

Original Article

Implementation of VA's Life-Sustaining Treatment Decisions Initiative: Facilitators and Barriers to Early Implementation Across Seven VA Medical Centers



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Abstract

Context. In 2017, Veterans Health Administration (VHA) National Center for Ethics in Health Care began system-wide implementation of the Life-Sustaining Treatment Decisions Initiative (LSTDI). The LSTDI is a national VHA policy and practice to promote conducting goals of care conversations and documenting veterans' preferences for life-sustaining treatments (LSTs).

Objectives. The aim of this article is to describe facilitators and barriers to early implementation of the LSTDI within one VHA Veterans Integrated Service Network.

Methods. From September 2016 to December 2018, we conducted site visits and semistructured phone interviews with implementation coordinators who championed the LSTDI rollout at seven VHA medical centers. We applied the Consolidated Framework for Implementation Research (CFIR) to assess facilitators and barriers to implementing the LSTDI and assigning interview data to specific CFIR constructs and CFIR valence ratings. We simultaneously benchmarked VHA medical centers' implementation progress as outlined by the National Center for Ethics in Health Care implementation guidebook.

Results. We divided sites into three descriptive groups based on implementation progress: successfully implemented ($n = 2$); moving forward, but delayed ($n = 3$); and implementation stalled ($n = 2$). Five CFIR constructs emerged as facilitators or barriers to implementation of the LSTDI: 1) self-efficacy of implementation coordinators; 2) leadership engagement; 3) compatibility with pre-existing workflows; 4) available resources; and 5) overall implementation climate.

Conclusion. Although self-efficacy proved key to overcoming obstacles, degree of perceived workflow compatibility of the LSTDI policy, available resources, and leadership engagement must be adequate for successful implementation within the implementation time line. Without these components, successful implementation was hindered or delayed. *J Pain Symptom Manage* 2021;62:125–133. Published by Elsevier Inc. on behalf of American Academy of Hospice and Palliative Medicine.

Key Words

Veterans, implementation science, life-sustaining treatments

Key Message

This article describes facilitators and barriers to implementation of the Veterans Health Administration

Life-Sustaining Treatment Decisions Initiative at seven Veterans Affairs medical centers. Results indicate the importance of the implementation coordinator

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Accepted for publication: October 27, 2020.

possessing high self-efficacy to implement the initiative coupled with leadership engagement to successfully implement large-scale initiatives of this nature.

Introduction

In 2017, the Veterans Health Administration (VHA) National Center for Ethics in Health Care (NCEHC) began system-wide implementation of the Life-Sustaining Treatment Decisions Initiative (LSTDI). The LSTDI is a national VHA policy and practice initiative to promote conducting goals of care conversations (GoCCs) and documenting veterans' preferences about life-sustaining treatments (LSTs) for seriously ill veterans at a high risk of experiencing life-threatening events.^{1,2} The LSTDI aims to create a clear and consistent way of documenting treatment choices and goals of care for veterans using an LST note through a clearly specified electronic documentation template that becomes part of a veterans' electronic health record. The LSTDI implementation guidebook recommended appointing an implementation coordinator (IC) at each VHA medical center (VAMC), who, along with an advisory board, would champion implementation and provide guidance and training to providers and staff as to how to have high-quality GoCCs and document treatment preferences.² The LSTDI template translates veterans' preferences about LSTs directly into durable and portable orders. The aim is to provide goal-concordant care consistent with medical record documentation.² LSTDI implementation followed a two-year demonstration phase, from 2015 to 2016 at four VHA facilities, championed by an individual at each facility.³ The LSTDI was mandated for all VAMCs, with the goal of July 2018 as the go-live date after administrative rollout and trainings facilitated by the VHA NCEHC. These trainings offered in-person workshops to train the trainers, who were normally clinicians, who then conducted trainings in their own VAMCs; more than 13,000 VA staff have been trained so far.⁴ The trainings at each VAMC were designed to teach staff how to conduct, document, and support GoCCs.² The LSTDI policy handbook—a product of more than 10 years of extensive research and collaboration for the LSTDI—was developed and disseminated across the health care system as well (this differs from the implementation guidebook).⁵

In 2016, the VHA Long-Term Care Quality Enhancement Research Initiative team partnered with the NCEHC to assess study implementation of the LSTDI both at demonstration sites and specifically in two of VHA's Veterans Integrated Service Networks (VISNs). The aim of this article is to describe implementation of the LSTDI within one of these two VISNs

from the perspective of ICs. Specifically, we applied the Consolidated Framework for Implementation Research (CFIR) to assess implementation and milestone progress as outlined by the NCEHC implementation handbook.^{6,7} The CFIR is an implementation science conceptual framework that allows for identification of specific factors, or constructs, that influence implementation.⁶

Methods

Data Collection

We conducted interviews with the seven ICs quarterly, from fall 2016 to 2018. Semistructured interview guides were designed to facilitate informal conversations and meaningful reflection about LSTDI implementation. Interview guides were revised iteratively and more specifically after the official LSTDI national start date in July 2018. Interviews began with in-person site visits conducted by two-to-three team members in 2016 and 2017. All follow-up interviews were conducted by phone by one or two team members. Team members took notes during interviews, and interviews were digitally recorded and referred to if notes were not clear; interviews were not transcribed verbatim.^{8–10} About 42 interviews with the seven ICs are included in the analysis. [Table 1](#) includes VAMC site and position and/or role of IC.

Data Analysis and Coding

One team member, a social scientist and qualitative methodologist (L.M.H.), with experience applying the CFIR to large-scale VHA evaluations, trained three other team members, who are social workers and health services researchers (C.V.G., C.E.M., and C.B.), in applying the CFIR for analysis. Training included explaining and discussing CFIR construct definitions and designing a plan to code the data. Coding involved applying the fewest CFIR constructs to a section of data (as is common in CFIR studies).¹¹ All analysts discussed application of CFIR valence ratings, which range from assigning data -2 to $+2$ to indicate how the construct influenced implementation. The valence indicates if a construct had a positive or negative influence on implementation, and the numeric value indicates the strength of the influence on implementation.⁷ We created a coding template including all 39 CFIR constructs, a section for assigning CFIR valence and strength ratings, and a section for stating rationale of the rating (each interview had its own coding template, see the [Appendix Table 1](#)).

To begin coding, the four team members paired off, each pair coding and rating four interviews individually (i.e., the first eight interviews). After individual

Table 1
Implementation Progress Across Seven VA Sites, September 2016–December 2018

Site	IC Characteristics		Implementation Guide Steps ^a									Implementation Completion Status
			Green = Completed; Yellow = in Progress; Red = Stalled or Not Started									
			1	2	3	4	5	6	7 ^b	8	9	
1	NP	Palliative care										Successful
2	MD	Palliative care										Stalled
3	NP, RN, and SW ^c	Various										Moving forward, but delayed
4	MD & RN	Palliative care										Moving forward, but delayed
5	Nonclinical	Ethics office										Stalled
6	NP and MD	Home-based primary care, palliative care										Successful
7	MD	Palliative care										Moving forward, but delayed

VA = Veterans Affairs; IC = implementation coordinator; NP = nurse practitioner; MD = medical doctor; RN = registered nurse; SW = social worker.

^aImplementation steps: 1) Identify a Life-Sustaining Treatment Decisions Initiative coordinator and alternate; 2) secure leadership support; 3) establish a Life-Sustaining Treatment Advisory Board, Select Board Chair, and co-chairs; 4) install, customize, and test the life-sustaining treatment progress note template and order set; 5) establish new progress note to document goals and preferences; 6) draft Life-Sustaining Treatment Medical Center memorandum; 7) educate staff; 8) launch new practices; and 9) monitor and improve.

^bStep 7 expected to remain yellow as education was ongoing and not a task completed at one point in time.

^cTurnover in IC at this site; various staff from various departments involved.

coding, pairs met to reach consensus. Pairs then swapped partners, and the new pairs coded the next four interviews (two interviews per pair, first individually, then meeting to reach consensus). Once all team members were confident in coding, notes from the remaining 30 interviews were coded and rated by team members individually. Team members met as needed to discuss questions about constructs.

Informed by previous CFIR analyses,^{7,8,11} analysts created a template to organize constructs across sites and identify constructs emerging as most influential to implementation. Two team members recorded the number of times a construct was coded across interviews, both at individual sites and across sites, regardless of the valence of the CFIR rating. Two team members then identified the most influential constructs by creating a spreadsheet of frequencies, noting those coded greater or equal to three times across six interviews per site, and reviewing valence as an indicator of positive or negative influence on implementation (Tables 2 and 3). Most coded constructs fell within the domains of inner setting and characteristics of individuals, and analysis was thus focused on those constructs.

Analysts also created a stoplight chart illustrating specific implementation steps outlined in the implementation guidebook and where each site fell in the implementation process. Stoplight charts use traditional colors of a traffic stoplight—green, yellow, and red—to signify where sites are in the implementation process.^{12–14} This step proved critical to highlight

sites' implementation progress as outlined by expectations of NCEHC. Green indicated completion of an implementation milestone; yellow indicated in progress; and red indicated stalled or not started. These categorizations assisted in an overall characterization of progress by site. We edited the stoplight chart after each interview to reflect sites' statuses at that time point, based on what they shared during interviews. We categorized sites into three groups based on their stoplight chart progress at the end of interview data collection in December 2018 (Table 1). Categories included successfully implemented (two sites), moving forward, but delayed (three sites), and implementation stalled (two sites).

Results

ICs shared information and reflection about their experiences implementing the LSTDI across settings of care. We highlighted five CFIR constructs emerging from interview data as facilitators for implementation or conversely, barriers: 1) self-efficacy, either voiced by and/or demonstrated by the IC at each site; 2) leadership engagement; 3) compatibility of the intervention with pre-existing workflows; 4) available resources (training, time, and funding); and 5) overall implementation climate (capacity for change, receptivity of the intervention, and the extent it will be supported).

Application of the CFIR to explain facilitators and barriers to implementation paired well with the LSTDI

Table 2
Example of CFIR Constructs Coded and Valence Ratings
at One of Seven VA Medical Centers, Across Six
Interviews

CFIR Constructs	Time Points of Interviews					
	T1	T2	T3	T4	T5	T6
Inner setting domain						
Structural characteristics		-1		-1		
Networks & communications	+2		-2			
Culture						
Implementation climate	+1	-2				
Tension for change						
Compatibility	+2	-1		+1		
Relative priority		0				
Organizational incentives & rewards						
Goals and feedback						
Learning climate			+2		-2	
Readiness for implementation				-2		-1
Leadership engagement	-1	-2	-2	-2	-2	-2
Available resources	+1	+2	-2		-2	
Access to knowledge & information			+2			
Characteristics of individuals domain						
Knowledge & beliefs about the intervention	+2					
Self-efficacy			+1		+1	
Individual stage of change						
Individual identification with organization				-2		
Other personal attributes				-1		

CFIR = Consolidated Framework for Implementation Research; VA = Veterans Affairs.

implementation guidebook's clear stated milestones.⁴ Table 4 illustrates where we determined which CFIR constructs aligned with implementation guidebook milestones as well as the specific implementation milestones.⁵ The degree to which ICs expressed positive or negative aspects of implementation constructs varied across time and sites. For example, some sites did not have leadership support for many months; once that changed, comments about leadership engagement shifted from negative to positive. Another site identified mistakes within their LST template in the electronic health record after they thought it was correct, and had to wait for technical support to repair it, which corresponded to lack of available resources and compatibility.

Self-Efficacy

Self-efficacy of the IC emerged as a strong predictor of implementation success; those with high self-efficacy facilitated progress throughout implementation milestones, regardless of obstacles faced. In the context of the CFIR, self-efficacy is defined as an individual belief in their own capabilities to execute courses of action to achieve implementation goals.

Table 3
CFIR Constructs Influencing Implementation With
Average Ratings Across Sites and Across Interviews

	T1	T2	T3	T4	T5	T6
Implementation climate						
Site 1		+2	+1	+1	+1	-1
Site 2	+2		+1	-2	-2	-2
Site 3	+1	-2				
Site 4			-1	-1		-2
Site 5						
Site 6		-2	-2	-1	-2	
Site 7					+1	
Compatibility						
Site 1	+1	+1		-1	+1	0
Site 2				-1		
Site 3	+2	-1		+1		
Site 4	+2					-1
Site 5		-1		-2	-1	
Site 6		+2	+2	+1		
Site 7	+2		+1		+1	
Available resources						
Site 1		-1	-2	0		
Site 2	+1		+2			+1
Site 3	+1	+2	-2		-2	
Site 4	-1	+2		-2	+2	
Site 5	+2				-2	
Site 6		-2	+2			
Site 7	+2		-2	-1		
Leadership engagement						
Site 1	-2	+2	+2	0	-1	-1
Site 2	-2	-2	-2	-2	-2	-2
Site 3	-1	-2	-2	-2	-2	-2
Site 4	-1	+2		-1	-1	-1
Site 5	-1		0	0	0	
Site 6		-2	+2	+1	-2	
Site 7	+2					
Self-efficacy						
Site 1	+2					
Site 2	-2		-1	-2		-1
Site 3	+2		+1		+1	
Site 4	+2	+1	-1		+1	+1
Site 5	+1				-1	
Site 6	+1		+2			
Site 7	+2		+1		+1	

CFIR = Consolidated Framework for Implementation Research.

For instance, an interesting difference emerged between two successful sites: Site 1 had mostly positive ratings for implementation climate, whereas Site 6 had mostly negative ratings of implementation climate. Even with these differences, self-efficacy of the ICs buoyed progress at both sites. In addition, despite varying levels of leadership engagement and available resources at both sites, the ICs' strong determination/self-efficacy at Site 6 made it possible to transcend an unsupportive implementation climate. In another comparison, Site 2 (stalled) and Site 3 (moving forward but delayed) had nearly identical low ratings for leadership engagement. However, Site 2 had consistently low ratings for self-efficacy, with the IC describing being highly discouraged by an inability to navigate their VAMC to promote

Table 4
Overlap of Implementation Milestones and CFIR Constructs Influencing Implementation and CFIR Construct Definitions

National Center of Ethics in Healthcare Implementation Guidebook Milestones	CFIR Construct Influencing Implementation	Definitions of CFIR Constructs Impacting LSTDI Implementation
1. Identifying an LSTDI coordinator and alternate	Self-efficacy and leadership engagement	Self-efficacy (individual characteristics): Individual belief in their own capabilities to execute courses of action to achieve implementation goals
2. Securing leadership support	Self-efficacy, leadership engagement, and implementation climate	Leadership engagement (inner setting): Commitment, involvement, and accountability of leaders and managers with the implementation
3. Establishing an Advisory Board	Self-efficacy, leadership engagement, and implementation climate	Implementation climate (inner setting): The absorptive capacity for change, shared receptivity of involved individuals to an intervention, and the extent to which use of that intervention will be rewarded, supported, and expected within their organization
4. Designing and testing the LST note template	Compatibility and available resources	Compatibility (inner setting): The degree of tangible fit between meaning and values attached to the intervention by involved individuals, how those align with individuals' own norms, values, and perceived risks and needs, and how the intervention fits with existing workflows and systems
5. Establish a new progress note to document goals and preferences	Compatibility and available resources	Available resources (inner setting): The level of resources dedicated for implementation and ongoing operations, including money, training, education, physical space, and time
6. Drafting a medical center memorandum	Self-efficacy, leadership engagement, and available resources	
7. Training and educating staff	Self-efficacy, implementation climate, and available resources	
8. Launching the new practices	Self-efficacy, compatibility, and implementation climate	
9. Monitoring and improving efforts	Self-efficacy, implementation climate, and available resources	

CFIR = Consolidated Framework for Implementation Research; LSTDI = Life-Sustaining Treatment Decisions Initiative; LST = life-sustaining treatment.

implementation. By contrast, Site 3 had consistently positive ratings for self-efficacy, with the IC commenting that *The more resistance we run into, we're more energized to make sure it [the LSTDI implementation] works.* Thus, strong self-efficacy positively influenced Site 3s' implementation, despite some delays. In contrast, Site 2s' low self-efficacy prevented them from even formally beginning the implementation process.

Leadership Engagement

At sites with successful implementation, leadership engagement varied, and ICs' described it as both supportive and lacking. A key example of leadership engagement at successful sites was the ability of ICs to complete the required memorandum earlier in their implementation process (the medical center memorandum was one of nine required milestones and had to be completed before implementation could begin—Table 1). In contrast, this became an obstacle for sites categorized as moving forward but delayed, who found themselves waiting months to receive necessary signatures from leadership. At the end of 2018, stalled sites still had not obtained signatures, making this a continued obstacle for them. Across sites, the amount of leadership engagement in relation to ICs' self-efficacy emerged as important; at sites where ICs had higher self-efficacy, barriers related to lack of leadership were more readily overcome.

At sites with weak leadership engagement, ICs remained motivated despite describing culture and leadership engagement as resistant to change or where leadership only gave a cursory indication of engagement. At Site 6, a successful site with mostly negative/complacent leadership engagement, the IC noted, *We're just going to push through [the resistant culture]; we're going to win!* This demonstrated a belief in achieving implementation goals despite obstacles and is an example of how the constructs of leadership engagement and self-efficacy overlap.

Compatibility

Compatibility relates to how well the initiative fits into pre-existing workflows in the context of individuals' own perceived values and norms.⁶ In early conversations with ICs, they commonly assumed that VHA nursing homes (community living centers) and home-based primary care (HBPC) programs would be *low-hanging fruit*, that is, easier settings to implement the LSTDI because these programs cared for veterans with more serious illnesses. These assumptions, however, were often inaccurate. At one successful site, the IC said HBPC resisted having GoCCs at the first few visits after enrollment, instead focusing on building relationships with veterans and their families. This delayed completion of documentation of veterans' wishes in the LST templates. In other cases,

without a champion within the community living center or HBPC program (such as a clinician actively completing and promoting completion of LSTDI), ICs said resistance emerged from staff/providers who preferred the *old way* of doing things. Despite staff resistance to change, none of the ICs we interviewed questioned either the importance or the feasibility of the LSTDI. One IC stated, *this is needed for my patients.* This is the coolest thing that I think has come down the pike in allowing us all to really focus on where the patient is and what they want and what their preferences are and what their goal is in living the life they have before them.

Even at one stalled site, the IC commented, *"What keeps me motivated is being a palliative care clinician. I see the need for this project all the time, every day."* This IC indicated that the importance of the LSTDI to Veterans' overall care was, *"What keeps me engaged"*.

Other factors influencing compatibility included how ICs assumed their role as many were assigned to it. All ICs interviewed remained committed to the LSTDI implementation despite this challenge and added work responsibilities, thus making it compatible because they viewed the LSTDI as important for veterans, and it fit with their own norms and values. Many shared they were assigned or directed to this role by a supervisor, often with little discussion about their ability or desire to do so; one noted she was *vol-untold* to lead the LSTDI rollout. Few of the ICs had prior experience implementing large-scale initiatives. More than half worked in the palliative care service and presumed they were tasked to lead implementation because of their high comfort/skill level with end-of-life conversations; they felt those who assigned them this role saw it as compatible with their positions. As conversations with ICs continued during the course of many months, it became clear that many staff assumed that GoCCs were the specific responsibility of palliative care, rather than primary care (PC) or other specialty services. Although ICs who were palliative care staff acknowledged they were comfortable with these conversations, they did not appreciate the assumption that completion of the LST template would be their duty, and theirs alone. This assumption that LSTDI implementation should be compatible with palliative care staff and providers was a consistent barrier to implementation, particularly for PC. ICs shared that PC providers were often uncomfortable having these conversations, preventing GoCCs and LST template completion from becoming more compatible with PC workflow.

Available Resources

The NCEHC implementation handbook proved to be a major facilitator to implementation. ICs

referenced the guidebook numerous times as a crucial tool in conceptualizing and tracking implementation progress. Even ICs who did not meet the suggested time frame for implementation milestones still found it helpful in identifying steps they could address. The usefulness of the guidebook combined with resources, such as direct support from NCEHC staff and national calls with other ICs, positively influenced implementation and fostered self-efficacy.

Across sites, lack of staffing and time outside clinical duties to obtain LST training, as well as demands on the ICs' time, emerged as major barriers related to available resources. ICs frequently mentioned staff vacancies as barriers, particularly in PC and leadership. Sites noted that concern surfaced among providers and clinical staff about the length of the LSTDI training and the additional time it would take to conduct GoCCs and document veterans' treatment preferences. This posed a consistent barrier in providing training to PC clinics. One IC at a moving forward, but delayed site, addressed this by offering support and feedback to clinicians who were conducting their first GoCC: *The power was standing with them and watching them complete one; once they did one it seemed like they were successful in doing more.* That IC added, *We're all adult learners so having someone guide you through it was helpful.* They indicated awareness that as a smaller facility, they may have had more ability to take a 1:1 approach that would be even more time intensive at a larger site.

Implementation Climate

The two successful sites had opposite implementation climates, with one reporting mostly positive aspects about implementation climate and the other site mostly negative. Implementation climate at the first successful site served as a facilitator as staff had *enthusiastic support* and *knowing everyone helped* because they were a smaller facility. This site also had a natural fit with the goals of LSTDI because of caring for a more elderly population, making providers more readily understand impacts of GoCCs. Alternatively, poor implementation climate emerged as a barrier for the other successful site. There, clinical staff exhibited lack of desire to change processes and lack of active leadership support in responding to their IC's implementation efforts. Interestingly, high self-efficaciousness of this IC led to overcoming implementation climate barriers. A main strategy this IC used in addition to an attitude of determination was engaging a colleague to assist in implementation efforts despite a despondent advisory board and resistance of receptivity of the initiative from other colleagues.

Discussion

Our assessment of the implementation of the VA LSTDI through application of the CFIR identified five constructs that influenced implementation: self-efficacy, leadership engagement, compatibility with pre-existing workflows, available resources, and overall implementation climate. Much research has pointed to the need to improve how individuals with life-limiting illness are approached about their treatment goals and preferences to improve palliative and end-of-life care and outcomes.^{15,16} Although all the ICs we interviewed embraced the importance of implementing the LSTDI to improve patient outcomes, our focus was on the *process* of implementing a national initiative based on observation of and reflection by the individuals charged with leading these efforts in their VAMC. This allowed us to identify dynamics that served as both facilitators and/or barriers to successful implementation and suggest considerations for future national initiatives.

All ICs interviewed displayed commitment to implementing the LSTDI initiative, which they viewed as essential to improve LST documentation—thus improving documentation of veterans' values, goals, and decisions—regardless of their success in rolling out the policy. Positive self-efficacy emerged as the main driver for implementation success. ICs who had positive self-efficacy combined with stronger levels of leadership support achieved more successful implementation outcomes, both in terms of completing the implementation guidebook milestones and use of the LST template. However, as Bandura¹⁷ noted, when discussing collective self-efficacy, even the more efficacious individuals, who are not easily deterred, find their efforts blunted by mazy organizational mechanisms that diffuse and obscure responsibility (p. 144). Thus, although self-efficacy proved key in overcoming obstacles like poor implementation climate, and although it was the strongest construct we observed, it is often not enough on its own. The degree of perceived compatibility of a new policy, availability of resources, and leadership engagement must be adequate, or even successful sites and ICs with high self-efficacy will experience challenges or delays in their sites adopting new ways of managing GoCCs.

The ICs interviewed described PC as a particularly difficult area to implement the LSTDI. This may be explained by recognizing that the LSTDI required culture change,^{18,19} a much larger request than simply introducing a new way of documenting GoCCs. Prior work in PC by Bernacki and Block²⁰ noted that GoCCs are not routinely integrated into outpatient care in part because of ambiguity about who is responsible

for early GoCCs. They found PC physicians were unsure about their role, especially when multiple specialists were involved. In addition, ICs referenced colliding with cultures that historically relied on palliative care to conduct GoCCs and demonstrated a reluctance to initiate these conversations in PC. These factors related to how compatible clinicians felt the LSTDI would be in their clinics, and across sites, ICs identified PC as the most difficult area to implement the LSTDI. Similar resistance to change and doubts of compatibility to workflow have been noted in other research.^{21–24} Overall, the biggest implementation hurdle ICs' faced tended to be shifting culture to find time (available resources) to train providers because of multiple staff vacancies in PC, clinician turnover, interim leadership, and clinical demands—especially within PC—where they care for very high-needs veterans.

Birken et al.²⁵ described the importance of middle managers in implementing new initiatives within health care systems. Although ICs did not carry the title of middle manager, they essentially served this function, as stewards of disseminating information about and providing leadership for implementation of the LSTDI policy. They acted as intermediaries between executive leadership and health care staff who would carry out the policy. Birken²⁵ and Hysong et al.²⁶ studied implementation of clinical practice guidelines within the VHA system and noted that the ability to be proactive (i.e., self-efficacious) greatly impacted the ability of individuals to effectively implement policy. Martin and Waring²⁷ noted the importance of aligning goals between middle managers and leadership to support proactive implementation. These findings are in line with insights gained from interviews with ICs: when ICs had high self-efficacy and strong leadership support, implementation milestones were achieved.

The experiences of ICs in engaging leadership are similar to experiences of other robust GoCCs implementation projects in large and integrated health systems. For instance, Schellinger et al.²⁸ echoed the challenges of adequately engaging leaders, hand in hand with changing culture. In their study of advance care planning among heart failure patients, they noted that engaging some providers in supporting in-depth GoCCs was challenging, and to address this barrier, they had to engage the senior leadership team to adopt this goal as a priority. Basically, at some sites, despite the efficaciousness of middle managers (i.e., ICs) and compatible implementation climate, the culture may still only adhere to instructions received from the top and down.

Finally, most ICs commented they were assigned rather than recruited or invited to their role. Given the positive role, higher self-efficacy played in allowing ICs to more effectively lead from the middle,²⁷ future

policies reliant on clinicians leading implementation would benefit from a more formalized application/selection process. The relationship between self-efficacy and motivation of those tasked with implementing such initiatives is also important to consider.

Limitations to our work include interviewing a small sample of individuals within a limited number of VAMCs about their experiences implementing the LSTDI. Although we captured a very complete picture within one VISN, experiences at other VAMCs may have differed. Regardless, lessons can be learned from ICs' experiences. Implementing a new, major, and system-wide health care policy change is never without challenges. Consistent with research related to self-efficacy,²⁹ our work revealed ICs' high self-efficacy, combined with beliefs in the benefits of the LSTDI, motivated them to see implementation through. An accurate estimate of resources, compatibility of initiatives with workflows, and strength of leadership support is needed before beginning implementation. Other facilities, within and outside the VA, should keep these constructs in mind when pursuing implementation of other large-scale initiatives.

Disclosures and Acknowledgments

This work was supported by a Veterans Health Administration Quality Enhancement Research Initiative (QUE 15-288) grant. The VA Office of Research and Development determined that this analysis was for quality improvement and not subject to human research regulations; thus, no institutional review board approval was obtained. The authors declare no conflicts of interest.

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Appendix Table 1
CFIR Coding Template

CFIR Constructs	Rating (−2, −1, 0, +1, +2) Plus Summary of Rationale	Recommendations
I. Intervention characteristics		
Intervention source		
Evidence strength & quality		
Relative advantage		
Adaptability		
Trialability		
Complexity		
Design quality & packaging		
Cost		
II. Outer setting		
Patient needs & resources		
Cosmopolitanism		
Peer pressure		
External policy & incentives		
Inner setting		
Structural characteristics		
Networks & communications		
Culture		
Implementation climate		
Tension for change		
Compatibility		
Relative priority		
Organizational incentives & rewards		
Goals and feedback		
Learning climate		
Readiness for implementation		
Leadership engagement		
Available resources		
Access to knowledge & information		
Characteristics of individuals		
Knowledge & beliefs about the intervention		
Self-efficacy		
Individual stage of change		
Individual identification with organization		
Other personal attributes		

(Continued)

Appendix Table 1
Continued

CFIR Constructs	Rating (−2, −1, 0, +1, +2) Plus Summary of Rationale	Recommendations
Process		
Planning		
Engaging		
Opinion leaders		
Formally appointed internal implementation leaders		
Champions		
External change agents		
Executing		
Reflecting & evaluating		