

VA Quality Enhancement Research Initiative (QUERI)

Strategic Plan

2016-2020

Health Services Research and Development Program

VHA Office of Research and Development

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EXECUTIVE SUMMARY

The goal of the VA Quality Enhancement Research Initiative ([QUERI](#)) is to improve Veteran health by supporting the more rapid implementation of effective treatments into practice. Since 1998, QUERI has achieved this goal as a field-based program comprised of Centers and projects that primarily focused on conditions that contributed to the major causes of morbidity and mortality among Veterans. Providing an essential combination of scientific rigor and bi-directional partnerships with VA operations, QUERI was an integral component in VA's last major transformation from a hospital to a primary care-based system, and is poised to be the engine for VA's most recent transformation and promotion to a successful [Learning Healthcare System](#) in the future.

Now more than ever, QUERI remains an essential component to VA care. In 2014, VA underwent an unprecedented reorganization, notably with the [Veteran's Choice Act](#) and [MyVA](#) initiative. These changes do not represent business as usual. QUERI will need to change in response to these transformations in VA care and in anticipation to future needs of Veterans. Earlier in 2014, QUERI underwent an external national evaluation of its program that included substantial input from over 100 VA operational partners, researchers, and outside experts, as well as an internal evaluation of its portfolio and operations. Key recommendations from this evaluation also reflected changes that are salient to the VA transformation. In response QUERI actively vetted a draft strategic plan with key stakeholders and in October 2014, met with QUERI and VA leadership to incorporate evaluation results and to update the Plan based on the Blueprint for Excellence, Veterans Choice Act, and MyVA. As a result, the updated QUERI Strategic Plan accomplishes three major goals in support of these efforts:

1. Rapidly translate research findings and evidence-based treatments into clinical practice (i.e., VHA Blueprint for Excellence Strategy 7h)
2. Increase impact of VA research findings through bi-directional partnership, rigorous evaluation, and communication
3. Make VA a national leader in promoting a learning healthcare organization through innovative implementation science

How will the QUERI Strategic Plan support VA's transformation in 2016 and beyond? First, QUERI will support programs that focus on updated VA national priority goals as emphasized in the Blueprint for Excellence, Veterans Choice Act, and other VA national leadership-supported initiatives. In doing so, these programs will work with operational partners to make changes to VA healthcare across conditions or settings through the application of implementation strategies. To this end, QUERI plays an essential role in decreasing the time from generation of research findings for interventions deemed a national VA priority to their use by VA providers.

Second, QUERI will increase impact on Veteran care by continuing to serve as a trusted and essential partner to VA through rigorous evaluation of VA national initiatives. As VA becomes more of a health care payer as well as provider through the Choice Act, its reorganization will involve substantial changes that will have intended and unintended consequences on Veteran care. QUERI investigators will be essential in helping VA unpack the uptake of these new initiatives, notably through randomized evaluations and testing optimal sustainability strategies across different settings that will lead to insights in the ongoing evolution of the VA healthcare system for Veterans and stakeholders.

Finally, QUERI will remain grounded in rigor as it actively engages with operational partnerships. This will require continued investment in a critical mass of implementation-savvy scientists and shared opportunities with non-VA entities, especially those who can lead innovation at the earlier stages of the research pipeline, as well as ensure that interventions are grounded in evidence and are feasible for providers to use.

VA's recent transformation involves major changes of a magnitude not seen in more than a generation. VA is changing, and VHA programs, including QUERI, will need to change in response to this transformation and in anticipation to future needs of Veterans. This Strategic Plan guides QUERI through these changes and enables the program to continue to stay grounded in science and strengthen its partnerships with operations, playing an essential role in informing the uptake, sustainability, and value of new initiatives that ultimately improve the quality and outcomes of care for Veterans.

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I. Introduction

The goal of the VA Quality Enhancement Research Initiative (QUERI) is to improve Veteran health. In order to improve the quality of VA healthcare and accomplish this goal, QUERI supports the application of critical evidence into practice. Harnessing the power of research in partnership with VA operations, QUERI applies innovative strategies to more rapidly implement effective treatments and other evidence based system improvements in routine care. Since 1998, QUERI has achieved this goal as a field-based program comprised of Centers and projects that primarily focus on conditions contributing to the major causes of morbidity and mortality among Veterans.

Overall, QUERI combines scientific rigor and bi-directional partnerships with VA operations. This combination is synergistic: QUERI focuses on the implementation of practices of clinical and policy importance to VA operations, and through scientific rigor contributes to foundational knowledge and production value to the work of operations. This synergy results not only in the improvement of the health care system through the adoption of effective clinical practices into routine care for Veterans, but in the identification of the best approaches to spread and sustain these practices in VA and elsewhere. In brief, these desired approaches, or implementation strategies, are methods to support providers in the use of a clinical treatment across different practice settings, including lower-resourced sites. Implementation strategies often focus on enhancing the uptake of more complex clinical interventions that involve different providers or components (e.g., team-based collaborative care, multicomponent clinical processes) as opposed to a single component (e.g., pharmaceuticals not involving routine monitoring). Hence, QUERI is a national resource, conducting research for VA and beyond to support what the Institute of Medicine has referred to as a [Learning Healthcare System \(Table 1\)](#); e.g., performance improvement through empirical methods, optimization of care impacts through scientific rigor around target areas, and broad leadership capabilities that span field-based and national policy-level partners and ultimately improve the care experience for Veterans.

QUERI’s Role in a Changing VA

Now more than ever, QUERI remains an essential component to VA care. QUERI was integral in the VA’s last major transformation from a hospital to a primary care-based system. Recently, VA is undergoing an unprecedented reorganization, notably with the [Veteran’s Choice Act, MyVA](#) initiative, and VHA’s [Blueprint for Excellence](#). These changes have not happened in over a generation and do not represent business as usual. QUERI will need to change in response to these transformations in VA care and in anticipation to future needs of Veterans. The original strategic goals of QUERI were established with input from VA leaders, clinicians, researchers, and other stakeholders and centered on areas of high disease burden and potential for quality enhancement. As in the past, QUERI re-examined its priorities based on a recent national evaluation of its program, extensive input from VA leadership, its strategic advisory committee (Research & Methodology- R&M), and operational partners. In doing so, QUERI will continue to support the implementation of effective practices or programs in areas deemed national VA priorities beyond disease label or condition to ultimately improve care for Veterans.

Table 1: How QUERI Can Accelerate the VHA Learning Healthcare System*

Domain	IOM Recommendation	Examples of QUERI activities
Digital Infrastructure	“Research funding agencies and organizations (such as VHA) should promote research designs and methods that draw naturally on existing care processes and that also support ongoing quality improvement efforts” to “improve capacity to capture clinical, care delivery process, and financial data for better care, system improvement, and (new knowledge)”	-Support implementation studies using national VHA data sources to monitor patient processes and outcomes -Use large databases to compare implementation outcomes of national program/policy rollouts across treatment contexts**
Data Utility	“Streamline and revise research regulations to improve care, promote the capture of clinical data, and generate knowledge” “(Grantmakers) should develop strategies to improve	-Deploy parallel data/human subjects review processes -Promote mechanisms for ethical quality improvement

	understanding of the benefits and importance of accelerating the use of clinical data to improve care and health outcomes.”	studies through QUERI -Enhance QUERI investigator access to VA national large outcomes datasets
Implement Care Improvement Targets	“Decision support tools and knowledge management systems should be routine features of health care delivery to ensure that decisions made by clinicians and patients are informed by current best evidence. Research funding agencies and organizations should promote research into the barriers and systematic challenges to the dissemination and use of evidence at the point of care, and support research to develop strategies and methods that can improve usefulness and accessibility of patient outcome data scientific evidence.”	-QUERI Evidence Synthesis Program: support VHA in identifying best practices -Implementation strategies: support VHA in identifying optimal ways to facilitate uptake of evidence-based practices or policies
Patient-Centered Care	“Health care delivery organizations, including programs operated by the DoD, VHA, and Health Resources and Services Administration, should monitor and assess patient perspectives and use insights gained to improve care processes; establish patient portals to facilitate data sharing and communication among clinicians, patients, and families; and make high-quality, reliable tools available for shared decision making.”	-Incorporate patient/family/caregiver input in QUERI projects -Support electronic data collection and dissemination of data-sharing -Designing for implementation across the research pipeline
Community Links	Promote community-clinical partnerships and services aimed at managing and improving health at the community level.	-QUERI involvement in VA community Veteran advisory councils, other regional initiatives
Care Continuity	“Health economists, health service researchers, professional specialty societies, and measure development organizations should develop and test metrics with which to monitor and evaluate the effectiveness of care transitions in improving patient health outcomes.”	-Support evaluation of Veterans Choice act implementation

Optimized Operations	“Accelerate training, technical assistance, and the collection and validation of lessons learned about ways to transform the effectiveness and efficiency of care through continuous improvement programs and initiatives.”	-Promote implementation strategies using QI and Lean methods
Policy Environment	“Develop and evaluate metrics, payment models, etc. that reward high-value care that improves health outcomes.”	-Support randomized program evaluation of value-based and similar provider behavior initiatives**
Performance transparency	“Increase dissemination of information on costs, quality, value”	-Support dissemination of QUERI findings, metrics
Broad leadership	“Continuous learning and improvement should be a core and constant priority for all participants in health care”	-Support strong partnerships between field investigators across VA operational partners

*Institute of Medicine. “Best Care at Lower Cost: The Path to Continuously Learning Health Care in America.” September 2012 Available at: http://www.iom.edu/~media/Files/Report%20Files/2012/Best-Care/Best%20Care%20at%20Lower%20Cost_Recs.pdf

**For more information on use of existing data to promote cost-efficient and rigorous evaluations, see White House Office of Management and Budget May 2012 Memorandum on use of evidence and evaluation in the 2014 budget.

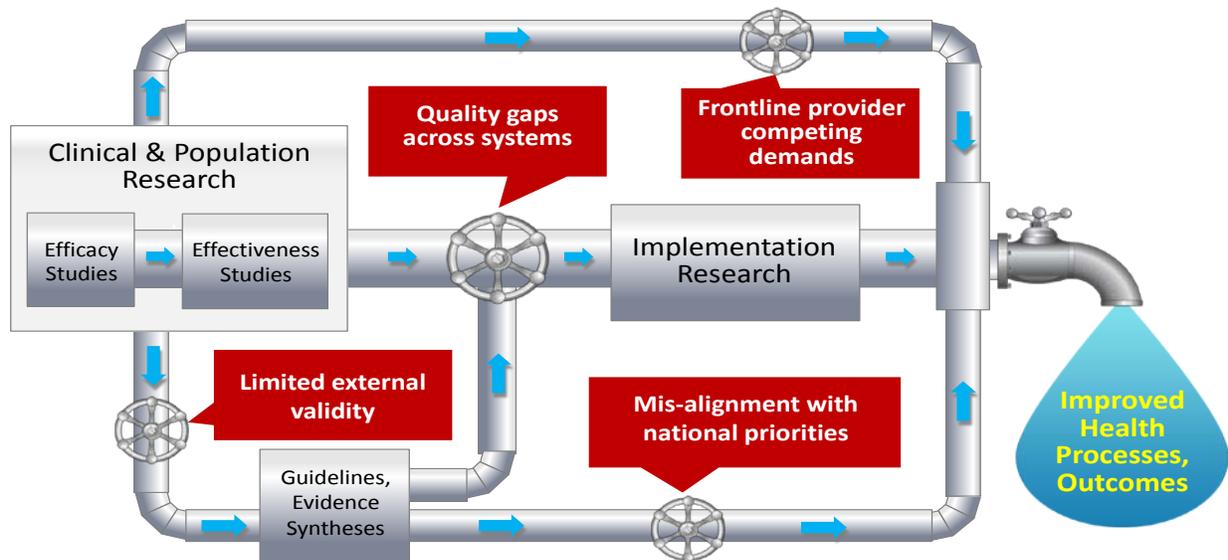
To this end, QUERI’s 2016-2020 QUERI Strategic Plan supports VA’s transformation by focusing on the future of implementation and implementation science in terms of system, provider, and most critically, Veteran needs (“skate to where the puck is going to be”). Specifically, this plan supports VA’s implementation of the [VHA Blueprint for Excellence](#), [Veteran’s Choice Act](#), and [MyVA initiatives](#) by ensuring that these initiatives are fully realized regardless of treatment setting, and applying rigorous program evaluation to enhance their return-on-investment. QUERI’s involvement is essential because there are well documented risks in all efforts to improve health care systems.

QUERI’s Essential Role as the Implementation Lab in a Learning Healthcare System

Many new practices or initiatives fail to achieve their desired goals without effective strategies to overcome barriers to implementation. Key implementation barriers include but are not limited to: 1) limitations of treatments or clinical practices studied in select

patient populations that have not been fully adapted for routine care, 2) potential misalignment of research and operational priorities, 3) competing demands of frontline providers to implement new practices, and 4) variations in organizational capacity to support the uptake of effective clinical practices. Figure 1 highlights the most common gaps, or barriers to effective implementation of research into practice. Most notably is the gap in evidence drawn from select patient populations in tightly-controlled studies that are not practical to implement in routine practice, especially those with fewer resources or less organizational commitment. But other implementation barriers exist even for practical, effectiveness- based interventions. There is potential misalignment of research and operational priorities, especially when research is created by independent investigators whose interests may not be aligned with the priorities of a health care system. Moreover, competing demands of frontline providers to implement new practices and not understanding how to mitigate these challenges can get in the way of their implementation. Finally, variations in organizational capacity to support the uptake of effective clinical practices impede their dissemination into routine care.

Figure 1: Gaps in the Research-to-Practice Pipeline



There has been an increased call for the embedding of implementation science into the development phase of interventions so that they can be implemented in routine care more readily (i.e., “designing for implementation”). Implementation barriers and facilitators have been studied in depth by [QUERI investigators](#), who have developed a

knowledge base that includes implementation theories, frameworks. Additional implementation studies will be needed beyond descriptive work to address gaps in the pipeline. These studies will need to extend beyond the effectiveness study design paradigm (i.e., Hybrid Type I or II designs per Curran et al 2012) to more deep evaluation and testing of strategies to mitigate barriers to implementation, especially across different organizational contexts. In addition, there needs to be studies that seek to build the infrastructure to scale up interventions when proven effective, such as practice networks or “Big Data” sources to better track outcomes across multiple sites. To address barriers at the frontline provider level, formative evaluation of “early-adopter” sites that are implementing evidence-based practices are vital in understanding the core components required for further spread. Finally, implementation research will need to be better aligned with the needs of system-level, regional, or policy priorities, notably by working closely with operations leaders to design evaluations of existing or new policies or programs that are rolled out nationally, to better understand their impact and ultimately achieve further spread of what works over time. Ultimately these expanded research directions in QUERI should strive to transport research knowledge off the academic shelf and into the hands of those who could ultimately benefit from it, particularly in later-adopter, lower-resourced sites.

QUERI’s Emerging National Evaluation Role

QUERI is also well-positioned to support innovative and cross-disciplinary strategies to improve the uptake of effective clinical practices or policy initiatives across one of the largest single employers of healthcare providers in the U.S. Randomized program evaluations of the most critical elements of the implementation process produce more effective strategies that can prevent wasted effort and expense on ineffective rollouts, and ultimately produce greater return on the resources invested in implementing new programs. This

**“Less than one dollar out of every \$1,000 that the government spends on healthcare will go towards evaluating how well the other \$999-plus actually works”-
Bridgeland & Orszag, 2013**

approach to data-driven decision-making (e.g., Bridgeland and Orszag, 2013) has been referred to as “evidence-based policy”, and VA and other federal programs are

proposing greater investment in program evaluation, preferably involving systematic allocation of new programs using comparison groups to assess return-on-investment across programs. Similarly, a recent [IOM update](#) on learning healthcare systems strongly suggests the need to better integrate more practical research methods (e.g., cluster randomized controlled trials, population-based studies) into health care systems. As a bridge between research and clinical operations, QUERI's role is the rigorous study and support of effective implementation or quality improvement strategies that empower frontline providers, promote transparency across organizational levels, and ensure that transformative initiatives are implemented successfully in line with local realities as well as national priority goals. To this end it will be essential for QUERI to be involved at the beginning of new initiatives or rollouts in order to serve as a trusted partner in laying the groundwork for their rigorous evaluation using systematic allocation (randomization of new programs or clinical policies) whenever possible.

II. QUERI Program and Goals

a. QUERI Mission

The overall mission of QUERI is to improve Veteran health by supporting the more rapid implementation of effective clinical practices into routine care

b. Vision

As the essential engine for promoting a successful learning health care organization, QUERI is the model for deploying innovative and rigorous improvement science that supports VA's mission to improve Veteran care.

c. Values

Serving as a trusted partner to providers and clinical leadership, QUERI applies a deep knowledge of evidence-based care and innovative implementation science to support providers and clinical leaders in the adoption of research findings into clinical practice, asking crucial questions regarding the intended and unintended impacts of implementing new treatments or programs and the best strategies for speeding their adoption into practice. QUERI's critical role in achieving the vision of a learning healthcare system will help leaders and providers exemplify the

core VA values of integrity, commitment, advocacy, responsibility, and excellence (ICARE) in treatment delivery.

d. QUERI Strategic Goals

Strategic Goal 1: Rapidly translate research findings and evidence-based treatments into clinical practice

QUERI Strategic Goal 1 is identical to VHA Blueprint for Excellence Strategy 7h.

As the principal agents responsible for quality improvement in VA, clinical leaders and providers benefit from QUERI through the implementation of effective clinical practices endorsed by VA leadership. QUERI, primarily through the application of implementation strategies that are rigorously tested that enhance the uptake of effective clinical practices throughout the healthcare system, supports operational partners in making changes to VA healthcare across conditions and treatment settings.

Strategic Goal 2: Increase impact of VA research findings through bi-directional partnership, rigorous evaluation, and communication

QUERI will increase impact on Veteran care by continuing to serve as a trusted and essential partner to VA through rigorous evaluation of new initiatives. QUERI will be essential in helping VA unpack new initiatives such as the Veteran's Choice Act; identifying and testing optimal sustainability strategies across different settings, and communicating findings to stakeholders. QUERI's impact will be judged by the extent to which knowledge and products that are developed through the program are used by operational partners to improve the way healthcare is delivered to Veterans.

Strategic Goal 3: Continue to make VA a national leader in promoting a learning healthcare organization through innovative implementation science

As one of the only entities in the U.S. and globally with its own national network of implementation-focused investigators embedded within a healthcare system, QUERI makes essential contributions to implementation science through discovery, participatory research in partnership with clinical operations, mentorship, and capacity-building, through cross-agency opportunities, ultimately advancing knowledge on improved health.

III. Strategic Analysis

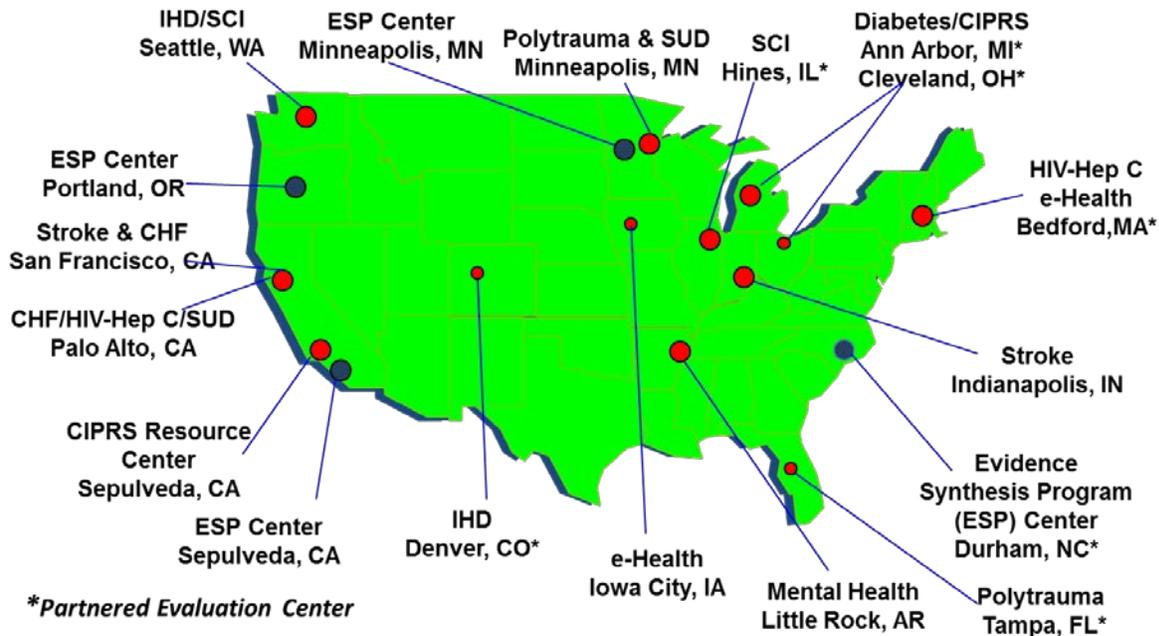
The overall QUERI mission remains as relevant today as it was when QUERI was established over a decade ago. No other VA entity has specific responsibility for using scientific rigor to study the best implementation strategies to facilitate adoption of effective practices into routine care. While QUERI is part of the VHA Office of Research and Development, its funding source (VHA medical services/administration) enables flexibility in conducting rigorous quality improvement studies with operations partners. QUERI is not the implementer of effective clinical practices but rather serves as an implementation science and strategy lab. To this end, QUERI strives to be a trusted partner with VA operations and challenges assumptions, notably through rigorous studies involving the implementation of clinical practices with strong support of their evidence primarily from randomized controlled trials, not simply practices with operational or political enthusiasm. The following Strategic Analysis is based on a careful consideration of input from a national evaluation of QUERI as well as VA leadership and key stakeholders and recent national transformational initiatives including the Blueprint for Excellence, MyVA, and the Veterans Choice Act.

a. Planning Assumptions and Horizon Scanning

QUERI has been instrumental in leading efforts to more rapidly translate evidence-based practices into routine clinical care for Veterans. Some recent QUERI impacts include the following:

- Established benefits of integrated mental health in primary care and implementation of a national clinical initiative that has greatly increased access to mental health care for Veterans
- National evaluation of implementing weight loss programs in VA care settings
- Implementation of Blue Button (medical notes for patients)
- Development of an opioid dashboard to monitor and improve opioid safety use
- HIV rapid testing initiative led to increased number of patients tested and receiving care
- Critical review of clinical performance measures, leading to revisions to national guidelines (e.g., lipid management, tobacco use) and more patient-centered measures
- Implementation of the Cardiac Assessment, Reporting and Tracking System (CART) for tracking and improving catheterization procedures in VA Cath Labs
- Increased influenza vaccination rates for staff and for Veterans with spinal cord injuries

Figure 2: QUERI Centers: FY2015



QUERI Current Center Infrastructure

QUERI impacts are currently achieved primarily through investment in a national network of Centers and investigator-initiated projects (Figure 2). As of FY2015 there are 10 principal QUERI Centers, all of which are affiliated with major VA research facilities, and comprise a national network of research, clinical, and implementation experts that are primarily focused on particular conditions or treatment settings: Chronic Heart Failure, Diabetes, HIV/HCV, Ischemic Heart Disease, Mental Health, Spinal Cord Injury, Stroke, Substance Use Disorders, Polytrauma and Blast-related Injury, and eHealth (Table 2). With the exception of the Polytrauma and eHealth QUERIs, the focus areas of the ten principal centers were established in 1998 based on input of VHA leaders with input from key researchers to represent conditions of significant disease burden among Veterans, costs to VA, and potential to improve quality through evidence-based practices. Each of these Centers is led by a Research Clinical, and Implementation Research Coordinator, with input from an Executive Committee comprised of VA and non-VA stakeholders who work to ensure the primary goals of the Center are aligned with VA priorities and sound improvement science. While these ten Centers focus on specific areas, they have more recently supported cross-cutting initiatives (Table 3).

The ten principal QUERI Centers have used their own strategic planning process to promote studies related to evidence-based practice implementation in their key content area. Each Center is required to submit an updated Center-specific strategic plan every three years that are primarily informed by research evidence and program office partnerships. Centers also support projects in collaboration across other QUERI Centers, primarily through their designated Implementation Research Coordinators, and have contributed to several cross-cutting impacts in partnership with VHA clinical operations that are focused on speeding the uptake of research into practice (Table 3).

Table 2: QUERI Centers, Strategic Goals, and Key Partners as of FY2014

QUERI Center	Center Goals	Key Partners
Chronic Heart Failure (CHF)	Decrease unnecessary hospitalizations, increase life-prolonging therapies towards improving quality of life	Pharmacy Benefits Management, Office of Specialty Care, CMS, PCORI

Diabetes (DM)	National implementation of weight loss interventions Decrease risk and improvement appropriate management of diabetes	National Center for Health Promotion and Disease Prevention
eHealth (eH)	Implement e-health to improve access, determine meaningful use of new technologies	Connected Health
HIV/Hepatitis C (HH)	Increase identification and improve coordination and value of HIV and HCV care	Office of Patient-Centered Care, Office of Rural Health
Ischemic Heart Disease (IHD)	Improve patient-centered care and health of persons with acute cardiac events	Office of Informatics and Analytics, American Heart Association
Mental Health (MH)	Implement effective care for SMI, primary care-mental health integration, and recovery	Office of Mental Health, Arkansas Veterans Commission
Polytrauma (PT)	Optimize coordination of care and self-management support for patients with poly trauma and traumatic brain injury	Physical Medicine and Rehabilitation Program, Office of Mental Health
Spinal Cord Injury (SCI)	Reduce respiratory disease/pressure ulcers, optimize virtual care, functioning in SCI patients	Spinal Cord Injury and Disorders Services, Office of Public Health, Paralyzed Veterans of America, VERC
Stroke (STR)	Reduce risk of stroke, and improve in-hospital care and rehabilitation of stroke patients;	Office of Primary Care, National Center for Health Promotion and Disease Prevention, VERC, VISNs
Substance Use Disorders (SUD)	Increase implementation of effective treatments (alcohol abuse, smoking opiate addiction), de-implement ineffective treatments	Office of Mental Health Commonwealth of Pennsylvania
Center for Implementation Practice and Research Support (CIPRS)	Development, teaching, and dissemination of implementation and quality improvement research	VA investigators, academic medical centers
Evidence Synthesis Program (ESP) Centers	Produce evidence-syntheses for guidelines and policy decisions at the request of VA operational partners	VHA Policy and Clinical Operations; Agency for Healthcare Research and Quality (AHRQ)
Office of Specialty Care Services-QUERI (SC)*	Evaluate implementation of Specialty Care initiatives	Office of Specialty Care Services

	(SCAN-ECHO, e-consults)	
Evaluating Patient-Centered Care in VA (EPCC-VA)*	Evaluate patient-centered care at Centers of Innovation	Office of Patient-Centered Care and Cultural Transformation
Center for Evaluation of Practices & Experiences of Patient-Centered Care (CEPEP)*	Evaluate implementation and spread of patient-centered care initiatives in VHA	Office of Patient-Centered Care and Cultural Transformation
VA Nursing: Effectiveness and Entry (VAE2)*	Evaluate implementation of VA staffing methodology, transition to practice program	Office of Nursing Services
Nursing Innovations Center for Evaluation (NICE)*	Evaluate ONS initiatives around pressure ulcer prevention	Office of Nursing Services
Caregiver Support Program (VA-CARES)*	Evaluate VHA Caregiver Support program on costs & outcomes of Veterans and caregivers	Office of Social Work

*Partnered Evaluation Center

In addition, QUERI supports Evidence Synthesis Program (ESP) centers which produce evidence syntheses for guidelines and policy decisions at the request of VA operational partners. There are four ESP centers and a Coordinating Center which identifies topics and key questions, manages reports and reviews, communicates with stakeholders, and plans implementation. QUERI’s Center for Implementation Practice and Research Support (CIPRS) is a resource center devoted to the development, teaching, and dissemination of implementation and quality improvement research.

Most recently, QUERI has funded several Partnered Evaluation Centers focused on cross-cutting topics of high priority including patient-centered care, specialty care, nursing services, and caregiver support. As of early 2015, three additional Partnered Evaluation Centers are in progress to evaluate the VHA Lean Transformational Initiative (with the Veterans Engineering Resource Center), identify priority areas for quality enhancement among Veterans (Office of Health Equity), and evaluate implementation of Patient-Aligned Care Team training (Office of Academic Affiliations).

Table 3: Recent Cross-Cutting Impacts: QUERI Centers and Operational Partners

Cross-cutting Impact	Principal QUERI Center	Additional VA Partner(s)
Implemented national pharmacy program to improve patient safety (e.g., aldosterone antagonists)	Chronic Heart Failure	Pharmacy Benefits Management
Established Veteran Stakeholder Council to provide guidance on partnered research projects.	Mental Health	Veterans, VHA providers
Implemented secure messaging to facilitate pre-visit coordination for PACTs.	eHealth	Office of Connected Health
Operationalization of comprehensive assessment of implementation (CFIR)	Diabetes	Cross-Center
Implementation Target Assessment Tool to assess priorities in rolling out effective clinical practices	Substance Use Disorders	10NC
Large-Scale Disclosure Toolkit for Clinical Episode Response Team (CERT) for large-scale adverse events	HIV/Hepatitis C	10NC
Scalable provider-based improvement strategies (e.g., Facilitation, Evidence-based Quality Improvement) to enhance use of evidence-based programs	Mental Health/Stroke	Mental Health Operations (10NC)
Implemented streamlined screening & telehealth to improve access to care (e.g., TBI)	Polytrauma	Care Coordination
Implemented a declination form program to improve healthcare worker vaccinations	Spinal Cord Injury	Office of Public Health, SCI/D Services
Anticoagulation dashboard to improve adherence/quality (VA Anticoagulation Directive)	Stroke	VISN 1/Patient Care Services
Opioid safety initiative performance metrics and dashboard – national Opioid Safety Initiative	Substance Use Disorders	VHA Operations (10NC)

QUERI Investigator-Initiated Studies

VA investigators (either affiliated or not affiliated with specific QUERI centers) have conducted a variety of short (less than 12 months) and longer (up to 3 years) research and implementation projects, which have helped to advance improvement science both within and outside of the VA. These studies have often been at the forefront of the emerging field of implementation science. Early QUERI studies moved from conventional health services research approaches around variations in quality or

outcomes of care towards greater emphasis on practice improvement involving a 6-Step framework.

More recently, QUERI moved from research focused primarily on describing implementation barriers or facilitators conducted in traditional efficacy/effectiveness research settings (e.g., Hybrid Type I/II; see Curran et al, 2012) to studies producing knowledge around optimal strategies in implementation across more real-world treatment settings (e.g., Hybrid Type III studies comparing different implementation strategies) that combine elements of quality improvement and implementation science and employ either randomized program evaluation and/or deep observational studies of larger-scale clinical practice or policy initiatives. This transition is ongoing and crucial in order for QUERI to stay ahead of implementation science innovation, increased demands for meaningful healthcare studies from operational partners, and national initiatives such as the IOM's [Learning Healthcare System](#) and the Office of Management and Budget's [Improve Government Performance](#). This transition will require that QUERI promote the use of rigorous evaluation methods, practical implementation/improvement science trial designs, and investigator-operational partnerships that enable QUERI programs to be informed by and inform national policy decisions early on in order to design rigorous studies (i.e., to allow for randomized program evaluation). It will also require added investment in comprehensive clinical and patient-centered outcomes data so that implementation studies can be conducted more efficiently. In addition, VA/non-VA collaborations with other healthcare systems (e.g., HMO research network), and further development of interdisciplinary teams (e.g., business, industrial engineering, political science, etc.) will be crucial for fostering innovation and impact. In early 2014, based on the national evaluation and input from VA leaders, investigators, and Center leadership, QUERI updated its funding mechanisms to better align with its overall mission and strategic goals (Table 4). These funding mechanisms also provide more opportunities to reduce the research-to-practice gap in key areas (Figure 1).

Table 4: QUERI and Alignment of Short- and Longer-Term Funding Mechanisms to Fill Gaps in Pipeline

Pipeline Gap (Figure 1)	Strategy	Examples	Funding Options
<p>Limited external validity of efficacy/effectiveness studies</p>	<p>Design clinical interventions ready for implementation</p>	<p>Access variation in intervention effect Mediators → mechanisms Moderators → barriers/facilitators Consumer/provider acceptance Guideline creation, updates</p>	<p>Short-term QUERI-Cooperative Studies Program (CSP) supplements for existing trials to develop/support implementation strategies (Pilot stage)</p> <p>Longer-term Deployment of optimal strategies in “designing for implementation” earlier in the research pipeline involving development of tools/products/strategies that mitigate variations in uptake across consumer, provider, and or organizational contexts</p>
<p>Quality gaps across systems due to variations in organizational (e.g., resource, leadership) capacity</p>	<p>Assess variations and customize implementation strategies based on organizational context</p>	<p>Provider/practice networks Data capture: implementation fidelity/outcomes Implementation strategy refinement based on assessment barriers/facilitators, capacity, etc.</p>	<p>Short-term Development of implementation infrastructures (e.g., provider networks)-RISOMEs</p> <p>Data infrastructure development to routinely capture or assess implementation fidelity, patient-level processes/outcomes of care, and value/return-on-investment measures</p> <p>Longer term Application of provider/practice-based networks to conduct implementation studies</p>

			<p>or evaluation of national programs</p> <p>Further refinement of implementation strategies involving organizational/provider behavior change</p>
<p>Frontline provider competing demands (e.g., multiple clinical reminders)</p>	<p>Real-world implementation</p>	<p>Positive deviation studies</p> <p>Further customization of EBP (Type II)</p>	<p>Short-term</p> <p>Quality improvement studies</p> <p>Longer-term</p> <p>Refinement of implementation strategies using cross-disciplinary methods that address provider behavior/organizational change (e.g., business, economics, policy, operations research. etc.)</p> <p>Positive deviation or adaptation studies especially to improve implementation at lower-resourced, later-adopter sites</p>
<p>Misalignment with national or regional priorities</p>	<p>National policy/practice roll-outs</p>	<p>Systematically assess national clinical rollouts (e.g., Directives, guidelines)</p>	<p>Short-term</p> <p>RFA to support national evaluation of the Veterans Choice Act</p> <p>Longer-term</p> <p>Randomized program evaluations of national VA programs or policies</p>

b. Strengths, Weaknesses, Opportunities and Threats (Figure 3)

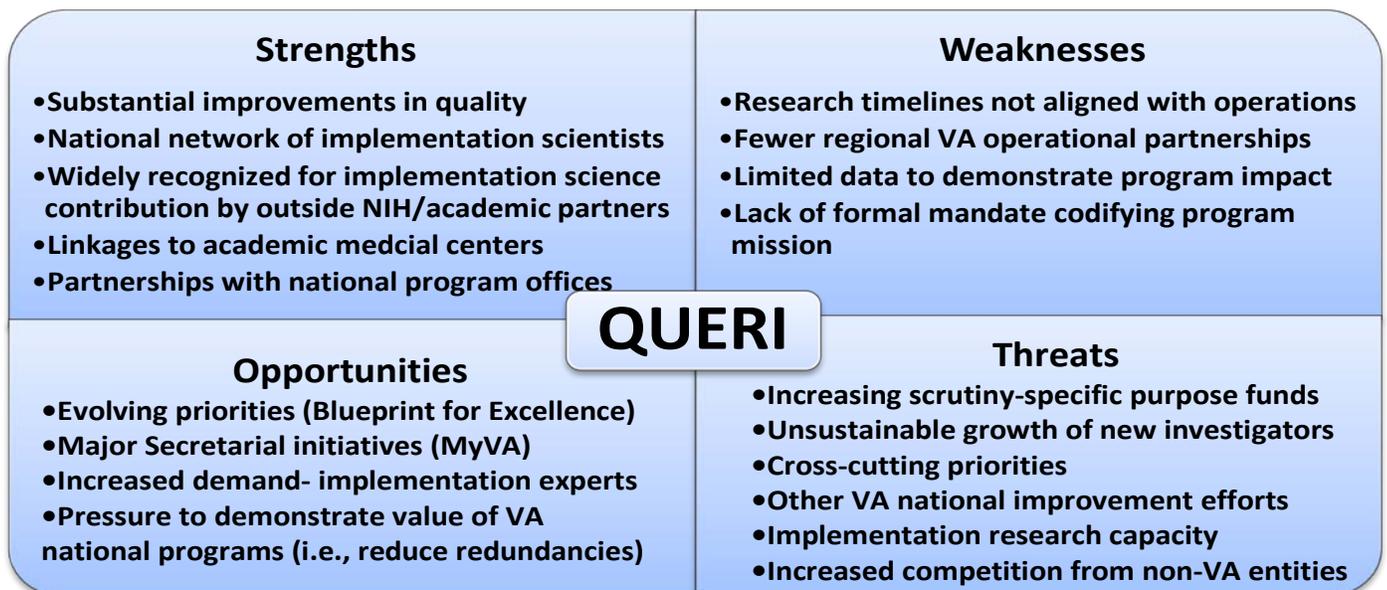
A nationally focused, updated QUERI Strategic Plan is needed for several reasons. The VHA national reorganization under MyVA and the Blueprint for Excellence merit a serious re-examination of the QUERI mission, its organization, and core activities.

There is more recent emphasis by VHA leaders on national issues that span clinical

areas, such as improving access to care under the **Veteran’s Choice Act** as well as cross-cutting transformational efforts under the VHA’s Blueprint for Excellence and MyVA. At the same time, previously strong partnerships with senior VA leadership have weakened with time and have been replaced by partnerships primarily centered within program offices. Continued pressure to reduce what is perceived as a top-heavy national central office infrastructure under the VA transformation may lead to substantial changes in the mission and organization of many of these national program offices, which in turn will impact their relationships and priorities with current QUERI centers.

In addition, QUERI was initially established as a result of an informal commitment between VA leadership and the Office of Research and Development (ORD), without any formal executive decision memo or legislative mandate constituting the program. This puts QUERI continually at risk as difficult funding decisions are made. In fiscal year 2015, remaining special purpose funds including QUERI funds were swept and presumably redistributed to support major clinical priorities. There has also been increased scrutiny of special purposes funds used for activities other quality enhancement (e.g., investigator-initiated research projects).

Figure 3: QUERI SWOT Analysis



The timeline of conceiving and funding QUERI initiatives does not always allow it to stay ahead of implementation challenges. Generalizable knowledge across current projects has not been fully realized to inform the deployment of appropriate implementation strategies across different settings. A notable advantage of QUERI funding is that according to the VHA Handbook 1058.05, projects covered under special purpose (medical administration/medical support) funds are eligible to be considered non-research, or quality improvement if there is substantial input from the operational partner. Quality improvement protocols can be reviewed in a much shorter time period because operations review is considered sufficient. However, in almost all situations, QUERI projects have been reviewed as research studies even when they might be more appropriate as quality improvement protocols.

Finally, existing challenges to QUERI also include inherent issues with conducting research in VA and elsewhere. Notably, growing numbers of early-career scientists with an interest in independent investigator work are not being matched by an equally growing trajectory of increased funding opportunities ([Alberts, et al PNAS 2014](#)). Many of these individuals have been supported through QUERI rapid-response projects that have not moved towards the deployment of more widespread implementation or improvement science studies. In addition, there are increased regulations involving human subjects, information technology, and federal hiring processes, leading to delays to study completion and adoption in routine clinical practice.

c. Stakeholders

QUERI represents a unique collaboration between research and the VA health care delivery system and given its role in promoting implementation science, seeks input from a diverse array of stakeholders at the leadership, provider, and increasingly consumer levels. While to date focusing mainly on condition-specific areas, the ten principal QUERI Centers are also encouraged to involve operational partners outside of their focus areas through their Executive Committees in order to help guide the overall strategic direction and ensure that goals are also congruent with the broader VA mission. At the same time, the strategic planning process for Centers enables them to

focus on achievable goals that are consistent with the available clinical evidence and operational capacity, without overpromising across multiple stakeholders.

A list of key QUERI stakeholders is provided below:

Veterans and their families/caregivers

VA and VHA

- Research and Methodology (R&M) – QUERI’s Strategic Advisory Committee
- VA Patient Care Services (10P; QUERI funding)
- VA Office of Research and Development- ORD, HSR&D (QUERI program infrastructure)
- VA clinicians
- VA field investigators supported by QUERI, HSR&D, and ORD
- VISN leadership, VA Operations (10P, 10N)
- Center for Veteran Engagement/Community Veteran Advisory Councils
- Office of Academic Affiliations
- VA National Leadership (VACO)
- Veteran Benefits Administration
- VHA National Leadership Council
 - Finance committee
 - Healthcare delivery
 - Veteran experience
 - Workforce management
- National Research Advisory Council
- Field Research Advisory Councils

Veteran Organizations, e.g.,

- Friends of VA Research
- [National Veterans Service organizations](#)

Other Federal Agencies

- National Institutes of Health (NIH)
- Agency for Healthcare Research and Quality (AHRQ)
- Department of Defense (DoD)- e.g., joint VA/DoD initiatives
- Patient-Centered Outcomes Research Institute (PCORI)
- Centers for Disease Control and Prevention (CDC), National Center for Health Statistics
- Social Security Administration (SSA)

White House Offices

- Executive Office of the President (e.g., Fast Track to Civilian Employment initiative)
- Office of Management and Budget (e.g., Evaluation initiatives)
- Office of Science and Technology Policy (e.g., data sharing policies)

Congressional Committees (Senate)

- Sen. Committee on Veterans Affairs
- Appropriations
- Budget.
- Finance

Congressional Committees (House)

- House Committee on Veterans Affairs
- Appropriations
- Budget
- Ways and Means

State and Local Agencies and Organizations

- National Governors Association
- State/Local Legislatures and Governments
- Local Veterans Service Organizations

Private Sector/Non-profit Organizations

- American Association of Medical Colleges
- AcademyHealth
- NCQA
- HMO Research Network
- Voluntary organizations (e.g., American Heart Association)
- Research Societies
- American Association of Medical Colleges
- Institute of Medicine
- VA affiliate universities

Specialized Media Groups

- Medical Journals/Blogs (NEJM, AMA, Health Affairs)
- Medical professional and specialty societies
- Modern Healthcare

d. Competitors

QUERI competes with medical schools and universities for employment opportunities, especially as they build their capacity to conduct implementation science (e.g., through the NIH CTSI program). Increasingly, QUERI is also competing with other healthcare systems or health plans such as the HMO Research Network, Mayo Clinic, etc. which are developing large-scale improvement science capabilities in the wake of U.S. healthcare reform. Nonetheless, unlike VA, these healthcare systems may not have an extensive intramural research program. Other VA research programs, notably Health Services Research and Development (HSR&D) are not seen as competitors, but are incorporating QUERI features, such as stronger collaborations and health system partnerships, which could threaten to weaken QUERI's unique identity. Moreover, the larger body of QUERI-funded research has great potential to contribute to recent Office of Research and Development strategic expansions in innovative research areas including measurement science (e.g., data analytics validation), provider behavior (e.g., intrinsic motivation or other strategies beyond clinical reminders and education),

operations research (e.g., validation of efficiency models across organizational contexts), and randomized program implementation.

VA has delineated research from evaluation functions, seeing the former more as a vehicle to promote the systematic study that yields generalizable knowledge, and the latter more focused on determining whether a program or initiative provided by an organization was delivered as intended, with less of a focus on its application to outside the organization. Several VA operational partners have their own evaluation units (e.g., Mental Health Program Evaluation Centers). While these evaluations mainly address short-term questions or Congressional inquiries, they are beginning to address longer-term questions of more strategic significance. In December 2014, the Office of Management and Budget (OMB) asked VA to support a systematic program evaluation of the Veterans Choice Act (VCA) that involved overarching definitions of success and key measures and rigorous methodology. The program evaluation is a joint effort of the Office of Analytics and Business Intelligence (OABI) and the Office of Research and Development (ORD), with QUERI playing a prominent role in formative evaluation for ongoing learning and implementation of the Veterans Choice Act. Program offices are also being encouraged by OMB and VA to invest in supporting evaluation of their program's policies; a good opportunity to involve QUERI as an essential partner in these efforts through Partnered Evaluation initiatives.

Other VA program initiatives that involve quality improvement (e.g., Systems Redesign, Veterans Engineering Resource Center-VERC) do not have research as a primary goal, and hence are partnering with QUERI to build generalizable knowledge around best implementation practices. For example, VERC recently issued a joint Partnered Evaluation Center with QUERI to evaluate Lean Transformational Initiatives, given the need to understand the "black box" of Lean deployment in order to inform further rollout and sustainability across different organizational contexts. Hence, it is expected that QUERI initiatives will serve to complement existing operational partner-based evaluation work over time. In fact, many QUERI investigators have roles that span both

clinical operations and research, which afford the opportunity to make a more immediate impact on practice.

NIH, AHRQ, DOD, PCORI, and other funding agencies are not seen as competitors of QUERI, and many QUERI investigators receive funding from these other agencies. In the past there have been active collaborations with these agencies through jointly funded requests for applications and conference sponsorships (e.g., Dissemination and Implementation Conference), and discussions are continuing to identify scientific and methodological areas of overlap. While AHRQ and NIH are growing their implementation portfolios, QUERI differentiates itself from NIH and other federal funding agencies by placing a particular emphasis around military deployment-related conditions, as well as improvement science applied to a large healthcare system.

QUERI can also make a unique contribution to implementation science apart from other health services funding sources that primarily focus on studies involving network-model health plans or practices. By working within the largest single employer of healthcare workers and trainees in the U.S., and one of the largest single providers of care for individuals that are primarily treated for major chronic mental and physical health conditions, QUERI investigators can conduct studies of national policy evaluations and implementation strategies (e.g., implementation Type III hybrid designs involving organizational and provider behavior change) that are optimal in settings with low variation in health care payer mix. These types of studies have been recently promoted by the Office of Management and Budget as a means to build capacity for evidence-based policy development across federal agencies.

e. Legal and Regulatory Drivers and Mandates

1. Congressional legislative mandates (e.g., Veterans Choice Act, GPRA)
2. Presidential Executive orders
 - i. Big Data Research and Development Initiative to greatly improve the tools and techniques needed to access, organize, and glean discoveries from huge volumes of digital data

- ii. Executive Order 13563 -- Improving Regulation and Regulatory Review -- to determine which VA regulations should be modified, streamlined, expanded, or repealed so as to make the agency's regulatory program more effective or less burdensome in achieving the regulatory objectives
3. Office of Management and Budget Evidence-based Policy (Using Evidence to [Improve Government Performance](#) and operationalization of the Paperwork Reduction Act)
4. OSTP Science Integrity Policy
5. The Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy and Security Rules
6. Federal Policy for the Protection of Human Subjects (The Common Rule) and VA's Office of Research Oversight concerning quality improvement versus research(e.g., [VHA Handbook 1058.05](#))
7. The Health Information Technology for Economic and Clinical Health (HITECH) Act
8. The Privacy Act of 1974
9. The Federal Information Security Management Act
10. Budget guidance issued by the Office of Management and Budget
11. Office of Personnel Management (OPM) regulations
12. Office of General Council Ethics Regulations regarding participation of VA Investigators in commercial ventures with private entities

IV. Strategic Planning Framework: Alignment with VA and VHA Strategies

QUERI Strategic Plan Development

Over the past two years QUERI has worked to obtain support for an updated global strategic plan that is aligned with VA's strategic goals as a learning healthcare organization (Table 5). QUERI incorporated feedback from the national evaluation

conducted by ICF International in 2014. Since the evaluation, QUERI has reassessed its organization and focus areas to better align with VA current needs and priorities, revised the strategic plan which was vetted by VA leadership, revised dissemination products based on QUERI's updated goals, and executed strategic alliances within and outside of VA that support the overall QUERI and VA missions that include opportunities to contribute to the more rapid implementation of clinical evidence into practice, as well as to new knowledge involving implementation and quality improvement science.

Table 5: Preparing for Change: QUERI Strategic Planning Timeline

Milestone	Date
QUERI national evaluation contract bid	Fall 2012
QUERI global priority goals drafted (impact, response, science)	Spring 2013
Draft QUERI global strategic plan	Fall 2013
Centers, R&M review of strategic plan, Updated RFAs	Winter 2014
National evaluation (ICF International)	Spring 2014
Evaluation results disseminated (Centers, R&M, VA leaders)	Summer 2014
Strategic planning meeting, new funding mechanisms (RISOME)	Fall 2014
QUERI funding sweep, VA leadership/R&M input, updated plan	Winter 2015
New RFAs: Choice Act; QUERI program, partnered evaluations	Winter 2015
QUERI FY16 budget due (zero-based budget)	July 2015
Execute updated QUERI program/mission	September 2015

QUERI National Evaluation Summary

The QUERI national evaluation was conducted in 2014 by ICF International and involved over 100 interviews of operational partners, researchers and other stakeholders within and outside of VA. An accompanying internal audit of QUERI funding trends was also conducted. Interview participants were asked about QUERI's overall impact in VA and elsewhere, their experiences in working with QUERI, and future directions. Overall, interviewees felt that QUERI was generally responsive to the needs of its current partners and had made an impact on VA care. However, there was room for improvement among VA operational partners who were currently not working with QUERI, and that QUERI had not yet reached its full potential in the implementation of research into practice. Key recommendations from the national evaluation are listed in Table 6 below. In response to these recommendations QUERI launched several new initiatives in FY2014-2015.

Table 6: Key Recommendations from QUERI Evaluation and Recent Activities

Key Evaluation Recommendation	FY2014-2015)QUERI Initiatives Implemented in Response	Alignment with key 2016-2020 QUERI Strategic Goal
<p>Decrease time between research studies to application in clinical practice</p> <p>More emphasis on quality improvement initiatives</p>	<p>Shortened QUERI proposal RFA, review, and decision process in eRA commons</p> <p>Piloted funding mechanism to support implementation (e.g., Cooperative Studies Program-CSP QUERI “design for implementation” supplement)</p> <p>Operationalization of QUERI non-research (Quality Improvement) review mechanism based on the Office of Research Oversight VHA Handbook 1058.05 to help speed the implementation of research to practice through ethical quality improvement procedures</p>	<p><u>Strategic Goal 1:</u> Rapidly translate research findings and evidence-based treatments into clinical practice</p> <p>(Blueprint for Excellence Strategy 7h)</p>
<p>Develop additional strategic partnerships within and outside of VA</p>	<p>Proposed funding mechanism: Rapid Implementation Supporting Operations & Management Enhancements (RISOMEs) to establish VA and non-VA partnerships</p> <p>Increased number of Partnered Evaluation Centers involving strategic alignments with VA operational partners (VERC, OHE) to inform improvement science and enhance quality of care for vulnerable groups</p>	<p><u>Strategic Goal 2:</u> Increase impact of VA research findings through bi-directional partnership, rigorous evaluation, and communication</p>
<p>Address more cross-cutting health care issues, consider broader implications of QUERI studies</p>	<p>Proposed updated RFAs to promote cross-cutting work (e.g., provider behavior change strategies, implementation methods, provider networks, budget impact assessments) aligned with a VA national priority through operational partnerships</p> <p>Updated RFAs to encourage more rigorous studies of implementation strategies, rigorous national evaluations</p>	<p><u>Strategic Goal 3:</u> Make VA a national leader in promoting a learning healthcare organization through innovative implementation science</p>
<p>Improve marketing & communication</p>	<p>Added policy impact metrics to Center reports (e.g., to what extent has project</p>	<p><u>Strategic Goal 2:</u> Increase impact of VA</p>

of QUERI program impacts	<p>led to changes in VHA policy/clinical practice, improved process/outcome measures)</p> <p>Included more VA program leaders as proposal reviewers to ensure projects are relevant to VA priority goals and Veteran care</p>	<p>research findings through bi-directional partnership, rigorous evaluation, and communication</p>
Benchmark QUERI impacts by patient-level process/quality of care provided	<p>Updated QUERI RFAs to encourage development/leveraging of national data sources</p> <p>Added impact tables to measure policy as well as patient-level impacts of QUERI projects</p>	<p><u>Strategic Goals 1,3</u></p>

Alignment of QUERI with Strategic Plan with VHA Priorities:

QUERI held a Strategic Planning Meeting in order to apply recommendations from the national evaluation towards updating the current QUERI strategic goals and to update the organization of QUERI in light of recent VA transformations. Center Coordinators, affiliated resource centers, and VA leaders met on October 7-8, 2014 at the VA National Conference Center in Arlington, VA to further refine QUERI's 5-year strategic goals focused on speeding the translation of research into practice, increasing impact of evidence-based care at the VA provider and policy levels, and promoting implementation science. VA leaders presenting at the meeting stressed the importance of QUERI's role in executing the VHA Blueprint for Excellence, notably by supporting the more rapid implementation of research into practice (BPE #7). As emphasized in the national evaluation, VA leaders also recommended that QUERI move beyond its disease-focused areas and develop more cross-cutting implementation work that is further aligned with new VA national priorities. Notably, they pointed out QUERI's prominent role in supporting providers in a number of cross-cutting initiatives in advancing personalized, proactive care (BPE #6), and supporting research through innovative VA/non-VA partnerships (BPE #8). Subsequent breakout sessions were held to develop milestones and metrics for each QUERI priority goal that also address major recommendations from the national evaluation (e.g., improving communication of impacts, speeding the research cycle, benchmarking value) and VA national leaders

that were incorporated into the updated Strategic Plan goals (Table 8). The national evaluation also recommended that QUERI incorporate more quality improvement methods, such as rapid-cycle designs and engagement of different stakeholders (frontline providers, leaders, patients, caregivers).

Several updates to the QUERI Strategic Plan and its overall operations were made in response to the national evaluation and strategic planning meeting. The QUERI funding priorities were further updated to focus on cutting-edge research or implementation that do not duplicate but rather complement or synergize with other VA program office priorities. As described under the section on Competitors (**III.d**), these funding priorities take advantage of QUERI's unique position as a national resource in improvement science and focus on the testing of implementation strategies and systematic, rigorous evaluation of clinical or policies especially at the national level. Hence, these updates do not represent "business as usual" because they focus more on more cross-cutting strategies to achieve impacts in VA national priorities, forge new partnerships (i.e., per VHA Blueprint for Excellence - BPE #8, Community Veteran Advisory Councils), involve novel methods to be used in VA to better implement effective clinical practices (BPE #7/#4/#6), and support VA efforts nationally through rigorous program evaluation (e.g., Veteran's Choice Act). As emphasized in the national evaluation, a key strength of QUERI is its ability to grow and maintain a critical mass of investigators who are adept at research in learning healthcare organizations, and who partner and collaborate with non-VA entities (BPE #6). These investigators have irreplaceable skills in areas considered crucial for the success to VA's reorganization as a learning healthcare system (BPE #7- rapid translation of research into practice), including cross-cutting improvement science methods, program evaluation design, Veteran engagement, and mixed-methods research.

QUERI Research & Methodology (R&M) Committee feedback:

The QUERI R&M Committee, QUERI's principal strategic advisory committee comprised of implementation researchers and VA leaders/operational partners, has been holding regular calls since 2013 to provide feedback on the overall QUERI

program including the updated strategic goals, partnered initiatives, and overall structure of its Centers. The Committee met in February 2015 to review current progress of the QUERI Centers and the updated Strategic Plan, taking into account the VA reorganization and budgetary challenges (recent funding sweep), as well as recommendations from the QUERI national evaluation. Given major changes to VHA and increased scrutiny regarding programmatic overlap, the R&M Committee reviewed the Centers with an eye towards determining what the VA would lose if the QUERI-funded Centers and affiliated activities did not exist. The R&M Committee also reviewed the QUERI updated strategic goals of the Centers were also asked to report impacts beyond research productivity including policy or clinical practice changing shaped or resulting from QUERI-funded projects. Essential contributions across many of the Centers that were observed by the Committee spanned three general areas: 1) deep knowledge of contextual factors and implementation processes, 2) development and application of strategies to mitigate barriers to implementation, and 3) ability to support rigorous, time-sensitive evaluation work using non-research (i.e., QI) protocols.

Some members of the Committee also noted key areas where QUERI Centers could improve their impact on VA care. For instance, many Centers were conducting multiple investigator-initiated projects without tangible support from operational partners (e.g., co-funding, data-sharing), where evidence on overall clinical or policy impact may be uncertain. The funding of several short-term projects was apparent and could limit the ability of many Centers to achieve impact on VA policies/clinical practice and fully deploy implementation methods, tools, or products that were seen as unique and essential contributions to VA. Others noted that a few Centers had not moved beyond traditional health services research to support the advancement of implementation science. In addition, the Committee also recommended that some Centers might function more effectively as partnered evaluation initiatives.

Future organization of QUERI centers

A major issue discussed at the October strategic planning and the February 2015 R&M committee meetings was whether QUERI Centers should remain disease-focused. The

national evaluation also recommended that QUERI move beyond a disease-based approach and address more cross-cutting issues. This same recommendation was also endorsed by VA leadership in light of changing VA priorities at the October 2014 strategic planning meeting, in order to prioritize areas of implementation that had the greatest potential to achieve substantial impact on emerging VA national priorities (e.g., Blueprint for Excellence). A similar theme has been brought up recently in the VHA's overall reorganization, where there has been a critical re-assessment of program office priorities and assessment of opportunities to align existing initiatives across key areas.

At the same time, the national evaluation highlighted the importance of maintaining core groups of investigators focused on essential areas of expertise. This would also allow for a critical mass of investigators who could foster collaborations especially in advancing implementation and improvement science. Because of this infrastructure, most QUERI Centers have increasingly engaged in cross- Center and cross-cutting initiatives (Table 3). There are key advantages to having condition-specific programs, including the ability to focus on improving care that can be linked to a tangible patient-level outcome, especially for conditions representing a high disease burden among Veterans, as well as the recognition of key conditions among potential non-VA partners.

Nonetheless, the movement towards consumer-focused care beyond disease labels, emphasis on a learning healthcare system that involves more cross-cutting strategies to improve care (Table 1), and the realization that many of these conditions co-occur among individuals warrants re-examination of QUERI's condition-focused Centers. Investigators working in disease-focused areas may also benefit from expanded work in other conditions especially to inform implementation methods or strategies (e.g., team-based primary care, care coordination, provider prescribing behavior).

Overall, as a result of the Choice Act, MyVA, and other VA national transformational initiatives, VHA is changing, and VHA programs, including QUERI, will need to change in response to these changes and in anticipation to future needs. Current QUERI centers will need to show how they are responding to these updated VA priorities, and

the reorganization may also involve changing roles for many of the centers' operational partners, particularly for specific conditions. Given the many demands on VHA, it is unlikely that QUERI will successfully compete for funding unless we can show that it provides high value on a national, rather than on a regional or program office-specific basis, and that its efforts significantly influence the quality of care delivered to Veterans nationwide. QUERI has discussed moving away from a disease-focused entity for quite some time, and many Centers have been working towards broader agendas already. The current VA transformation provides substantial opportunities to broaden the implications of QUERI's role in VA and beyond through updated centers and the potential for new field programs. As QUERI works to secure its future there will be inevitable adjustments in the sense of identity through disease-specific Centers that existed since the late 1990's. As in previous times QUERI is poised to respond to change because of our outstanding investigators, supporting updated VA national priorities to ultimately inform better care for our Veterans.

a. Resource Requirements

QUERI is housed administratively under the VHA Office of Research and Development (ORD) but currently supported through special purpose funds (i.e., VA medical services/administration funds). Special purpose funding is currently reviewed and approved annually by the VHA National Leadership Board and managed by ORD. Field VAMCs also receive Medical Care Support funds in the form of Veterans Equitable Resource Allocation (VERA) research allocations to support the salaries of VA clinicians conducting QUERI research and to support the local administration of research. For clinician investigators, QUERI funds are leveraged by matching facility contributions in terms of their FTEE. In addition, ORD supports five FTEE staff in Central Office (Director, Program Manager, Program Coordinator, Budget Analyst, and Administrative Assistant) to manage the overall QUERI program.

Many QUERI investigators also apply for additional VA (e.g., HSR&D) and non-VA funding to support their research careers. HSR&D's research priorities were recently updated to reflect the growing demand for implementation research including hybrid

studies and observational studies of implementation processes. NIH, AHRQ, and PCORI are the most prominent sources of leveraged funding outside of VA. It is also important for VA investigators to obtain NIH funding because it assures the public that the quality of the VA and NIH research projects are comparable, and ensures that QUERI investigators can apply their implementation expertise elsewhere. QUERI investigators also receive funding from VA clinical operational partners to conduct quality enhancement or evaluation work.

Demand by VA operational partners for additional partnered work with QUERI initiatives has increased over the past two years, notably through partnered evaluation initiatives. In FY2015, there were six partnered evaluation initiatives with, with three additional initiatives slated to begin in FY2016. VA operations partners benefit from investment in funding evaluations because proposals are subject to a rigorous scientific review process (thus enabling nationally recognized scholarship involving the most relevant and state-of-the-art evaluation methods). In addition, QUERI, which is administratively part of the VA Office of Research and Development ORD, can support administrative requirements (e.g., OMB requests) where applicable. Moreover, operations partners can treat evaluation funds as line items reflecting activities considered essential to a Learning Healthcare System that can be allocated to field investigators who in turn support the evaluation efforts.

Given the potential for re-alignment of priorities through the MyVA and Veterans Choice Act, there will likely be a greater demand for evaluation expertise as well as cross-cutting implementation strategies to more efficiently and effectively support changes to the VA health care system. To meet this demand QUERI will require additional investment in effort in its central office staff in order to manage the process of rigorously assessing applications for Partnered Evaluation Initiatives and other administrative processes (e.g., peer review process, guidance on conducting partnered studies, memoranda of understanding, data use agreement protocols, investigator training opportunities in partnered research), which are considered essential components to their success. QUERI will also continue to critically align its funding priorities to better

promote improvement science as well as partnered research, and seek new opportunities to further leverage its strengths with unmet quality enhancement needs in VA overall.

QUERI/VHA Budgetary Challenges/Opportunities FY16 and Beyond

In December 2014, unspent fiscal year 2015 (FY15) funds across VACO programs including QUERI were swept, partly in response to VA reorganizational needs under MyVA and implementation of the Veteran's Choice Act. VA is currently being tasked with a number of reorganization initiatives and in 2015, there has been particular emphasis on justifying VHACO functions in light of new VA national priorities. In early February 2015, QUERI had its remaining FY15 funds restored but with the condition that the restored funds be used exclusively to support the evaluation of the Veterans Choice Act. The Choice Act evaluation was requested by the Office of Management and Budget (OMB) and is a joint effort of the Office of Research and Development (ORD) and Office of Analytics and Business Intelligence (OABI), with QUERI to play a prominent role in specific evaluations of ongoing learning and implementation of the Choice Act. A request for applications to support evaluation activities related to the Choice Act was released in February 2015.

For FY2016 and beyond, VA is undergoing a major reorganization with updated national priorities, and future budgeting for QUERI as well as other VHA programs funded under medical care dollars is to be “zero-based.” This is a standard budgeting technique which is used, as a part of an overall management framework, to assure that each budget element meets overall institutional goals under updated VA priorities. As part of this process, all national program activities including programs receiving special purpose funds (QUERI) will need to submit a budget upfront prior to the beginning of the fiscal year which will be evaluated closely to ensure they are aligned with VA national priorities including the Blueprint for Excellence and Veterans Choice Act before FY16 funding will be approved. In addition, special purpose funds (i.e., QUERI, especially those used for individual research projects) have been under particular scrutiny by VA finance, and as a result QUERI had to suspend current investigator-initiated (i.e.,

SDP/RRP) request for applications. Overall, QUERI will have to justify how funds are being used to directly impact VA national priorities, and ensure that funds are not used for duplicative purposes such as for investigator-initiated projects, which are covered under Research funding. FY2016 QUERI funds will also need to be allocated towards more service-directed evaluation activities that are directly in support of the Blueprint for Excellence (Strategy 7h in particular- see below) and Choice Act implementation/evaluation.

QUERI FY2016 funding priorities

ORD negotiated with VA leadership in February 2015 in order to secure QUERI's future given budget uncertainties with the VA transformation. In one of the most dramatic transformations VA has seen in decades, QUERI was on the brink of non-existence in early 2015 due to funding sweeps. It was through rapid and intense negotiations by the Office of Research and Development/HSR&D leadership that QUERI lived to see another day.

Per leadership recommendations and given the new guidance under zero-based budgeting, QUERI was encouraged to justify FY2016 budget items and disburse approved funds to the field prior to the start of FY2016 to ensure that unspent funds are not swept during the fiscal year. Overall, input from VHA leadership strongly suggested that if the budget provided for FY2016 looked similar to the FY15 or prior year budgets there will be a perception that QUERI has not changed with the times and that the work is duplicative with research, leaving QUERI significantly at a risk of de-funding when VHA is considering other programs that provide direct patient care.

As a result, QUERI FY16 funding will need to be prioritized based on alignment with VA national priorities including the Blueprint for Excellence, MyVA transformation, and Choice Act with an emphasis on achieving specific goals that accelerate the impact of these priorities per the VHA Blueprint for Excellence Strategy 7h.

QUERI Updated Programs (Centers)

Given recommendations from VA leadership and the rapid need to justify its FY2016 budget in light of updated VA national transformational priorities, QUERI implemented a new request for applications (RFAs) in March 2015 to fund updated field-based programs that are aligned with VA national priorities and involve an implementation core and a coalition of VA operations partners. The updated RFA would replace the current Centers, but ultimately increase the total number of programs in the field and their total funding amounts assuming similar QUERI funding amounts for FY2016. Updated QUERI programs are expected to propose an overarching goal that is supported by three to five projects including a local quality improvement initiative that are tied together by implementation methods. The overarching impact goal for each program will need to be directly aligned with a specific goal or milestone outlined in the Blueprint for Excellence, MyVA transformational initiatives, Choice Act, or other VA national priority goal that is specifically endorsed by VA or VHA national leadership. The impact goal can focus on a common theme (e.g., improving satisfaction, post-deployment care, population health, coordinated care, etc.) but the theme must be directly aligned with a milestone articulated and supported by at least two program offices of VA national operational partners to ensure that the goal applies across specific diagnoses/treatment settings. Specific projects proposed in the program application should inform which strategies are optimal for later-adopter or lower-resourced sites (BPE Strategy 7h). QUERI programs will be peer-reviewed through the NIH Grants.gov mechanism to ensure scientific integrity as well as potential for impact using the IOM-based impact measures (Table 7).

QUERI Partnered Evaluation initiatives

QUERI also released an additional RFA in March 2015 to support partnered evaluation initiatives that are primarily funded by operations partners that have a disease or condition-focused area that is aligned with a specific operations partner. The RFA is based on best practices derived from the current Partnered Evaluation Centers (Table 2). Condition-specific initiatives may continue to be funded through Partnered Evaluations if tied to VA priorities and when there is substantial funding support from a

single operational partner. OMB has recommended that federal programs including VHA program offices set aside a portion of their funding for rigorous evaluation activities. Given the funding type (medical services/administration) QUERI may co-fund rigorous evaluations under an operations mechanism (per VHA Handbook 1058.05).

These new RFAs will help QUERI address immediate threats to its funding due to increased scrutiny of special purpose funds and to provide a budget justification prior to the beginning of the fiscal year that is aligned with updated VA national priorities. For many existing QUERI Centers there might be fewer changes than expected depending on whether the priority goals of their operational partners are aligned with VA national priorities such as the Blueprint for Excellence or Choice Act. For others, existing center goals may have to be updated because their main partners (program offices) might change dramatically under the VA reorganization.

Assessing QUERI impacts

A key recommendation from the national evaluation was to improve QUERI’s reporting of impacts to VA leadership and other key stakeholders, beyond the traditional academic metrics (publications, additional grant funding). Based on input from the strategic planning meeting, QUERI revised its impact measures for the FY2014 annual reports for its principal Centers, based in part on the [Institute of Medicine’s](#) “Degrees of Impact” framework (Table 7).

Table 7: Summary of QUERI Impact Measures

Domain (IOM)	Metric
Alignment with Priorities	How project is directly linked to VA priority milestones (Blueprint for Excellence, MyVA goals, and/or other VA/VHA national priority) Completion of initial QI project
Commitment	Degree of partnership with operations (Describe resources provided to project by operational partners- e.g., data sources, personnel, provider or practice networks, other)
Message	Specific impact or project results that were communicated to decision- makers or media (Describe briefings or invited meetings in which project results were directly presented to VA leaders, Veterans advisory councils, or other VA stakeholders)

Formal Response	Project spread (Describe products, tools, data resource, or other methods that were adopted by VA providers, facilities, leaders, or national program offices) Establishment of initiative/taskforce resulting from project findings
Effecting Change	Policy or operations change(s) resulting from or shaped by Project results (e.g., new national directive, new clinical program/de-implementation, performance metric, etc.) Improvement in patient-Level processes/outcomes

V. Strategic Goals and Objectives

Table 8 provides an outline of each QUERI Strategic Goal and alignment with updated VA priorities. Based on the national evaluation, SWOT analysis, recent VA transformational efforts/changes to national priorities, and VA leadership input, the strategic goals and milestones place particular emphasis on activities designed to inform the more rapid translation of research into practice. Each goal is accompanied by a long-term objective, as well as milestones and shorter-term metrics. Objective 1 is identical to Strategy 7h in the BPE (Rapidly translate research findings and evidence-based treatments into clinical practice). Objectives 2 and 3 reflect other BPE strategies focused on measuring impact (BPE Strategy #2), advancing personalized, proactive care (Strategy 6), innovations through academic affiliations and collaboration (Strategy 8), and fostering continuous learning (Strategy 5). QUERI will accomplish these goals by staying grounded in scientific methods while promoting more strategic operations partnerships with leadership within and external to VA.

Moving forward, this updated Strategic Plan enables QUERI to achieve greater impact, especially under the VA's transformation. There is a greater focus on supporting goals that are more aligned with VA national priorities rather than exclusively disease-focused program areas to help VA leaders make changes to healthcare. This will require QUERI to invest in more innovative and cross-disciplinary methods, harnessing the power of research to promote the more rapid implementation of effective treatments into practice. QUERI will continue to serve as a trusted and essential partner to VA, particularly through its involvement in rigorous national evaluation of new initiatives. Finally, QUERI remains committed to improvement science innovation as it actively engages with

operational partnerships through continued investment in a critical mass of implementation-savvy scientists and shared research opportunities with non-VA entities.

Overall, VA's recent transformation involves major changes of a magnitude not seen in more than a generation. The priority goals outlined in this Strategic Plan will enable QUERI to respond to this transformation by continuing to stay grounded in research and by strengthening its partnerships with VA operational leaders, ultimately playing an essential role in informing the uptake, sustainability, and value of new initiatives that ultimately improve the quality and outcomes of care for Veterans. QUERI will support the more rapid adoption of effective practices that address high-priority gaps in quality or efficiency of care by implementing under-used evidence-based practices, or, in some cases, de-implementing non-evidence-based or overused practices that may have unintended consequences on Veteran care. Through this process QUERI will identify innovative and effective improvement science strategies, using state-of-the art methods that address complex issues across treatment settings. Finally, QUERI will promote implementation expertise much earlier in the research pipeline in which novel clinical practices are designed with an eye towards implementation, so that these new programs, if proven effective, are ready to "hit the ground running."

Table 8: QUERI Strategic Goals, Benchmarks, and Alignment with VA Priorities

Goals	Outcome	Milestones	Metrics	VA Strategic Linkages
<p>1. Support VA providers in improving quality, outcomes, and well-being of Veteran patients by more rapidly and effectively implementing evidence-based clinical practices into routine care</p> <p>Identical to BPE Strategy 7h</p>	<p>Decrease the time from publication of research trial or evidence synthesis demonstrating clinical effectiveness of an intervention deemed a national VA priority to its use by VA providers</p>	<ul style="list-style-type: none"> i. FY2016: Develop ORD liaison roles for 1) VA/DOD guideline and evidence synthesis program Centers, and 2) professional licensing organizations ii. FY2017: Develop rapid peer review mechanism for time-sensitive implementation opportunities iii. FY2018: Increase # ORD (e.g. CSP) studies that involve an implementation plan to more rapidly translate effective clinical interventions into practice iv. FY2019: Increase # of empirically tested implementation strategies that are available for different practice settings (e.g., “late adopters”, lower-resourced sites) v. FY2020: Support ORD in developing processes for expedited review of implementation studies involving effective interventions, parallel review processes for data security/human subjects 	<ul style="list-style-type: none"> i. Fund QUERI programs focused on achieving impact based on updated VA national priorities using implementation methods ii. Initiate RFAs for CSP and rapid implementation supplements iii. Increase # Evidence Synthesis Program (ESP) reports with positive results that lead to VA initiatives iv. Develop parallel review process for data security/human subjects with ORD 	<p><u>BPE Strategy 7h</u>. Rapidly translate research findings and evidence-based treatments into clinical practice</p> <p><u>BPE Strategy 2</u>: e.g., employ (evaluate) Lean management practices</p> <p><u>ORD Goal 2.9</u>: Enhance Evidence Synthesis Program towards Veteran-focused research</p> <p><u>ORD Goal #3</u>. Foster VA as a learning healthcare system by serving as a trusted partner in generating and delivering scientific evidence.</p>

<p>2. Increase impact of VA research findings through bi-directional partnership, rigorous evaluation, and communication</p>	<p>More VA policies or clinical operations driven or shaped by research evidence</p>	<ul style="list-style-type: none"> i. FY2016: Fund QUERI initiative to evaluate implementation of the Veteran’s Choice Act ii. FY2017: Develop best practices for QUERI Partnered Centers ii. FY2018: Communicate QUERI impacts to national VA leaders, regional stakeholders, & Veterans iv. FY2019: Increase # strategies, tools, or methods developed by QUERI investigators that are used by VA operational partners to make changes to health care v. FY2020: Increase # QUERI projects using national data to systematically evaluate impact of implementation strategies on patient-level outcomes/value 	<ul style="list-style-type: none"> i. Increase # of VA national initiatives that include a research-partnered evaluation plan ii. Develop resources focused on implementation strategies, communication tools for VA leaders, national evaluation data sources, and budget impact metrics iii. Increase # strategies, tools, or methods developed by QUERI investigators that are used by VA operational partners to make changes to health care 	<p><u>BPE Strategy 7a (ORD Goal #2d):</u> Inform Veterans, stewards of the system, and the public about VA research <u>BPE Strategy 6a.</u> Advance personalized, proactive care that optimizes health, well-being (e.g., PACT) <u>BPE Strategy 6b:</u> Engage HSRD/QUERI in program design/evaluation <u>BPE Strategy 2:</u> e.g., VA will aspire to Triple Aim-focus performance measurement on strategic outcomes</p>
<p>3. Make VA a national leader in promoting a learning healthcare organization through innovative implementation science</p>	<p>Advance innovations in implementation science across the research pipeline</p>	<ul style="list-style-type: none"> i. FY2016: Develop best practices in conducting randomized program evaluations ii. FY2017: Develop clearinghouse of implementation training and research funding opportunities ii. FY2018: Develop core competencies of Implementation Experts and Partnered Centers v. FY2019: Initiate studies testing novel strategies involving provider behavior/incentives for promoting use of effective clinical practices v. FY2020: Increase # QUERI investigators involved in studies with non-VA affiliates 	<ul style="list-style-type: none"> i. FY2016: Fund studies related to rigorous evaluation of VA national programs ii. FY2017: Fund studies to develop novel implementation strategies across different organizational/provider contexts iii. FY2018: Develop implementation strategy and methods resources iv. FY2016-2020: Increase # non-VA affiliates adopting QUERI products, methods 	<p><u>BPE Strategy 7.2.c:</u> Share intramural research Opportunities between VA, HHS, DoD, and NIH <u>BPE Strategy 8:</u> Innovation through academic affiliations and collaboration <u>BPE Strategy 5.</u> Foster continuous learning <u>ORD Goal #1:</u> Improve Veteran health and well-being by conducting a full spectrum of innovative research; Share intramural research opportunities</p>

VII. CONCLUSION

Since 1998, QUERI has been at the forefront in continuously supporting VA in the adoption and implementation of evidence-based practices and identifying the best approaches for sustaining quality improvement initiatives. QUERI continues to promote the more rapid implementation of research into practice through the application of scientific rigor and bi-directional partnerships in which VA operational entities play an active role in shaping the strategic goals of its Centers and investigator-led initiatives. QUERI also embodies and accelerates the core components of what the Institute of Medicine has described as a [Learning Healthcare System](#).

Overall, this Strategic Plan communicates QUERI's goals and objectives for improving Veterans' lives through the implementation of evidence-based practices. In a changing VA, QUERI continues to play a key role in not only in the more rapid translation of evidence-based research into practice, but ultimately through the promotion of implementation science in a learning healthcare system. As part of the largest integrated health care system in the United States, QUERI draws upon a world class cadre of investigators and researchers, engaged providers, patients and families, and a national health care delivery infrastructure working in tandem to implement effective programs into routine care for Veterans. Through VA's mission to advance health care for Veterans, QUERI supports both research and clinical operations by serving as a 21st century model for how American healthcare can be transformed through scientific inquiry and partnership, leading to a learning health care system and sustainability of evidence-based treatments that improve overall health for Veterans and the nation.