we can do those higher-level functions because the basic functions are starting to kind of line up.*
>
> *(Site N, Whole Health Program Manager)*

Infrastructure: Nearly all flagship sites encountered *barriers related to Infrastructure*. At a basic level, the introduction of new staff offering additional services posed challenges in VA Medical Centers with limited space. New types of staff (e.g., CIH providers, Whole Health Partners and Coaches) also required the development of new position descriptions, which took concerted time and effort initially to get approved locally. Office space and larger space for group classes are scarce in many VA Medical Centers. Some have been able to partially address these challenges by partnering with nearby community organizations or building out new space on campus when possible.

Whole Health viewed as a program: Another major challenge was the limited experience that some VA Medical Centers and their leaders have with system transformation. In some flagship sites, *Whole Health is viewed as a program or service rather than an approach to care* that includes additional services. When viewed as a program or service, implementation efforts run the risk of being siloed and not viewed as a system-wide priority. Flagship sites with this experience were also more likely to be uncertain about the continuation of funding for new staff beyond the initial three-year investment as they were less likely to be considered part of a larger systemic change process.

Misalignment of incentives and processes of care: A third major set of challenges experienced by all flagship sites are the "growing pains" that come with changes in a large infrastructure that is set up to protect the status quo. Whole Health leaders contended with the challenge of promoting transformation in care before *incentives* and *processes of care* were aligned with new approaches. For example, performance metrics are currently linked to a model of care that is driven by identifying problems and treating them, rather than changing the conversation with Veterans to focus on what matters most to them and to be a partner in, rather than a driver of, their healthcare. A related issue is that clinical providers, especially those in primary care, have *limited time* during their medical visits and a long list of clinical reminders and other tasks to complete. They are most vocal about the potential challenge of continuing to meet required expectations and have the time to engage Veterans in new ways. Sites with strong executive leaders have started working on the alignment of incentives at the local level, *but true transformation will require national leadership across multiple central offices to align Whole Health approaches with meaningful incentives and expectations for care.*

> *We recognize there are multiple layers of total transformation as we've gotten into this…– putting the pieces into place, then integrating it into what we do clinically, and then transformation. And that's started but it's not something that happens in 3 years. It's significant and we're running into – the more we're transforming, the more we're running into the old model of care that complicates it.*
>
> *(Site I, Whole Health Clinical Director)*

Perceived Impact

Despite some of the challenges of transforming their systems of care, Whole Health flagship site leads are already beginning to see and hear about the return on investment in their sites. These benefits include positive impacts on Veteran well-being, employee well-being and healthcare costs. During qualitative interviews, Whole Health leads shared numerous stories of the impact of Whole Health approaches on Veterans, including *reductions in the use of opioids and other*

> *And we recently worked with a Veteran – he's a retired colonel. Perfect example of what you want. He came to us with chronic pain, had struggled with it for quite some time. Started using acupuncture and chiropractic care, kind of the more passive modalities – someone doing something to you. Then he started doing some of our integrative pain academy…From there he started doing yoga and tai chi at VA. Then he started doing yoga in his community at his gym. And then he heard about a swim class at the gym, and now he's swimming regularly at his gym! Coming to the VA for a couple of things but essentially is doing so well that he doesn't really need us anymore!*
>
> *(Site F, Whole Health Clinical Director)*

pain medications, weight loss, smoking cessation, and improvements in mental health. Whole Health leaders attributed these changes, in part, to a radical shift in approach to healthcare, from one that fosters "learned helplessness" and dependence on medical professionals to one that "brings some empowerment back" to Veterans and promotes their active partnership with a medical team as they figure out what health and well-being looks like for them.

An equally valuable impact that flagship sites reported was on *VA employees*, many of whom are Veterans themselves. Successful flagship sites were focusing on employee Whole Health as they recognized that healthcare is a partnership between Veterans and members of their healthcare teams, and that partnership is only as good as the people who are in it. If employees are tired and burned out, they are not able to bring their "best selves" to the partnership. They are also more likely to leave VA, creating disruptions in relationships and expensive shortages in care. Whole Health site leads are beginning to see that Whole Health approaches are energizing for staff and word is getting out as they are seeing an *"increase in more people wanting to come work for VA because it will be a nationwide implementation of a healthcare system that focuses on wellness, self-care, and helping the Veteran have a longer life." (Site H, Whole Health Program Manager)*

2.4 Summary

The 18 flagship medical centers have all had successes in implementing the components of the WHS. Variations in the level of success may be due to many factors, including leadership engagement and support at all organizational levels; alignment of resources, goals, incentives and rewards; capability development through training and application of newly-learned skills in practice; de-implementation of provider-centric approaches; and collaboration among disciplines and services. The continued improvements over time, however, indicates that ongoing investment in the WHS will likely lead to greater levels of implementation success, integration of the WHS into VA care and true transformation.

3.0 Utilization of Whole Health System of Care (WHS) Services During the Flagship Pilot

3.1 Introduction

A key goal of the Flagship WHS Pilot is to determine the feasibility of incorporating complementary and integrative health and Core Whole Health services to the system of pain management and other health care services for Veterans. These services are defined below in Table 2. This component of the evaluation focuses on assessing how the 18 pilot flagship sites expanded WHS services, and how those services were used by Veterans with chronic pain.

Table 2: **Categories of WH service use**

Whole Health Service Category	Services included
Complementary and Integrative Health (List 1) Chiropractic care	Chiropractic care Massage Whole body acupuncture & Battlefield acupuncture Yoga Tai Chi Meditation Biofeedback Guided Imagery Hypnosis
Core Whole Health	Personal Health Planning Peer-led Whole Health Groups Whole Health pathway services Whole Health Coaching Whole Health Educational Groups

3.2 Methods

For this evaluation, VA healthcare users were identified between Q1FY17 and Q3FY19. During the evaluation period a total of 1,241,606 unique Veterans received care at the 18 flagship sites and 137,003 used WHS services. We identified specific groups of Veterans to examine their use of WHS services: 1) Veterans with a history of chronic musculoskeletal pain with *moderate or severe intensity* levels of pain (29% of all VA users); 2) Veterans with mental health conditions - *anxiety, depression or PTSD* (42% of all VA users); and 3) Veterans with chronic conditions where self-care plays an important role including *obesity, cardiovascular disease, and COPD* (56% of all VA users).

Identifying WHS Services: We identified WHS services including Core WH services, List 1 CIH services, and chiropractic care. Multiple methods were used to identify both VA-delivered services as well as community-delivered services. Codes in the VA electronic medical record included CPT codes, note titles, location names and specialized administrative codes created to capture WHS services. We first identified all Veterans who used VA healthcare services in each quarter; among these we identified any current or prior use of WHS services going back to 10/1/2015.

3.3 Findings

Overall Increase in WHS Services

Among VA healthcare users with chronic pain in Q1FY17, before the beginning of the WHS flagship pilot, 10.5% of Veterans with chronic pain were being connected to WHS services. By Q3FY19, this had increased by 193% with *over 30.7% of Veterans with chronic pain connected to the WHS across the 18 pilot flagship sites*. The original goal of the WHS pilot was to reach at least 30% of Veterans; this goal has been reached for Veterans with chronic pain at this intermediate point in the pilot.

Increase in Core Whole Health Services and CIH Services

The increase in use of the WHS was due to both increases in use of newly developed Core WH services as well as increased use of List 1 CIH services and chiropractic care. Tables 3 & 4 show the large changes in service use for all Veterans, as well as those with chronic pain, mental health conditions and chronic conditions.

Table 3: **Whole Health Service use among all Veterans at 18 flagship sites.**

	Q1FY17	Q3FY19	% Change
Any WHS Service	4.4%	15.9%	259%
Any CIH Service	4.3%	13.0%	202%
Any Core WH Service	0.2%	5.6%	3,049%

Table 4: **Whole Health Service use among Veterans with chronic pain, mental health diagnoses and chronic conditions.**

	Veterans with Chronic Pain			**Veterans with a Mental Health Diagnosis**			**Veterans with Chronic Conditions**		
	Q1FY17	Q3FY19	% Change	Q1FY17	Q3FY19	% Change	Q1FY17	Q3FY19	% Change
Any WHS Service	10.5%	30.7%	193%	7.4%	23.2%	211%	4.4%	16.4%	272%
Any CIH Service	10.3%	26.4%	158%	7.2%	19.3%	169%	4.2%	12.8%	206%
Any Core WH Service	0.3%	10.6%	3,385%	0.3%	8.2%	2,798%	0.3%	6.5%	2,495%

Increases in WHS use among Veterans with chronic pain varied across sites

While all of the 18 pilot flagship sites saw increases in the proportion of Veterans with chronic pain who used WHS services, there was variability across the 18 sites. Some sites, especially smaller sites, were able to reach a higher proportion of Veterans at this preliminary point in the pilot evaluation (Figure 5).

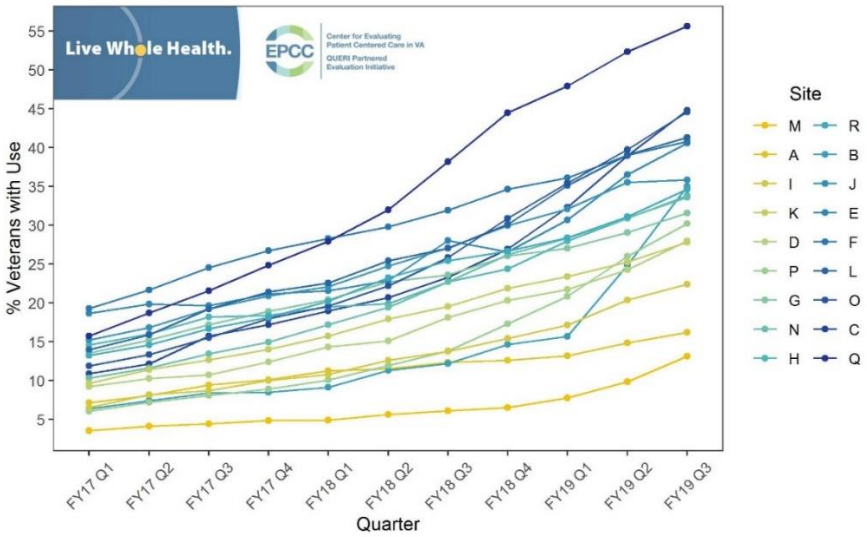

Figure 5: ***Changes in WHS utilization among Veterans with chronic pain.*** *Sites are arranged from lowest (yellow) to highest (dark blue) levels of WHS service use in Q3 2019.*

Increases in both VA-Delivered and Community Care Services

Some WHS services, such as meditation instruction and yoga, are specialized VA services that are available for Veterans primarily within VA as establishing contracts with community providers for these services is difficult. Veterans might use these services and cover the costs on their own. Other services including chiropractic care, acupuncture, and massage are services that Veterans are eligible to receive through community providers that are paid for by VA. Both *VA-provided and community-provided care increased in the 18 flagship pilot sites, with the majority of Veterans receiving care from VA providers*. The WHS pilot was implemented at the same time that CHOICE and the MISSION Act were being rolled out at VA, with increasing use of community care services (Figure 6).

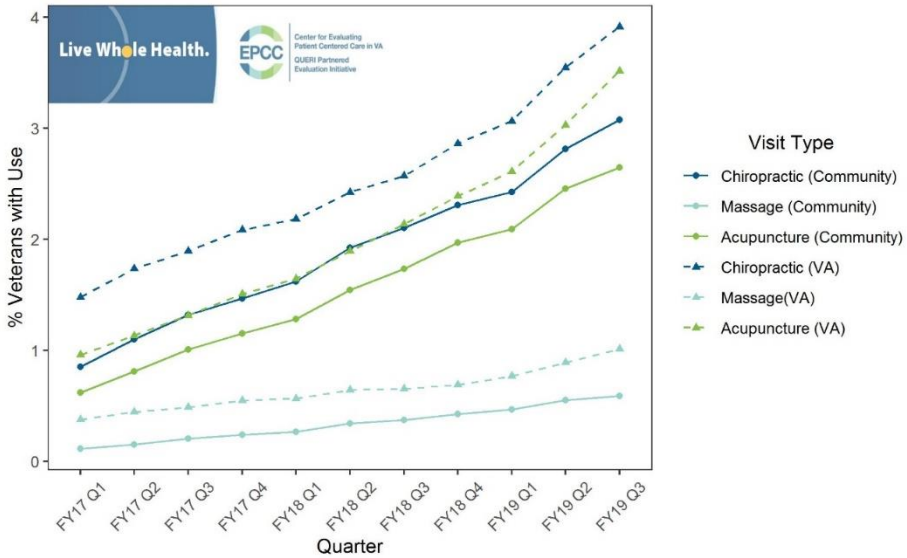

Figure 6: **This figure highlights an increase in use of both community care (solid lines with circles) and VA services (dashed lines with triangles) for these three WHS services among Veterans with chronic pain.**

3.4 Summary

We observed an expansion of all types of WH service utilization during the pilot period. The increase in use of the WHS observed to date reflects increases in use of newly developed WH services including personal health planning, health coaching and Whole Health skill-building, as well as increased use of List 1 CIH services and chiropractic care. At the current rate of expansion of the WHS, we estimate that over 44% of Veterans with chronic pain will be connected with some WHS services as part of their pain management care by end of the pilot in September 2020.

4.0 Impact on Veterans

4.1 Introduction

Implementation of the WHS is intended to improve Veterans' overall health and well-being. In order to assess the impact of receipt of WH services, we conducted several evaluations. First, we conducted the Veterans Health and Life Survey, a longitudinal survey of Veterans to assess the impact on Veteran-reported health and well-being. Second, we examined how WH service use impacted the use of opioids. Third, we examined how WH service use impacted overall pharmacy costs, reflecting changes in the use of medications.

4.2 Patient-reported outcomes: The Veterans Health and Life Survey

4.2.1 Methods

The Veterans Health and Life Survey (VHLS)

We conducted a survey of Veterans at the flagship sites to learn about changes in their perceived health and well-being when receiving WH services. The survey assesses a range of patient-reported outcomes, including Veterans' experiences of care, engagement, meaning and purpose, pain, and physical and mental health. (See Appendix 4 for more information on survey measures). Veterans were surveyed at baseline, 6-month and 12-month timepoints. Findings from the 12-month survey are not yet available.

Survey Participants

Veterans approached for participation in the survey were sampled based on a recent primary care, mental health or pain clinic visit, having a history of chronic pain at the time of that visit, no recent hospitalizations, and being a regular VA user assigned to a primary care team. To date, a total of 3266 Veterans have completed the baseline and 6-month survey across the 18 pilot flagship sites. The response rate for the baseline survey is 50% of those initially contacted. Among those completing the baseline survey, 74% completed the 6-month follow-up survey. The survey is ongoing with an anticipated participation of over 10,000 Veterans. For more information on the demographics of respondents see Appendix 4-A, Table 4.3.

Categories of WH service use

We defined four overlapping categories of WHS service use (Comprehensive, Core Whole Health intensive, CIH intensive, Any 2+ WHS use), and no WHS use. We categorized survey respondents based on looking at utilization of WHS services delivered in VA and in the community prior to the time of the 6-month survey. The four categories of WHS use are overlapping, with Veterans appearing in the Any 2+ Use group and all other groups for which they met the use criteria if they had more intensive use. Table 5 shows the distribution of WHS service use for survey respondents.

Table 5: **Distribution of WH user categories amongst VHLS respondents.**

WHS User Category	**Use Criteria**	**Survey Respondents** 3,266 Veterans with Chronic Pain
Comprehensive WHS Use	>= 8 total WH touches (>= 2 Core Whole Health touches + >= 2 CIH touches)	128 (4%)
CORE Whole Health Intensive Use	>= 4 Core WH, any CIH	261 (8%)
CIH Intensive Use	>= 4 CIH, any Core WH	617 (19%)
Any 2+ WHS use	>= 2 of any WHS service or self-reported use	1515 (46%)
No WHS Use	All Veterans with 0 or 1 WHS visits	1751 (54%)

Analytic Methods
We assessed changes in outcomes from baseline to 6-months and compared changes between each of the WHS use groups and the no WHS use group. We standardized all measures and report *effect size differences across the user groups* based on standardized mean differences. Please note that because the survey is ongoing and multiple outcomes are being examined, formal tests for statistical significance were not performed. (Raw data are reported in Appendix 4-A.) In order to account for differences in Veterans who used and did not use WHS services, we adjusted for self-reported pain intensity on the baseline survey and demographic characteristics including age, gender, race/ethnicity, and education.

4.2.2 Findings – Patient-reported outcomes

Below we report first on some baseline characteristics of the survey cohort. We then report on a series of outcomes with the potential to be impacted by the receipt of WH services. The findings presented indicate trends towards differences in improvements for different categories of WH users. These findings are encouraging, demonstrating that WH service users experience 1) better perceptions of VA care; 2) greater engagement in healthcare, self-management and greater meaning and purpose in life; and 3) improvements in well-being, particularly in managing stress, with smaller improvements in physical health, mental health and pain. These are explained below, and detailed data can be found in Appendix 4-A.

Interest in Using WHS Services was Very High at the Beginning of the Flagship Pilot.
Among the first wave of survey respondents, who were randomly sampled across the flagship sites in the first 6 months of the pilot, over 97% of Veterans responded they were either somewhat interested, very interested or already using at least one WHS service listed.

Baseline Demographics Differ Between WHS users and non-users.
Of all survey respondents who were sampled based on having a history of chronic pain in their electronic health record, over 80% reported on baseline surveys moderate or severe pain intensity, with 18% reporting mild pain intensity and only 2% indicating no pain or not reporting pain intensity information. Among this cohort, those who used WHS services were more likely to be female, younger, have higher levels of pain intensity and longer duration of chronic pain compared to Veterans who did not use WHS services.

Veterans with WHS service use reported better perceptions of VA care.
Among Veterans with chronic pain who participated in the survey, *those who used WHS services reported greater improvements in quality of healthcare interactions with VA providers and improved satisfaction with VA care* compared to those who did not use WHS services. The largest improvements were observed in the response to 2 questions regarding Veterans' discussions of personal health goals with their providers, indicating that Veterans with more WHS services discuss and get help with their personal health goals more than those who did not use WHS services (Figure 7).

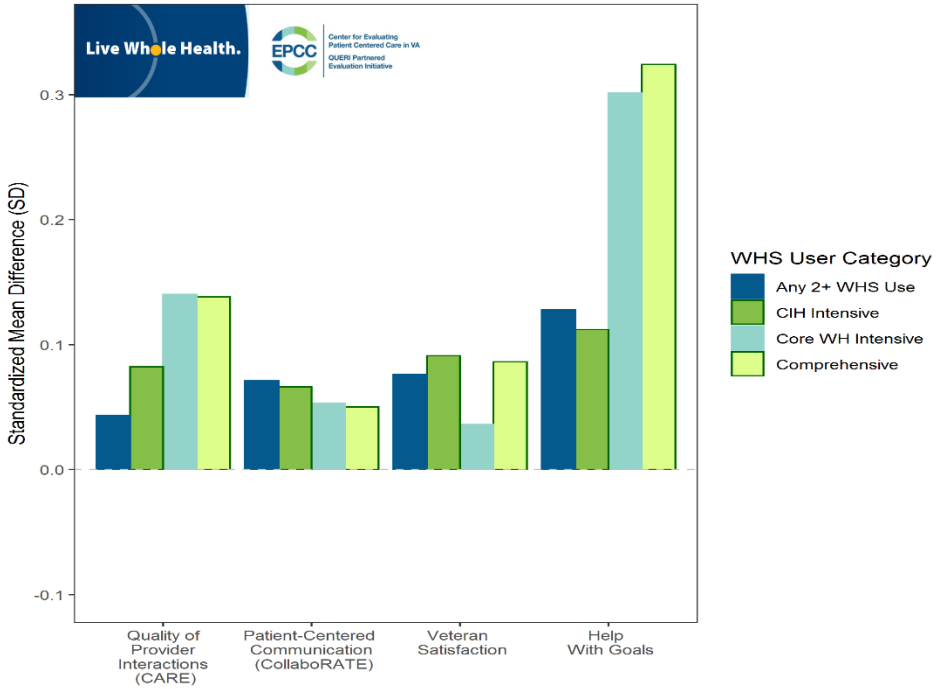

Figure 7: **Association between changes in perceptions of VA Care and levels of WHS service use compared to no use group**

Veterans with WH use report greater engagement in care and life.

Among Veterans with chronic pain who participated in the survey, those who used WHS services reported higher levels of engagement in healthy behaviors and participation in healthcare decisions compared to Veterans who did not use WHS services. These patterns were strongest among Veterans with pain who used core Whole Health services. Additionally, there were small improvements in overall meaning and purpose in life, especially among the Veterans with chronic pain who utilized comprehensive Whole Health services.

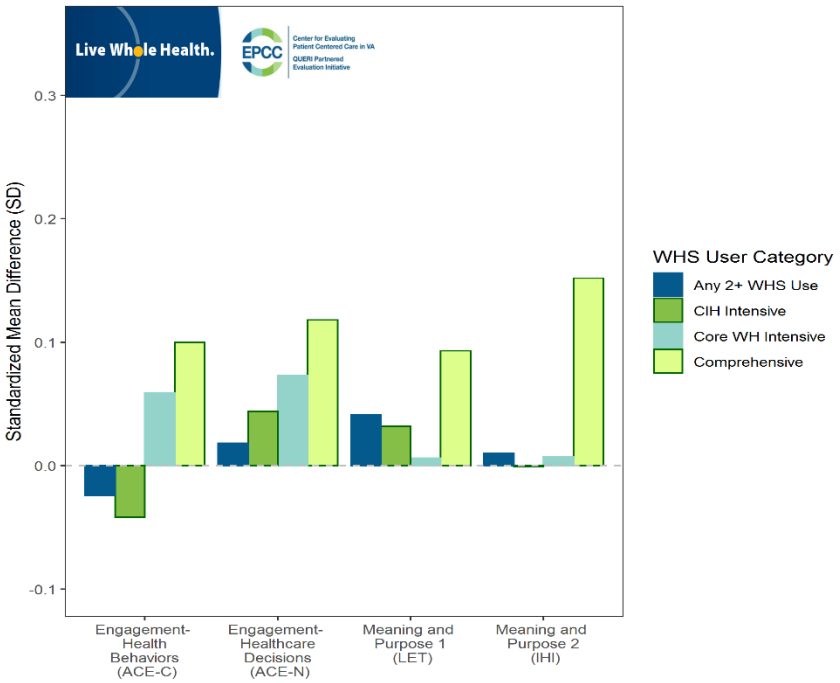

Figure 8: **Association between changes in Veteran engagement and meaning and purpose and WHS service use compared to no use group**

Veterans who used WHS services reported small improvements in well-being. Among Veterans with chronic pain who participated in the survey, those who used WHS services experienced slight improvements at 6 months in quality of life and well-being measures compared to Veterans who did not use WHS services. The *WHS users improved the most on the Perceived Stress Scale*, an important measure of one's ability to manage the challenges associated with chronic pain. For mental health scores, there were small improvements in scores for all WHS users relative to the no use group, with Comprehensive WHS users experiencing slightly better improvements. Although physical health scores were slightly better at 6 months for all groups, because the no use group also improved and improved by more than the WHS users, the relative effects show small negative trends among the WHS user groups. Pain scores improved slightly for all groups at 6 months including the no use group, with the Core Whole Health group experiencing slightly more improvement compared to the no use group although the changes were not clinically meaningful for any group.

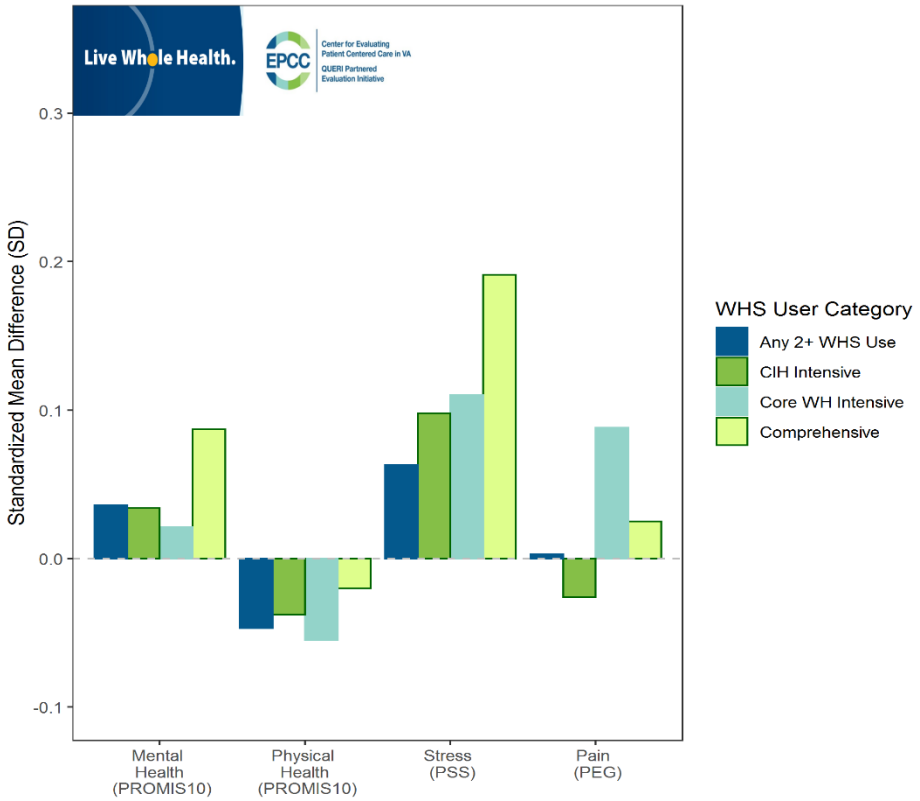

Figure 9: **Association between changes in Veteran well-being and pain, and WHS service use compared to no use group** *Note that any negative SD represents a relative change compared to the non-user group. All measures did improve across all groups.*

4.3 Overall Pharmacy Costs.

4.3.1 Introduction

Participation in the WHS is predicted to reduce utilization of more expensive services, and help Veterans avoid costly procedures, ER visits and inpatient admissions. Complete cost analyses are not yet feasible for the period for this preliminary evaluation, which overlaps with CHOICE

and rollout of the MISSION Act due to the lag in availability of paid community care claims. We instead conducted a preliminary analysis of electronic health records examining VA outpatient pharmacy costs among Veterans who consistently used care in the 18 pilot flagship sites who did and did not use WHS services.

4.3.2 Sample of Regular VA Healthcare Users

In order to assess broad patterns of care associated with WHS services, we identified *a Veteran User Cohort* – VA users across the 18 pilot flagship sites who were regular VA healthcare users in FY18 and continued to use VA healthcare in the first half of FY19. Among these regular VA healthcare users, we identified those who had not previously used any WHS services before the midpoint of this evaluation (April 2018). This identified a sample of 114,357 Veterans with chronic pain, 149,621 Veterans with anxiety, depression and PTSD, and 229,646 Veterans with a common chronic condition. (The groups are overlapping and Veterans with multiple conditions are included across groups.) Based on WHS service use beginning in April 2018, Veterans were categorized based on the level of WHS services similar to the analysis conducted for the Veterans Health and Life Survey.

Table 6: **Categories of WHS users among Veteran cohort at 18 flagship sites**

		114,357 Veterans with Chronic Pain	149,621 Veterans with Anxiety, Depression, PTSD	229,646 Veterans with Chronic Conditions
Comprehensive WHS Use	>= 8 total WH touches (>= 2 Core Whole Health touches + >= 2 CIH touches)	601 (0.5%)	583 (0.4%)	574 (0.2%)
Core Whole Health Intensive Use	>= 4 Core WH, any CIH	961 (0.8%)	1005 (0.7%)	1155 (0.5%)
CIH Intensive Use	>= 4 CIH, any Core WH	4198 (3.7%)	3833 (2.6%)	3727 (1.6%)
Any 2+ WHS use	>= 2 of any WHS service or self-reported use	6594 (5.8%)	6187 (4.1%)	6288 (2.7%)
Single WHS use	Used 1 WHS service	2155 (1.9%)	2073 (1.4%)	2479 (1.1%)
No WHS Use	All Veterans with 0 WHS visits	105,608 (92.3%)	141,361 (94.5%)	215,423 (93.8%)

4.3.3 Methods

Because all Veterans in this sample were regular VA healthcare users, we were able to compare their average pharmacy costs for the 2 quarters prior to start of use of WHS services (October 2017 - March 2018) and a follow-up period (October 2018 - March 2019). The interim period (April 2018 - September 2018) was the period in which some Veterans began to start using WHS services and was not included in the cost analysis. Total outpatient pharmacy costs were compared between the period before and after starting to use WHS services to determine if WHS service use was associated with longitudinal cost patterns. More complete analyses of specific care activities are planned when community care claims become available so that comprehensive measures of utilization can be ascertained.

4.3.4 Findings

Pharmacy costs increased overall, but less among WH users than non-users for some Veterans.

Average pharmacy costs generally increased between FY18 and FY19 due to inflation, rising pharmacy prices, and continued aging among Veterans who were regular VA healthcare users during the evaluation period. Increases in pharmacy costs among Veterans with chronic pain did not differ for WH users compared to non-users. However comprehensive *WHS service use among Veterans with mental health conditions* (PTSD, anxiety and depression) was associated with smaller increases in outpatient pharmacy costs (3.5% annual increase) compared to similar Veterans who did not use WHS services (12.5% annual increase). Additionally, comprehensive WHS service use *among Veterans with chronic conditions* was associated with smaller increases in outpatient pharmacy costs (4.3% annual increase) compared to similar Veterans who did not use WHS services (15.8% annual increase).

Table 7: **Overall Pharmacy Costs Among 114,357 Veterans with Chronic Pain Before and After Starting Use of WHS Compared to Similar Veterans Who Were Regular VA Healthcare Users and Did Not Use WHS**

	114,357 Veterans with Chronic Pain			
WHS User Category	**Unique Veterans (%)**	Average Quarterly Pharmacy Costs 6 Months Before Using WHS	Average Quarterly Pharmacy Costs 6 Months After Using WHS	**% Change**
No Use	105,608 (92.3%)	$758	$847	11.9
Single Use	2,155 (1.9%)	$803	$937	16.7
Any 2+ WHS service use	6,594 (5.8%)	$761	$890	17.0
CIH Intensive	4,198 (3.7%)	$706	$846	19.8
Core WH Intensive	961 (0.8%)	$872	$1002	14.9
Comprehensive	601 (0.5%)	$846	$980	15.8

Table 8: **Overall Pharmacy Costs Among Veterans with Depression, Anxiety or PTSD, and Veterans with Chronic Conditions Before and After Starting Use of WHS Compared to Similar Veterans Who Did Not Use WHS.**

	149,621 Veterans with Depression, Anxiety or PTSD				229,646 Veterans with Chronic Conditions			
WHS User Category	**Unique Veterans (%)**	Average Quarterly Pharmacy Costs 6 Months Before Using WHS	Average Quarterly Pharmacy Costs 6 Months After Using WHS	**% Change**	**Unique Veterans (%)**	Average Quarterly Pharmacy Costs 6 Months Before Using WHS	Average Quarterly Pharmacy Costs 6 Months After Using WHS	**% Change**
No Use	141,361 (94.5%)	$556	$623	12.1	215,423 (93.8%)	$629	$728	15.8
Single Use	2,073 (1.4%)	$670	$813	21.4	2479 (1.1%)	$743	$989	33.2
Any 2+ WHS use	6,187 (4.1%)	$674	$805	19.4	6288 (2.7%)	$785	$910	16.0
CIH Intensive	3,833 (2.6%)	$635	$749	18.0	3727 (1.6%)	$788	$883	12.0
Core WH Intensive	1,005 (0.7%)	$846	$923	9.1	1155 (0.5%)	$808	$947	17.3
Comprehensive	583 (0.4%)	$932	$965	3.5	574 (0.2%)	$960	$1002	4.3

4.4 Opioid Use Among Veterans with Chronic Pain Who Do and Do Not Use WHS Services

We examined opioid use to address a key component of the CARA legislation's aim of improving care for Veterans with chronic pain. We conducted analyses examining opioid use for the Veteran User Cohort – a sample of 114,357 Veterans with chronic pain who were regular healthcare users between October 2017 and March 2019.

4.4.1 Methods

Similar to the analysis of pharmacy costs, among the 114,357 Veterans with chronic pain we assessed opioid prescription data for the 2 quarters prior to start of use of WHS services (October 2017 - March 2018) and for a follow-up period (October 2018 - March 2019). The period (April 2018 - September 2018) was the period in which some Veterans began to start using WHS services and was not included in the analysis. All opioid prescription data was converted to morphine equivalent dose and an average was calculated each quarter. Changes in average dose of opioids use were calculated from the 6-month period before Veterans started using the WHS and the 6-month period after using WHS services.

4.4.2 Findings

Veterans with chronic pain who used WHS Services had a larger overall decrease in the average morphine equivalent dose of opioids compared to similar Veterans who did not use WHS services or used only a single WHS service.

Notably, there were decreases in opioid dose levels for all Veterans across the time period of this evaluation, which is consistent with national VA efforts to reduce opioid use. *Larger decreases in opioid doses were observed among the Veterans with chronic pain who were Core Whole Health Intensive users (-38%) and who were Comprehensive Core Whole Health and CIH users (-38%) compared to those who did not use WH services.*

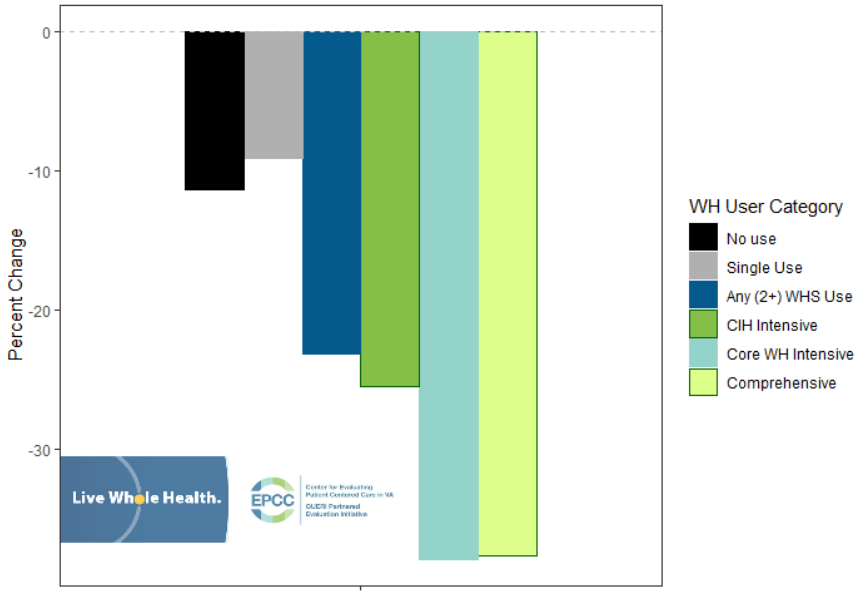

Figure 10: **Change in opioid use by WH user category for Veterans with chronic pain.**

Table 9: **Change in opioid use by WH user category for Veterans with chronic pain, including mg morphine equivalent doses and percent change.**

WHS User Category	% of Veterans (in EHR)	Mg Dose Period Before Using WHS	Mg Dose Period Started WHS	Mg Dose Period After WHS Use	Mg decrease (Before-After)	% Change
No Use	105,608 (92.3%)	634	593	563	-72	-11%
Single Use	2,155 (1.9%)	977	906	888	-89	-9%
Any 2+ WHS use	6,594 (5.8%)	759	683	583	-176	-23%
CIH Intensive	4,198 (3.7%)	710	626	529	-181	-26%
Core WH Intensive	**961 (0.8%)**	**557**	**453**	**346**	**-211**	**-38%**
Comprehensive	**601 (0.5%)**	**658**	**496**	**410**	**-248**	**-38%**

Veterans with chronic pain showed a greater overall decrease in morphine equivalents over time after starting use of WH services.

Figure 11 demonstrates the overall trends in average quarterly opioid dose among 105,608 Veterans with chronic pain who did not use WHS services and the 6594 Veterans who used any WHS across three time points. Time 0 is the when Veterans first used WHS services, Time -1 is the 6-month period prior to using WHS services and Time +1 is the 6-month period after starting to use WHS services.

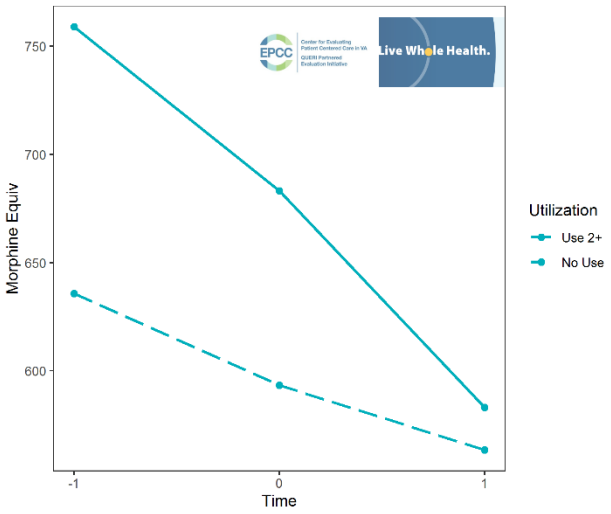

Figure 11: **Opioid Use Among 114,357 Veterans with Chronic Pain (Morphine Equivalent/Mgs) Before and After Starting Use of WH services Compared to Similar Veterans Who Were Regular VA Healthcare Users and Did Not Use WHS.** *Time 0 = initiation of WHS.*

Opioid dose patterns varied across the 18 flagship sites.

Figure 12 represents average total quarterly opioid dose each year from FY16 to FY19 among the subset of Veterans who were identified as having at least one opioid prescription across the 18 pilot flagship sites. The denominator for this analysis differs from the above figures and is all Veterans with at least one opioid prescription in order to conduct national comparison. The figure demonstrates *the variability across the 18 pilot flagship sites in opioid dose patterns.* The dashed black line represents the national trend. Combined across the 18 pilot flagship sites there was a 17% decrease between FY16 and FY19, and nationally, across all VA Medical Centers, there was a 25% decrease during the same time period.

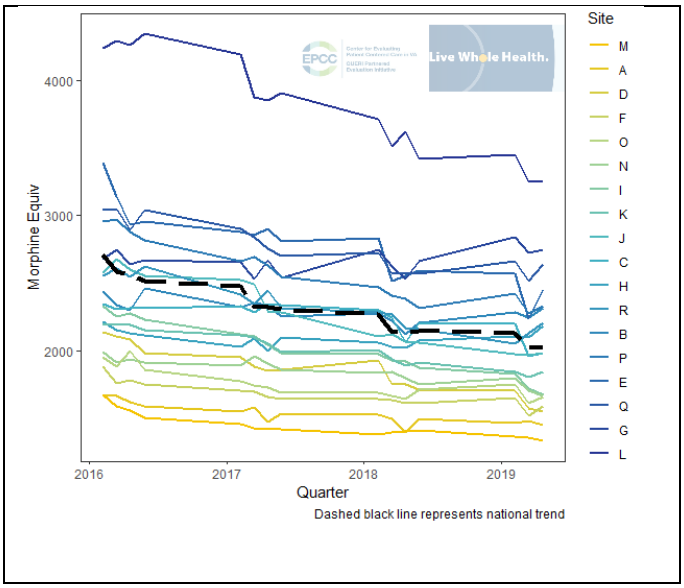

Figure 12: **Opioid dose changes over time across 18 flagship sites.** *Dashed line represents national trend.*

4.5 Summary

This preliminary evaluation of patient-reported and healthcare outcomes associated with WHS service use highlights several promising early trends. Veterans who are being connected to Whole Health services are reporting improvement in several areas which would be expected to be impacted by the WHS.

4.6 Considerations

The baseline survey assessment represents when the Veteran was invited to participate in the survey and some Veterans may have been using components of the WHS prior to the baseline survey assessment. Early delivery of WHS services within VA may not have been accurately captured in the VA electronic health record as pilot sites often began delivering care before coding methods had been fully operationalized. Thus, there may be some Veterans categorized as not having used WHS services who may have actually participated in those services. Although this analysis includes a comparison group of Veterans who did not use WHS services, Veterans were not randomly assigned; WHS service use or non-use may be associated with several factors, including an individual decision by a Veteran, distance and time of WHS service class, and other factors associated with availability of WHS services. Therefore, outcomes may be related to other confounding variables not captured by this evaluation.

5.0 Impact on Employees

5.1 Introduction

A major culture change is occurring in the delivery of care to Veterans as part of the implementation of the Whole Health System of Care. Culture is the commonly-held values and expectations of an organization's workforce. As the culture around common and shared goals increases, it may have beneficial effects throughout the organization. Yet culture change can be difficult as well. We sought to understand how providers' involvement in the WHS impacted employee engagement, well-being and retention. We also examined whether involvement would be associated with overall hospital performance, as measured by VA's system for summarizing hospital performance.

5.2 Methods

To measure employee involvement in Whole Health, we received permission from the VA Organization Assessment Sub-Committee to include a question on the 2018 and 2019 All Employee Survey (AES) conducted in June of each year. Employees who indicated a clinical role on the survey, such as a physician, nurse, or other clinical staff, provided responses to a multi-part separate question on the WHS in addition to the usual AES questions. In 2019, 21,667 employees responded and in 2018, 20,701 employees responded among the 18 flagship sites each year. The overall survey had a response rate greater than 60% in both years, suggesting broad representation of perspectives. The specific question asked on the survey is provided below (Figure 13).

The Whole Health System of Care is a new initiative rolling out across VA. During the past twelve months, in what ways have you been involved with your facility's Whole Health (WH) approach to care? (**Check all that apply**)

a. I am not familiar with Whole Health approach to care
b. I have participated in training about Whole Health
c. I have discussed how to incorporate Whole Health approaches with my co-workers
d. I have incorporated a Whole Health approach into my work with patients
e. I have worked with patients to develop a Personal Health Plan (PHP)
f. I have referred patients to a Whole Health service or approach (e.g., Whole Health peer led groups, coaching, well-being classes, or Complementary and Integrative Health)
g. I have participated in planning for implementation of Whole Health approaches

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Figure 13: **Survey item from All Employee Survey – Involvement in the Whole Health System**

Using items from the All Employee Survey, we assessed drivers of engagement, Best Places to Work engagement score, turnover intention and burnout. We created scores based on the Federal Employee Viewpoint Survey measures for: 1) Drivers of engagement - representing workplace characteristics with potential to influence engagement conditions and reflect perceptions of leadership behaviors, supervisor behaviors, and self-motivation; 2) Best Places to Work - a weighted score based on responses to questions on job satisfaction, organization satisfaction, and recommending the organization as a place to work; and 3) turnover intention - whether employees were planning to leave their job in the next year. Burnout consisted of two items asking about emotional exhaustion and depersonalization.

We also examined the relationship between Whole Health involvement survey responses from each of the 18 flagship sites and outcomes from other datasets representing hospital performance, patient-centered care, and turnover. Hospital performance was based on the star ratings from the Strategic Analytics for Improvement and Learning (SAIL) system. The star ratings are a method to summarize hospital system performance.

Finally, we examined the relationship between involvement scores with two items on self-management support from the Survey of Healthcare Experiences of Patients (SHEP), which is a survey of Veteran responses about their primary care experiences. Workforce turnover was obtained from administrative sources for physicians, nurses, and overall health services employees as a measure of the percent who voluntarily left the organization.

5.3 Findings

WH Involvement increased substantially between 2018 and 2019.
The percent of employees involved in any WHS activity had a 45% year-to-year increase. Participation rates in individual activities increased from 22% to 99% year-to-year.

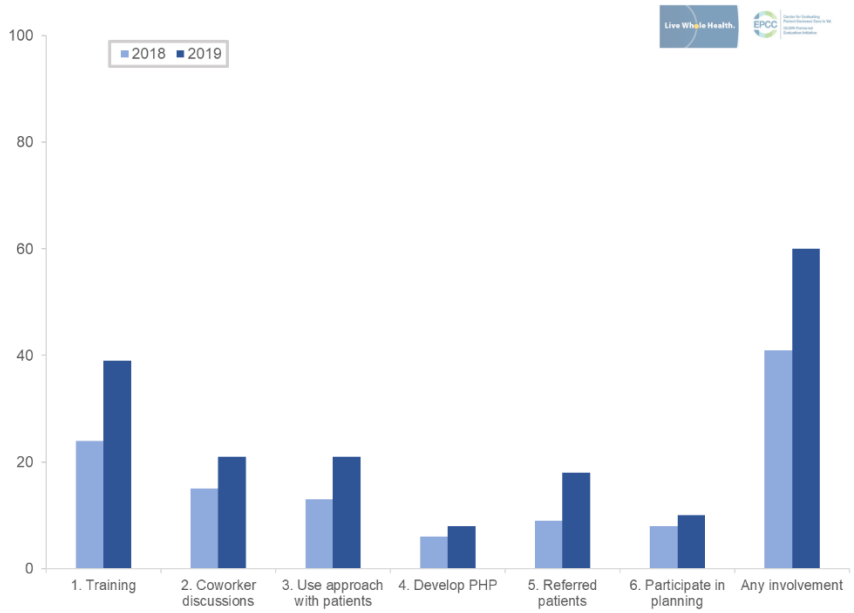

Figure 14: **Employee Whole Health Involvement Increase 2018-2019 - All Employee Survey National Flagship Average.**

Employee Whole Health involvement varied across sites.
The average site increase was 18%. The highest score was 87% in 2019.

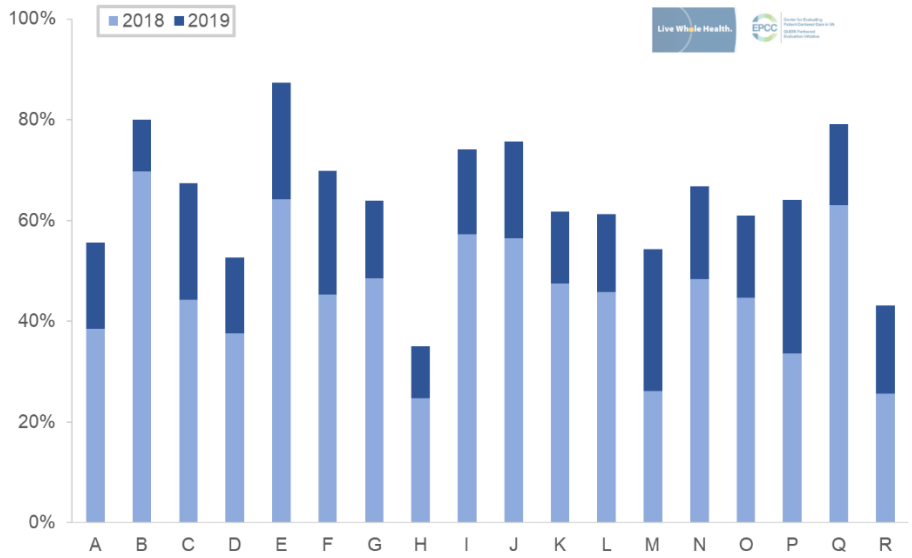

Figure 15: **Employee Whole Health involvement by site- All Employee Survey.** The light blue bar reflects the 2018 score and the darker blue bar indicates the 2019 score.

Considerable variation in involvement exists among clinical service areas.
Primary care, mental health, rehabilitation, and home/community care services had the highest involvement rates. All services increased involvement from 2018 to 2019 with an average change of 18% suggesting robust uptake.

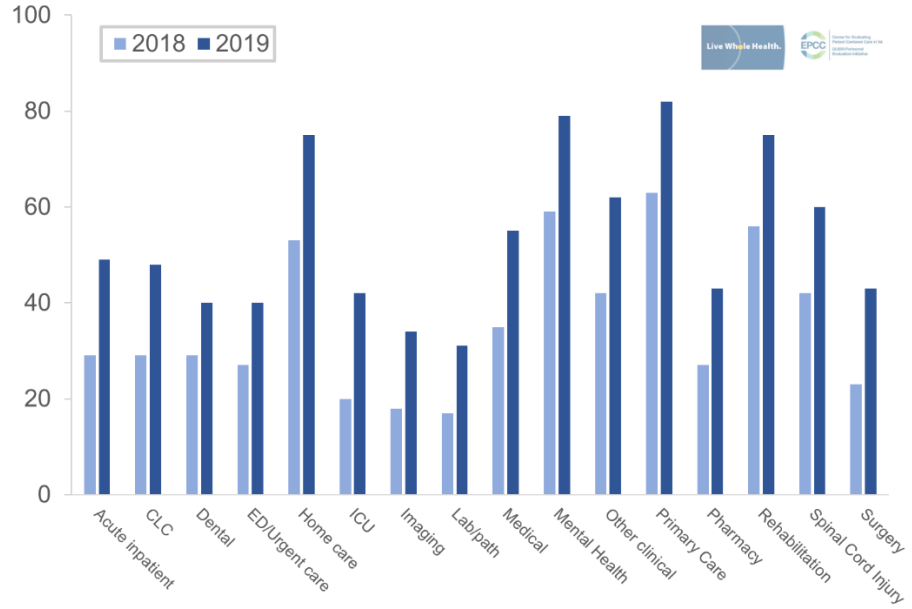

Figure 16: **Variation in WH involvement across clinical service areas in 18 flagship sites - All Employee Survey**

Involvement in WHS activities had positive effects on employees.
In 2019, employees reporting any involvement in WH had favorable workplace perceptions: identifying their VA as a 'Best Place to Work' and reporting better leadership, intrinsic motivation and supervisors' behaviors driving engagement. Involved employees were less likely to consider leaving and experienced lower burnout.

Clinical staff who are more involved with WH were also less likely to resign.
Looking within occupations, greater involvement in Whole Health negatively related to resignation rates at sites. Physicians, registered nurses, and health services employees showed similar patterns.

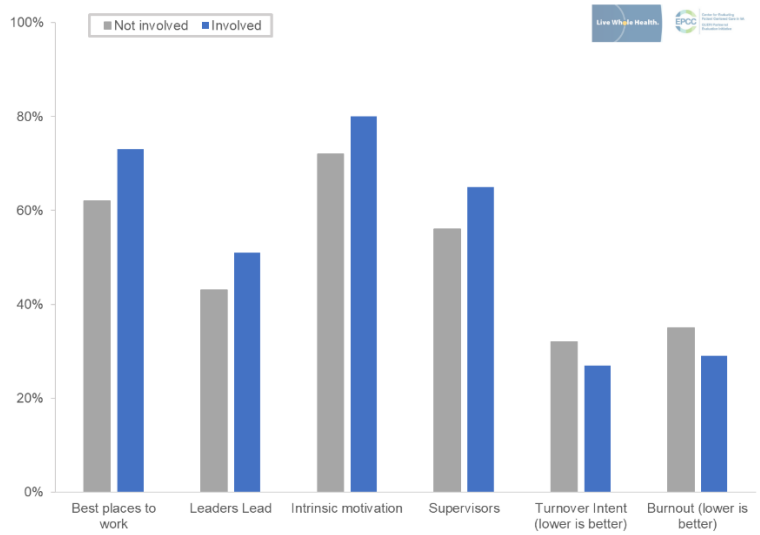

Figure 17: **Employee Engagement Index, Best Places to Work, Burnout, and Turnover by Individual Involvement with Any WHS Activity in Flagship Sites.** *WH involvement was associated with important employee outcomes.*

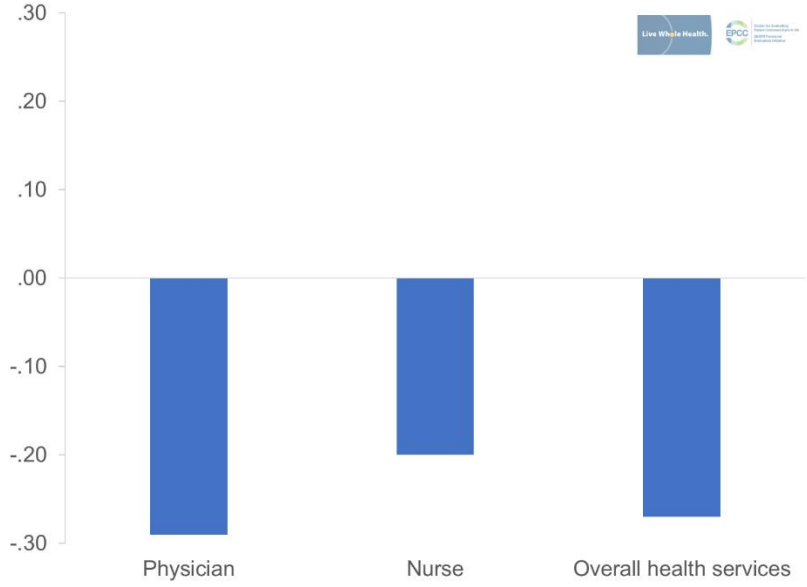

Figure 18: **Relationship between WH Involvement and resignation rates by occupation.** *Spearman rank-order correlations. Values of 0 suggest no association; while 1 indicate perfect association.*

Greater staff involvement at the 18 flagship sites was associated with other measures of healthcare system performance.

Greater employee involvement in WH activities was positively related to patient perceptions of patient-centered care as measured on SHEP. Greater employee involvement was also positively related to overall hospital system performance, as captured by SAIL.

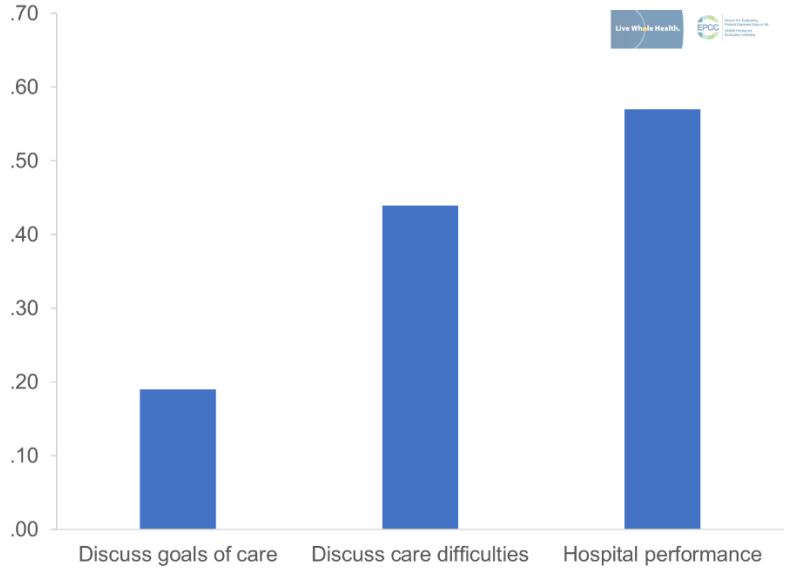

Figure 19: **Relationship between WH Involvement and Patient-Centered Care and Overall Hospital Performance.** *Greater WH involvement was associated with greater patient perceptions of care (SHEP) and SAIL metrics for the 18 flagship sites. Spearman rank-order correlations. Values of 0 suggest no association while 1 indicate perfect association.*

5.4 Summary

Our preliminary evaluation of the effects of Whole Health systems on employees suggested multiple benefits in the form of greater employee engagement, lower burnout, and increased workforce stability. Notably, Veterans at these sites also reported higher ratings of patient-centered care on items relating to discussing care goals and difficulties with care with their provider. Further, sites with greater Whole Health involvement appeared to perform better on global measures of performance.

6.0 Future Evaluation

We will continue to evaluate progress towards implementation, integration and transformation towards a true Whole Health System of care in the remainder of FY20 and into FY21. This includes tracking implementation stages for all 18 flagship sites using our existing protocol.

Understanding the full impact of WH on Veterans depends on continued progress towards implementation at each of the 18 flagship sites. When a sufficient number of the 18 flagship sites have reached an advanced level of implementation, we will be able to assess the impact of different levels of site-level WHS implementation, as well as the impact of increased utilization of WH services, on patient-reported outcomes and other clinical outcomes. At that time (expected to be late 2020), we will administer a third wave of the Veteran's Health & Life Survey. We anticipate a final total of roughly 10,000 Veteran surveys at baseline and 6-month timepoints, and an additional 8,000 surveys of these same Veterans at 12 months, which will provide us with opportunities for a number of secondary analyses - in addition to evaluating sustainment over time of the outcomes addressed in this progress report.

With increased utilization of WH services along an extended timeline, we also will further examine the possibility of cost avoidance by examining utilization of other high-cost services among WH users. Additionally, ongoing analyses of the All Employee Survey results according to site stage of implementation and a more targeted provider survey on WH for employees will allow us to track ongoing impact on affected VA employees. Finally, further qualitative site visits and analysis of both Veteran and provider stories about the implementation and impact of the WHS will provide even greater insight into the process of cultural transformation.

7.0 Conclusions

Implementation of the WHS is complex and takes time. Yet, the early findings from this evaluation demonstrate that when Veterans engage in WHS services, improvements in perceptions of care, engagement in care, and well-being are possible.

Critical to addressing the primary goal of CARA legislation, we observed a meaningful lower use of opioids amongst the most intensive WH users. Although there may be other reasons for this decrease, it might be associated with the intended outcomes of WH: having better experiences with their providers, increasing engagement in care and improved self-management of their pain. While we expect to see more meaningful outcomes over time, even these small improvements in pain are notable in this short time period – as are the improvements in self-reported physical and mental health.

The improvements we observed align well with the theoretical mechanisms for change in health – improving Veterans' experiences with care may in turn improve Veteran engagement and foster better self-management of chronic illnesses. And self-management is critical to better health and well-being over time. A Veteran consultant on our project, upon hearing the outcomes of this evaluation said the following: "*Whole Health - that might be one of the best things, is what it does to your state of mind."* If we can offer this level of services to all Veterans, we may see truly important improvements in overall health and well-being.

We must note an important caveat: these findings indicate a trend towards better health and well-being outcomes amongst those with the highest use of WH services compared to non-

users. Because the survey is ongoing and multiple outcomes are being examined, formal tests for statistical significance were not performed. Further research as outlined above will tell us if, over greater periods of time, we can more definitively identify the impact of the WHS on Veterans.

Implementing a Whole Health System of Care across the VA requires an organizational transformation that includes not only changes in processes and systems, supported by the addition of new and innovative resources, but also significant cultural shifts. Transformation requires many changes to how a medical center operates, which, over time, contribute to changes in the assumptions made by and expectations of leadership and staff which underlie the prevailing model of care for Veterans.

Large system change can be difficult for employees who are used to working in particular ways. Yet our findings indicate that higher employee involvement with WH was associated with better SAIL and SHEP scores; i.e., the shift towards a Whole Health culture of care may result in overall better facility level performance. The positive relationship between employee involvement in WH and key employee outcomes of decreased burnout and turnover may reflect the deep desire by employees to provide care that is truly patient-centered. Moreover, with increased emphasis on employee WH, employees may be happier as they come to work, much as noted in our qualitative work. Greater involvement by employees is an indication of not just practice change, but also culture change.

The impacts that Whole Health Flagship Leaders are seeing and hearing about every day are inspiring and motivating. When asked where they think they are in their stage of implementation, most estimated that they are between 25-30% into their transformation journey. This critical time period has allowed them to build the infrastructure for change, add new WH services and train employees on this new approach to care. Most viewed transformation as a process that will require on-going, concerted effort before this “new approach to care” is the established norm. As one WH leader said:

> *When I think about what we are doing and the idea of “Caring for him who has borne the battle” … our Veterans deal with more than any other population - PTSD, chronic pain, anxiety, depression, suicide. The kinds of things that Whole Health approaches have to offer, just the way that it’s operationalized is what our Veterans need and haven’t gotten… I think of all the individual stories I’ve seen and heard of just truly transformed lives. People who felt like they’ve gotten their lives back. Those are the things to me that say we need to stay on this path. (Site R, Whole Health Clinical Director)*

Our preliminary findings support the perception of this Whole Health leader. Creating a system of care that is truly patient-centered, focused on providing care that is aligned with individual Veteran’s goals, is of the highest priority. Staying on the Whole Health path may truly transform Veterans’ healthcare and more importantly, Veterans’ lives.

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