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## Commentary

### Implementation Science: Moving from Theory to Sustainability

Amy Kilbourne, PhD, MPH, Quality Enhancement Research Initiative (QUERI), VA Central Office

The field of implementation science has grown exponentially in the past decade, but the “Holy Grail” of reducing the time from a research finding to adoption in routine care remains elusive. While researchers have offered dozens of implementation models, theories, and frameworks, few outline specific pathways or strategies for accelerating the movement of research from the academic shelf into the hands of patients and practitioners. Specific strategies that enhance quality improvement and implementation sustainability are vital for frontline providers who ultimately hold the key to sustaining evidence-based practices (EBPs).

QUERI is a leader in these efforts. The largest national network of implementation experts devoted to the rapid deployment of EBPs into routine care, QUERI's goal is to have more front-line providers implementing EBPs using quality improvement strategies. We have seen great progress towards our goal; through a national network of 15 QUERI programs, VA has implemented over 50 clinical EBPs in 2016 alone. Recent examples include integrated pain management primary care models, telehealth for PTSD, Hepatitis C testing and management, and homelessness peer support programs, to name a few. QUERI was able to achieve this more rapid uptake of EBPs because QUERI required each program to implement a quality improvement strategy that improved the uptake of evidence-based practices,

and to work with independent national clinical operations partners to launch EBP uptake.

Quality improvement strategies are the “how” of implementation science. Without the specific tools or methods deployed at the organization level to help providers adopt effective practices, implementation cannot happen. Moreover, quality improvement strategies are vital to “scale up and spread” initiatives in order to maximize fidelity to the EBP and sustainability. Quality improvement strategies must involve state of the art methods geared towards provider engagement, ownership, and empowerment—methods drawn from organizational psychology, management, economics, sociology, and other fields. To this end, each of the 15 QUERI programs serves as a “laboratory” that actively tests established quality improvement strategies, including audit and feedback, Facilitation (provider strategic thinking), and Lean, as well as new strategies such as “unlearning” or de-implementation of low-value care practices.

This issue of FORUM showcases cutting-edge implementation science from the QUERI centers and related quality improvement initiatives in VA. Notably, investigators from the Precision Monitoring to Transform Care (PRIS-M) QUERI Program moved from ascertainment of Big Data to establishing a national quality improvement strategy for stroke care. Similarly, investigators from the Coordinated Care QUERI in greater



### Director's Letter

A key marker of a high-performing system is consistent and reliable performance. By this measure, both VA and the U.S. health care system have a long way to go. For a national system like VA, with 168 facilities and thousands of outpatient clinics, achieving more rapid spread of best practices and new innovations is a serious challenge. Despite data confirming that average VA performance is generally good relative to our peers, it isn't consistently good everywhere in VA. In a time of increasing scrutiny of and skepticism about VA, it is critical that we improve our ability to scale improvements across the diverse VA health system.

VA has had some notable successes, in areas like colorectal cancer screening, prevention of hospital-acquired infections, and integration of primary care and mental health. In other cases, such as the recent implementation of primary care patient-aligned care teams (PACTs), uptake across the many facilities has been inconsistent, hampered by uneven commitment of local leadership and variable staffing. The result is that the driving aims of the PACT initiative, improving patient outcomes while reducing provider burnout, have not been fully realized. Underlying these examples is the inevitable tension over when to disseminate a single, national standard for practice and when to emphasize common goals but allow local facilities and clinicians flexibility regarding how to achieve them.

Fortunately, VA and VA researchers have been ahead of the curve in thinking about implementation as a discrete and specific process susceptible to scientific inquiry. The Quality Enhancement Research Initiative (QUERI) was established in the late 1990's to tackle implementation in a number of high-priority conditions, and VA researchers have been important contributors to the early field of implementation science. As outlined in the articles in this issue, such work has identified factors critical to implementing new practices and described measures to enhance spread.

The hard truth is that there is no single recipe for successful implementation. Plenty of work remains for researchers to do, including helping to determine when a practice is truly ready to be scaled up, how it may need to be adapted to different environments, and how most effectively to facilitate the uptake in new settings.

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Los Angeles applied evidence-based quality improvement strategies (EBQI) to facilitate adoption of patient-centered medical homes, resulting in a crucial leap forward in developing strategies that improved provider engagement by reducing burnout. The QUERI for Team-based Care demonstrated the effectiveness of front-line provider-centered quality improvement strategies, using both external facilitators and embedded internal facilitators

to enhance the uptake of primary care-mental health integration.

More recently, VA national leaders challenged QUERI to take the program to the next level—by working to develop a cadre of tested quality improvement strategies that can be used to scale up and spread the highest priority initiatives. In doing so, QUERI must pay careful attention to input

and involvement from multiple stakeholders, especially from front-line providers. While quality improvement strategies such as Facilitation involve front-line providers at the beginning, in most cases, the evidence-based practice is still implemented from the top down, highlighting the need to include stakeholders from all levels in the process.

This year, QUERI funded a national evaluation of the Diffusion of Excellence initiative that seeks to garner ideas of best practices from the “bottom up” (beginning with front-line providers) and select the most promising ones via a “shark tank” format. This approach complements QUERI's focus by working with providers to realize the value of local experience, while at the same time applying implementation science to learn which quality improvement strategies are best for scaling up and spreading promising practices nationally. The Diffusion of Excellence platform will also provide opportunities to deploy quality improvement strategies from the ground up, determining which ones are most likely to lead to spread of effective practices across different settings.

Ultimately, front-line providers won't adopt an effective practice unless they find it of value to their day to day practice. The most promising quality improvement strategies are derived from underlying theory but also actively involve providers as key stakeholders from the beginning. For example, allowing front-line providers to adapt EBPs encourages ownership of the practice by the providers, a key motivator for successful longer-term adoption. Quality improvement strategies such as Replicating Effective Programs include steps that embrace adaptation but more work is needed to test their effectiveness in enhancing outcomes and sustainability. Finally, promoting positive deviance from the bottom-up is crucial because often the best ideas come from front-line providers.

What will it take to sustain the scale up and spread of evidence-based practices? Through QUERI and HSR&D, VA aims, with input from front-line providers and national leaders, to inform research and practice that will: 1) develop common national outcomes metrics to measure implementation effectiveness; 2) identify factors that drive variations in EBPs uptake

*Continued on page 8*

## Response to Commentary

# Aligning Forces for Implementation

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Implementing evidence into care for patients and then sustaining that implementation is arguably our biggest challenge in health services research. Much of VA's implementation science has been led and conceptualized by VA HSR&D and QUERI investigators. Our embedded intramural research program ensures that we as researchers address topics that are of importance to the care of Veterans and to our VA health care delivery system. Our career development award program creates a human capital pipeline of talented scientists who develop their research agendas within the rich data environment and multiple delivery settings of the Veterans Health Administration (VHA). The graduates of these programs often are retained in VHA to provide mentorship to the next generation of researchers, and to provide research, educational, and clinical leadership to VHA.

### Health Care Delivery System Partnerships

HSR&D explicitly recognizes and encourages partnership with the health care delivery system through its Center of Innovation (COIN) infrastructure program as well as funding mechanisms such as the Collaborative Research to Enhance and Advance Transformation and Excellence (CREATE) Initiative. The latter requires operational partners and researchers to interact throughout the research development and implementation process. Through the QUERI Evidence Synthesis Program, we ensure that our evidence reviews address important topics for our patients and our health care delivery system. The Evidence Synthesis Program also provides an opportunity to blend VA and non-VA research evidence, so that we can learn from other delivery settings, and vice versa. Implementation of this evidence into best VA clinical practice is in turn facilitated by the HSR&D QUERI program, which, as Dr. Kilbourne notes in her commentary article, is the largest network of implementation science experts in the United States.

VA, as the largest integrated health care delivery system in the nation with a global fixed budget, directly benefits from innovations in health care delivery that it can deploy directly into practice. So, an effective intervention developed by researchers that reduces infection rates in the intensive care unit, in addition to improving quality, also leads to shorter lengths of stay, and directly helps the financial bottom line of the health care delivery setting rather than an insurance company's profits. Furthermore, implementing preventive health interventions for Veterans, such as cardiac risk factor modification, allows VA to benefit from near-term investments that yield long-term benefits in morbidity and mortality, because our patients do not lose their VA "coverage." Our mission and expectations from Congress, Veteran advocacy groups, and the public provide additional pressures for VA to deliver access to high quality care. These pressures are unique to VA.

Research funding agencies such as the Agency for Healthcare Research and Quality and the National Institutes for Health do not have a health care delivery system, so while they produce state-of-the-art science, they have far fewer opportunities for implementation. The Centers for Medicare and Medicaid Services, while financing a large proportion of U.S. health care, does not have a formal embedded research program that it can deploy.

### Implementation of Research Into Practice

Despite the alignment of incentives in VHA, implementation of best evidence into best practice is not as rapid or seamless as we would wish. Intriguing models of combining top-down leadership with bottom-up engagement of front-line staff are the next wave of experiments in speeding implementation of research into practice. Multiple Houston PACT CREATE projects are experimenting in this vein. In

one project (CRE 12-035: Identifying and delivering point-of-care information to improve care coordination), we brought to primary care the Productivity Measurement and Enhancement System (ProMES), an empirically effective, structured focus group methodology from the discipline of industrial/organizational psychology based on motivational theory. In this approach, an already existing work team systematically identifies organizational objectives and develops clear, accountable performance measures, which are prioritized and weighted by their contribution to overall quality.

The research method and collaborative partnership with VISN 12 leadership through the CREATE development process, guided by The Practical Robust Implementation and Sustainability Model (PRISM), facilitated strong engagement by front-line staff and local leadership.<sup>1,2</sup> We are evaluating applications of ProMES now at multiple facilities and CBOCs in two VISNs, and we have received positive feedback about sustaining the project after research funding ends at several sites, perhaps due to engagement of partners at multiple levels from front line to network. We will propose a formal assessment of the sustainability of this intervention as part of an implementation evaluation.

VHA is a leader in implementation science and continues to innovate with implementation methods; these innovations in turn benefit non-VA health care settings. This is one of the many ways VA is able to achieve the aims of a learning health care system.<sup>3</sup>

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## Research Highlight

# Facilitation: A Key Strategy in the Field of Implementation Science

Mona J. Ritchie, PhD, and JoAnn E. Kirchner, MD, both with HSR&D's Center for Mental Healthcare and Outcomes Research and QUERI for Team-Based Behavioral Health, North Little Rock, Arkansas

The Department of Veterans Affairs (VA) has been a forerunner in the development, promotion, and implementation of evidence-based practices (EBPs) through innovative research initiatives, guidelines, quality improvement efforts, and programs designed to advance implementation science. Effective implementation typically involves a focus on adopting multi-component clinical innovations or programs tailored to individual settings, application of diverse implementation strategies to support adoption, and involvement of multiple stakeholders.

### Supporting Clinical Innovation

Implementation facilitation (IF) has been widely used in many health care organizations to support clinical innovation implementation. In its simplest form, IF is a process of interactive problem solving and support that occurs in the context of a recognized need for improvement and a supportive interpersonal relationship. However, IF can also be a complex, multi-faceted strategy that addresses implementation challenges by incorporating many implementation interventions, including identification of and engagement with key stakeholders, i.e., opinion leaders and clinical champions, at all organizational levels; problem identification and resolution; assistance with technical issues; development of information exchange networks; academic detailing; marketing; staff training; patient education; formative evaluation, audit and feedback; and fostering role modeling.

Although facilitation has been used in many disciplines, the tenets of IF in health care arose from the education and nursing disciplines and acknowledge the fact that, while research evidence that supports a given program or practice is important, clinical experience and professional knowledge

provide additional evidence that directly affects the adoption of a practice. For example, the experiences of a colleague who has successfully used the program or practice may be more important to a provider than a journal article. In addition, factors within the implementation setting or context influence practice adoption. Thus, the organizational structure, leadership support, prior experience in new practice implementation, and methods of communication directly influence implementation efforts. Finally, characteristics of the EBP or innovation being implemented influence uptake. Implementation facilitation provides a mechanism to address factors that may impede uptake of the innovation, whether they are associated with those receiving the innovation, the context within which the innovation is being implemented, or characteristics of the innovation.

### Helping Rather Than Telling

Facilitation involves helping rather than telling. Establishing a partnership based on mutual respect with stakeholders in the implementation setting is critical to successful facilitation activities. It is not a process of providing resources and stepping back or simply telling someone what to do. Rather, facilitation requires the creation of a supportive environment within which knowledge can be exchanged, barriers to implementation identified, and processes to overcome those barriers developed, applied, and refined. Implementation facilitation also involves both doing and enabling. At times, facilitation involves doing something for the organization or its stakeholders. For example, facilitators may provide education or monitor uptake of the innovation through an audit of electronic clinical data and feeding this information back to clinical providers. At other times, they may help and enable clinical providers to provide ed-

ucation or feedback to others. Although facilitation of each implementation effort has its own purpose and goals, ultimately, the overall purpose of facilitation is to provide the help and support needed to improve clinical care and patient outcomes.

Implementation facilitation has been successfully applied in several national initiatives. Kirchner, et al. tested the effectiveness of an IF strategy to implement Primary Care—Mental Health Integration (PC-MHI) at eight VA sites—both rural Community Based Outpatient Clinics and VA Medical Centers—identified by network leadership as being unable to implement the program without assistance. The IF strategy included an external facilitator and a network-level internal facilitator. This strategy was effective compared to support provided in the national rollout of PC-MHI and was later adopted by the VA Office of Mental Health Operations to support the implementation of PC-MHI as well as evidence-based psychotherapies.<sup>1,2</sup> Kilbourne, et al, applied a much less intensive model of virtual external facilitation to re-engage Veterans with severe mental illness that had been lost to VA care, which also showed increased effectiveness compared to standard national rollout support.<sup>3</sup> Thus, IF intensity and “dose” may vary based on the clinical innovation, innovation users, and the local context.

As noted by others, the rollout of clinical initiatives applying IF must include sufficient resources to support this strategy. Thus, it is critical that researchers document resources used in IF trials so that VA leadership can make informed decisions when designing clinical innovation implementation.

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## Research Highlight

# Enhancing PACT Implementation through Qualitative Research

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Since 2010, VHA has been implementing the Patient Aligned Care Teams (PACT) model as the standard of care for delivering primary care services. Implementation of the underlying patient-centered medical home model requires fundamental change in the organization of care, with the primary work unit moving from individual providers to interdisciplinary teams. During this transition we have worked as part of the PACT Demonstration Laboratory Initiative to conduct a multi-faceted, mixed-methods formative evaluation of implementation. Our underlying objective, as with any project applying implementation science, has been to inform successful and sustainable adoption of evidence-based practice into everyday care delivery.

### Qualitative Data Contributions: Three Examples

Although an important part of our effort has been the collection and analysis of quantitative data, we have also relied heavily on qualitative research to help us better understand the contextual factors contributing to both barriers and facilitators of implementation. Interviews, participant observations and open-ended responses to surveys have helped us learn directly from front-line personnel involved with the transformation of primary care delivery. These data have not only helped us better understand the implementation process but have provided our operation partners with ongoing insight regarding approaches for improving facilitation. We illustrate the unique contributions of qualitative data by highlighting three specific examples where qualitative analysis has helped inform and guide PACT implementation.

Our first example represents a collaborative effort where investigators from the VISN 4 and VISN 23 PACT Demonstration Laboratories undertook a joint analysis of qualitative data collected through semi-structured interviews with early PACT adopters. We examined findings from separate evaluation efforts and identified common, recurrent implementation issues, despite one lab's metropolitan setting (VISN 4) and the other's rural setting (VISN 23). Combining information collected through independent evaluations enabled us to develop a theoretical framework with which to understand team-, clinic-, and health care system-level factors contributing to implementation success. The resulting framework delineates the interconnected importance of such elements as: team-driven role negotiation; psychological safety; team-directed clinic grids; co-location of PACT members; and coordinated priority setting by health care system leadership, among others.<sup>1</sup>

A second example comes from the VISN 22 PACT Demonstration Laboratory where investigators used multiple waves of qualitative interviews with VISN and health care system leadership and PACT teamlet members to identify best practices and challenges for PACT implementation. Although team-based care was perceived initially by many as having a positive impact on patients, early implementation challenges reported by leaders and teamlet members included lack of cross-disciplinary role agreement, chronic understaffing, lack of training in team-based care, and inadequate implementation of PACT features, such as teamlet huddles. We used information such as this to identify best practices and develop an

evidence-based quality improvement approach to PACT implementation (EBQI-PACT), which has been associated with accelerated achievement of PACT goals, including lower provider burnout, lower use of face-to-face visits and higher non-face-to-face care.<sup>2</sup>

A third example comes from multiple national surveys that have been conducted to assess the adoption of PACT practices. The VISN 23 PACT Demonstration Laboratory is currently conducting thematic analysis of over 3,000 open-ended responses collected as part of a 2016 national survey. We have identified several key areas of concern among primary care personnel working to implement PACT, the most prominent being: challenges caused by understaffing and lack of role coverage; feelings of stress and overload; and a need for additional support from facility and service line leadership. This work complements an earlier analysis conducted by the national PACT Demonstration Lab Initiative evaluation team using national survey data collected in 2012.<sup>3</sup>

### Insights into Implementation

These three examples highlight how the Offices of Primary Care Services and Primary Care Operations' foresight to fund the PACT Demonstration Laboratory Initiative has been beneficial for facilitating the complex implementation of PACT. As with all change initiatives of such magnitude, implementation has moved forward in a somewhat protracted fashion, with certain facilities and individuals making more rapid progress than others. In this setting, qualitative research methods have been particularly useful for identifying specific implementation barriers and facilitators. Qualitative techniques have also provided a conduit for front-line staff to share their experiences with leadership and have helped build partnerships with operational leaders. Our formative approach to evaluation has provided insight into implementation as it occurs. We have routinely shared our ongoing discoveries with leaders at multiple levels, who have used the insights generated to shape subsequent PACT rollout efforts. The ongoing dialogue has directly informed

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## Research Highlight

# Measuring to Improve Care for Veterans with Cerebrovascular Events

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The story of ongoing improvement of acute ischemic stroke care for Veterans over the last decade is one where many projects and strategic partnerships come together to play pivotal roles. These pieces include VHA performance measurement, electronic health record data, chart review projects, national quality reports, a Veterans Affairs Central Office (VACO) directive, funded HSR&D and QUERI projects, and strategic partnerships between HSR&D, QUERI, and VHA operations.

### VHA Stroke Performance

In 2009, the Stroke QUERI, in partnership with what was then the national VA Office of Quality and Performance, led the first facility-level assessment of VHA stroke care quality.<sup>1</sup> Using administrative data and detailed chart review for patients with ischemic stroke in fiscal year 2007, this large-scale, labor-intensive project assessed inpatient stroke care quality as well as stroke risk factor management in the pre- and post-stroke periods at over 150 VA Medical Centers (VAMCs). This QUERI project led to the first understanding of VHA stroke performance across the system, and found that performance varied considerably across quality measures and across VAMCs, with some of the biggest improvement opportunities in the earliest phases of acute care.<sup>2</sup> These results were distributed widely to all VHA facilities, Veterans Integrated Service Networks (VISNs), and Central Office leadership. A stroke quality improvement toolkit and a national VA Stroke Quality Improvement Network (SQUINT) were also launched in support of this initiative.

This new knowledge about VHA stroke performance across the system directly informed the work of the VA Stroke Task Force, a strategic partnership with the national VHA offices of Emergency Medicine and Neurology and other national VHA stakeholders, whose work culminated

in the development of the VHA National Acute Ischemic Stroke Directive. Released in late 2011, the directive required every VHA medical center to formally self-designate at one of three levels of acute stroke care (Primary Stroke Center, Limited Hours, or Supporting Stroke Facility) and to self-report quarterly via the VA Inpatient Evaluation Center on a core set of facility-level stroke quality performance measures. From 2012 to the present, these reports—along with other sources of data, including national measurement of facility-level inpatient stroke care performance via chart review by the VHA External Peer Review Program—have shown steady improvement across VHA in acute stroke care.

In the timespan of only a few years, VHA moved from a system where acute stroke performance was largely unknown to one where facility-level stroke care is now formally organized, measured, and reported—and on an upward trajectory of improvement.

### VHA TIA Care

Following the example set with acute stroke care, transient ischemic attack (TIA) represents another clinical area within VHA where timely, high-quality care could directly benefit thousands of Veterans annually. Several non-VHA studies have demonstrated that timely management of vascular risk factors reduces the relative risk of vascular events by a clinically dramatic 70 percent. A QUERI-funded service-directed project conducted the first national benchmarking evaluation of TIA care across the VHA system nationwide. Electronic quality measures (eQMs) were validated against chart review and used to evaluate TIA care quality across a comprehensive set of processes and outcomes that spanned the care continuum from acute, emergency department care through the inpatient period to the outpatient, primary care

setting. Performance varied substantially across elements of care with lowest performance for polysomnography (<5 percent of eligible patients) and highest performance for international normalized ratio (INR) measurement for atrial fibrillation patients receiving anticoagulation (>96 percent of eligible patients).

In an effort to understand how TIA care is being delivered across the VHA system, this study also conducted 72 in-person interviews with multidisciplinary clinical and administrative staff at 14 VAMCs across the country. These interviews revealed that TIA care quality was largely invisible to practitioners because of a lack of access to performance data, with respondents universally welcoming quality performance data about TIA care.

In response to these findings, the PRIS-M QUERI launched the “Protocol-guided Rapid Evaluation of Veterans Experiencing New Transient Neurological Symptoms” (PREVENT) project. PREVENT makes it possible for the first time for participating VAMCs to examine their own facility-level TIA quality performance data; offers resources and facilitation to help local VA staff reflect upon and evaluate those data; supports local teams in quality improvement planning and goal-setting; and builds a system-wide quality improvement system for TIA care where staff at one VAMC can connect with and learn from the experience, knowledge, and efforts of VA staff at other VAMCs. As before with acute stroke, this systemic TIA initiative aims to contribute another chapter to a larger story of HSR&D, QUERI, VHA operations, VERC, and VA clinicians around the country working together to measure, organize, and improve care for Veterans.

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## Research Highlight

# Strategies to Increase Hepatitis C Treatment Starts

Rachel Gonzalez, MPH, National Hepatitis C Resource Center, VA Long Beach Healthcare System, Long Beach, California; Angela Park, PharmD, CACP, New England Veterans Engineering Resource Center, VA Boston Healthcare System, Boston, Massachusetts; Vera Yakovchenko, MPH, HSR&D Center for Healthcare Organization and Implementation Research, Edith Nourse Rogers Memorial VA Hospital, Bedford, Massachusetts; and Shari Rogal, MD, MPH, HSR&D Center for Health Equity Research and Promotion, VA Pittsburgh Healthcare System, Pittsburgh, Pennsylvania

Hepatitis C virus (HCV) infection is a leading cause of cirrhosis and liver cancer in both the U.S and Veterans Health Administration (VHA). A new generation of treatment regimens (Direct Acting Agents) has increased rates of sustained viral response (SVR) with fewer side effects than previous treatments.<sup>1</sup> Approximately 9 out of 10 patients who complete treatment achieve SVR12, indicating that the virus is no longer detectable 12 weeks after treatment completion.<sup>2</sup> With previous regimens, only 5 or 6 out of 10 patients achieved SVR, with much longer treatment durations and more frequent side effects such as extreme fatigue, depression, skin rash, and anemia. This efficacy increased demand, without a corresponding increase in clinic resources. To address this imbalance, the Hepatitis C Innovation Team (HIT) Collaborative committed to timely identification and treatment of patients with HCV, and reorganization of care in the most patient-centered manner.

In 2014, VA's HIV, Hepatitis and Related Conditions program (formerly the HIV, Hepatitis, and Public Health Pathogens Program), chartered the HIT Collaborative to improve access and quality of care for approximately 200,000 Veterans affected by HCV. The National Hepatitis C Resource Center partnered with the New England Veterans Engineering Resource Center to launch the HIT Collaborative and provide a clinically focused Lean foundation to Veterans Integrated Service Network (VISN)-based HITs. These multi-disciplinary teams apply Lean process improvement principles to identify barriers, implement strategies to ad-

dress them, and improve health care delivery from testing through treatment.

All teams receive centralized Lean training, data, coaching, and financial support from the HIT Collaborative. In the first year of the program, each of the twenty VISN HITs identified three priority issues in care delivery and designed corresponding interventions. HITs then selected and implemented strategies best suited to address local needs. The HIT Collaborative reviewed clinical quality measures and defined system-wide metrics to track changes in outcomes. While HITs identified opportunities for improvement across the care cascade (from screening to linkage to care, treatment and testing for SVR), HITs singled out the treatment initiation step as an area of critical importance. With growing treatment demand, most sites identified increasing treatment capacity and treatment starts as a top priority. Since the launch of the HIT Collaborative over 80,000 Veterans have initiated HCV treatment.

The HIT Collaborative Evaluation Team applied implementation science methodologies to evaluate the impact of a multitude of strategies employed by the HITs. The Expert Recommendations for Implementing Change (ERIC) provided a structured approach to identify and assess the use of discrete implementation strategies to increase HCV treatment initiation.<sup>3</sup> ERIC enumerates 73 implementation strategies in nine clusters: changing infrastructure, utilizing financial strategies, supporting clinicians, providing interactive assistance, training and educating stakeholders, adapting to the context, developing

stakeholder interrelationships, using evaluative and iterative strategies, and engaging consumers (patients). The evaluation team's VA medical center survey identified which of the 73 implementation strategies were used at each site.

The evaluation team found that the number of strategies used by a medical center was positively correlated with treatment starts. Of the 73 strategies, 28 were associated with treatment starts. The most frequent strategies implemented included using data warehousing techniques (e.g., using a population health management tool), and intervening with patients to promote uptake and adherence to HCV treatment.

Data from a prior survey of medical centers about the number and types of providers on the HCV care team also provided insight. The number of providers was neither significantly associated with number of patients treated nor the number of strategies used. This finding underscored a core element of the HIT Collaborative coaching, which emphasizes improving the processes of care, despite the size or composition of the HCV care team.

By using a Lean and team approach to identify barriers and design tailored solutions with the Veteran in mind, any care team, large or small, can work towards improving health care delivery and patient experiences. The results drawn from this evaluation support HITs to continue exploring which strategies lead to increased treatment. This information is invaluable to the work of the HIT Collaborative and helps drive the work of continuous improvement in health care delivery.

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and learn from “positive deviant” sites (including those with promising practices ready for national implementation); 3) develop and deploy tested quality improvement strategies for sustaining EBPs; and 4) determine the return-on-investment of implementation strategies so they can be resourced and used across different EBPs. To this end, we can move from theory to practice and ultimately, enable research to reach the providers and the Veterans they serve more efficiently and effectively.

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our evaluation focus and design over these past seven years. Qualitative techniques have thus provided a primary mechanism for closing the research-practice gap often associated with implementation science.

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