Current and Future Directions in Health Services Research

November 29, 2023
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Many thanks to the HSR Team!

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- Cathie Plouzek
- Crystal Henderson
- Amanda Borsky
- Robert O'Brien
- Robert Small
- Amy Kilbourne
HSRD is now Health Systems Research (HSR)

• ORD Reorganization: HSRD, RRD, BLRD, and CSRD → “broad portfolios” (BP)
  • In mid-2023, HSRD transitioned to the “Health Systems Research” BP
  • To better align with VA priorities, some BP funding moved from the BPs to “actively managed portfolios (AMPs)”
    • Each BP has a purview statement of scientific goals that informs their funding decisions

• HSR priorities expanded as strategic methodology areas
  • Reflect VA/VHA priority goals and NAM Quintuple Aim goals
  • Previously described in our HSR RFAs, so familiar to SMRBs and investigators
  • Do not replace but expand on the current topic areas

• Using cutting-edge science that informs how treatments, programs and policies work for Veterans and their providers, HSR/QUERI investigators are poised to inform VA strategic goals as national learning health system thought leaders
Office of Research and Development
Reorganization

Updated November 29, 2023
Office of Research and Development
Veterans Health Administration
ORD Reorganization

• More efficient use of resources to enable more impactful research investments ("big studies", Veteran access to latest treatments)
  • Centralized HR, IRB, IT/data analytics, and contracting support
  • Make it easier for external organizations to partner with VA research

• New organizational units: Strategy, Informatics, and Enterprise Optimization

• Funding more aligned with Congressional priorities, focus on requirements
  • Precision oncology/cancer clinical trials actively managed portfolio (AMP) (2022)
  • Pain and Opioid Management, Suicide Prevention, TBI AMPs (2023)
  • Health Systems Research (includes QUERI) broad portfolio-BP (2023)
  • Brain, Behavioral Health, and Mental Health BP (2024)
  • BPs: Medical Health & Aging, Functional Rehabilitation, Emerging Infections, Military Exposures (2024)

• Current challenge: lower than expected VA research appropriation
VHA Organizational Chart

Office of the Under Secretary for Health

Office of the Deputy Under Secretary for Health

PATIENT ADVOCACY
READJUSTMENT COUNSELING
WOMEN’S HEALTH

Chief of Staff
Risk Management

HEALTHCARE TRANSFORMATION

Discovery, Education and Affiliate Networks

Integrated Veteran Care
Clinical Services
Operations
Patient Care Services
Quality and Patient Safety
Support Services

- Office of Academic Affiliations
- Office of Healthcare Innovation and Learning
- Office of Research and Development
- National Center for Healthcare Advancement and Partnership

HSR/QUERI
VA: Nation’s Largest Embedded Research Program

- Over 9 million Veterans enrolled
- Over 1,250 facilities (>170 hospitals)
- Global budget, salaried providers, national EHR
- Integrated system: social, educational, housing and disability services
- Dedicated appropriation to research funding across the translation spectrum
- HSR emphasizes embedded research opportunities
- HSR’s national research-embedded QI program (QUERI) ensures effective practices are more rapidly translated to Veterans
Current ORD Organizational Chart

Key ISRM Leads will be valuable in establishing the reorganization without disrupting ongoing research.

Pilot Portfolios

***Note: Operations sub-units are still in development and not final***
ORD Mission and Goals

Mission
• Improve Veterans' health and well-being via basic, translational, clinical, health services, and rehabilitative research
• Apply scientific knowledge to develop effective individualized care solutions for Veterans
• Attract, train, and retain the highest-caliber investigators, and nurture their development as leaders in their fields
• Assure a culture of professionalism, collaboration, accountability, and the highest regard for research volunteers' safety and privacy

Goals
1. Increase Veteran access to high-quality clinical trials
2. Increase the real-world impact of research
3. Put VA data to work for Veterans
4. Actively promote DEI
5. Build community through VA research
ORD is Funded through a Separate Congressional Appropriation

**VHACO ORD primary roles are funding and policy related to research**

- **113** Active VAMC research sites nationwide
- **18,475** Active research projects
- **6,687** Active principal investigators
- **10,249** Published research articles

**ORD 2023 Budget: ~$916 Million, HSR budget ~$125 Million**

Source: VAIRRS 11/17/23
HSR funds investigators who focus on **innovative strategies** that lead to **accessible, high-quality, personalized, effective care** for Veterans and the nation

- **Learning Health System** approach that drives embedded, partnered research
- Funding for investigator-initiated projects, career development awards and Centers
- Cutting-edge research on **organization, implementation, and delivery** of clinical services informed **improvements** in **health care quality, equity, safety, experience, value, and outcomes** for Veterans over the past **3 decades**

**HSR’s QUERI** (Quality Enhancement Research Initiative) is a unique research-clinical partnership that is funded separately by the VA clinical appropriation with the goal of improving Veteran health by **more rapidly implementing research into practice at the national level**
HSR Centers of Innovation (COINs)

• Provide infrastructure to support collaborative, multi-site research, QUERI
• Multi-level engagement (Program offices, VAMCs, clinicians, Veterans)
• Host Veteran engagement panels
• Methods Cores (Data, Implementation, etc.)
• Advised by partnership engagement panels including VISN and VAMC, academic affiliate and program offices, providers, and Veterans
• Compete for funding every 5 years based on current priorities and impacts
HSR Centers of Innovation Across the U.S.
Updated HSR Priorities

November 29, 2023

Health Systems Research
Office of Research and Development
Veterans Health Administration
Our Goal: Improve Veteran Outcomes Through Cutting-edge Health Systems Research

• How we measure success: Are Veterans getting better? (Quintuple Aim)
  Increase Access  Ensure Equity  Support Workforce
  Improve Outcomes  Improve Value

• Research priorities reflect VA Strategic Plan, Agency Priority Goals, Performance Plans

• HSR is uniquely positioned to contribute to the science through Learning Health Systems:
  • Implementation Science
  • Data Science
  • Science of End-User Engagement
  • Systems Science
  • Policy Analysis

• Going forward: HSR / QUERI to inform VA’s next Strategic Planning Process
Inter-disciplinary assessment of Veteran and VA outcomes

Organizational, provider, and patient care processes (e.g., access, quality, equity), value (cost), and end-user lived experiences (e.g., Veterans, providers, communities)

Refs; Matheny M, et al: National Academy of Medicine, 2019; Nundy S, Cooper LA, Nate KS. JAMA 2022; Cahan EM, 2020
NAM Future of Health Services Research

• More system-focused research on practical topics and priorities faced by health care providers that includes end-user input

• More investment in technology and data infrastructure including community and population data

• Continued focus on disparities and solutions to quality gaps especially beyond the clinic walls

• Timely studies focused on dissemination and implementation

• Reward system, policy, and population impacts

Ref: https://nam.edu/the-future-of-health-services-research-special-publication/
VA Training and Funding Ecosystem

Data to Knowledge
- Examine performance gaps
- Identify best practices
- Patient/provider experiences

Post-doctoral Fellowships
- Investigator-initiated Research

Learning Hubs
- QUERI QI Collaboratives
- Diffusion of Excellence

Knowledge to Performance
- Implement, tailor best practices
- Implementation or QI playbooks
- Measure impacts

Advancing Diversity in Implementation Leadership
- Researchers in Residence

Performance to Data
- Data on new discoveries
- Change processes
- Actively involve interested parties

Knowledge to Performance
- Implement, tailor best practices
- Implementation or QI playbooks
- Measure impacts

Learning Community
- (e.g., Research Centers, National Program Offices, Regional Health System Leaders)

Infrastructure: Funding, Informatics, Governance, Methods
- e.g., HSR National Network of Research Centers; VA national EHR and population health databases; ORD research/QI ethical standards, Methods Resource Centers

Kilbourne, Schmidt, Edmunds, Vega, Bowersox, Atkins, 2022
VA 2022-2028 Strategic Plan

- Developed in 2018-20; updated 2021-22
- Emphasis on underserved, at-risk Veteran populations and understanding lived experiences
- “VA will leverage research studies, innovation and partnerships to enhance understanding of Veteran needs and eliminate disparities and barriers to health, improve service delivery and opportunities to enhance Veterans’ outcomes, experiences and quality of life.”
- “VHA researchers, statisticians and evaluators have a well-earned reputation as thought leaders in health care and have a distinguished history in contributing both to Veteran well-being and that of all those seeking health services.”
- (HSR and QUERI) are “VA’s principal sources of high-quality, independent, peer-reviewed evaluations”

Strategic methodology areas are based on the National Academy of Medicine Quintuple Aim goals, AHRQ Learning Health System Core Competencies, PCORI Methodology Standards, and VA Strategic Plan priorities. Quintuple Aim Outcomes: Increase Access, Ensure Equity, Support Workforce, Improve Outcomes, Improve Value.
HSR Priorities Encompass Core Strategic Methodology

1. **Implementation Science.** Discover and optimize strategies to get effective treatments to Veterans faster and sustain their use in real-world practice

2. **Data Science.** Design, validate, and apply data science and knowledge management tools that improve Veteran health and health care

3. **Engagement Science.** Create and test novel approaches for engaging end-users (e.g., Veterans, providers, communities, etc.) that support improved outcomes

4. **Systems Science.** Design and apply new systems science methods to improve Veteran provider workforce effectiveness, satisfaction, diversity, and retention

5. **Policy Analysis/Evaluation.** Develop, assess, and improve VA and national policies to improve Veteran outcomes, with a focus on underserved populations
# HSR Strategic Methodology Areas Benefit Veterans, VA Care

<table>
<thead>
<tr>
<th>Area of Scientific Inquiry</th>
<th>Benefit to Veterans</th>
<th>Key VA Priority Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation Science</td>
<td>Ensures “what we know is what we do” on a routine basis and that effective innovations get to Veterans more quickly</td>
<td>ORD Goal: Real-world Impact Congressional priority</td>
</tr>
<tr>
<td>Data Science</td>
<td>VA has extensive data that can be better leveraged to help improve Veteran care, outcomes, and experience in a way that ensures Veterans’ privacy and equity</td>
<td>ORD Goal: Making VA Data work for Veterans Evidence Act (US PL 115-435)</td>
</tr>
<tr>
<td>Engagement Science</td>
<td>Involving Veterans, providers, and other partners ensures treatments, programs, and policies work for Veterans, and that their lived experiences are considered</td>
<td>VA Strategic Plan: Support Underserved, At-Risk, Marginalized Veteran Populations ORD: Build Community through Research</td>
</tr>
<tr>
<td>Systems Science</td>
<td>Health care and health go beyond condition and disease labels; it takes a wider lens to understand the moving parts of the enterprise to improve them to ensure safe and effective care</td>
<td>VHA Long-Range Goals (e.g., Connect Veterans to the Soonest and Best Care; Workforce, High-reliability)</td>
</tr>
<tr>
<td>Policy Analysis</td>
<td>Many health problems have determinants outside the clinic walls, need to improve alignment and effectiveness of programs, benefits, and policies to ensure optimal Veteran outcomes</td>
<td>VA Legislative Mandates, e.g., Evidence Act MISSION Act PACT Act, Hannon Act, STRONG Veterans Act</td>
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HSR Strategic Methodology Areas Are Foundational to Current HSR Topics, Quintuple Aim Goals, and VA National Priorities

### HSR Topic Areas

<table>
<thead>
<tr>
<th>Health Care System Organization and Delivery</th>
</tr>
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<tbody>
<tr>
<td>- Access/Virtual Care</td>
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<tr>
<td>- Emergency Medicine</td>
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<tr>
<td>- Women’s Health</td>
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<tr>
<td>- Rural Health</td>
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<td>- Community Care</td>
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<table>
<thead>
<tr>
<th>Health Care and Clinical Management</th>
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</thead>
<tbody>
<tr>
<td>- Primary Care Practice and Complex Chronic Disease Management</td>
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<tr>
<td>- Disabilities related to Military Exposure*‡</td>
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<tr>
<td>- Chronic Pain &amp; Opioid Use Disorders*</td>
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<table>
<thead>
<tr>
<th>Long-Term Care, Aging &amp; Support Services</th>
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<tbody>
<tr>
<td>- Long-term Care &amp; Aging</td>
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<table>
<thead>
<tr>
<th>Behavioral, Social &amp; Cultural Determinants of Health</th>
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</thead>
<tbody>
<tr>
<td>- Health Equity &amp; Social Determinants of Health</td>
</tr>
<tr>
<td>- Ending Veteran Homelessness &amp; Housing Insecurity‡</td>
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<tr>
<td>- Whole Health &amp; Population Health</td>
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<table>
<thead>
<tr>
<th>Quality, Safety &amp; Value</th>
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</thead>
<tbody>
<tr>
<td>- Quality &amp; Safety of Health Care</td>
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<tr>
<td>- Health Care Value</td>
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<tr>
<td>- Emerging infectious diseases (COVID)*</td>
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</tbody>
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### Strategic Methodology Areas

- **Implementation Science**
- **Systems Science**
- **Engagement Science**
- **Data Science (EHR)**
- **Policy Analysis**

### VA Priority Goals‡:
- Workforce, Connect Veterans to soonest/best care, Promote culture of safety/learning

### Veteran Quintuple Aim Goals:
- improve outcomes, increase access, ensure equity, decrease cost, support workforce

*New or Planned Actively Managed Portfolios, BP = New ORD Broad Portfolios, MH= Mental Health; ‡VA National Priority Goals
HSR Strategic Methodology Areas Enhance HSR Topics

**HSR topics can encompass more than one strategic methodology area**

- Health Care System Organization and Delivery (Access, Emergency Medicine, Women’s Health)
- Mental and Behavioral Health, including Suicide Prevention
- Health Care and Clinical Management (Primary Care Practice and Complex Chronic Disease Management, Disabilities and Military Exposures, Opioid/Pain)
- Long-Term Care, Aging & Support Services
- Behavioral, Social & Cultural Determinants (Health Equity, Whole Health)
- Quality, Safety & Value

**Strategic methodology areas, VA priorities also inform expanded HSR topics**

- Homelessness, housing and economic security (Reduce Veteran homelessness)
- Workforce (Hire faster and more competitively, practitioner experience and well-being)
- High reliability (Culture of safety, learning, and knowledge translation)
- Policy, e.g., Veterans benefits and impact on health and social determinants (VA Strategic Plan focus)
Veteran Quintuple Aim Goals & HSR Strategic Methodology
Encompass Current HSR Topics

Veteran-focused Quintuple Aim Goals

HSR Strategic Methodology

Policy Analysis

Systems Science

Implementation Science

Engagement Science

Data Science

Increase Outcomes

Support Workforce

Increase Access

Ensure Equity

Improve Outcomes

Support Workforce

Increase Value

HSR Topic Areas

- Health Care System Organization and Delivery (e.g., Access, Virtual Care, ED, Women’s Health, Community Care)
- Mental Health, including Suicide Prevention
- Health Care and Clinical Management (Primary Care Practice & Complex Chronic Disease, Military Exposures, Opioid/Pain)
- Long-Term Care, Aging & Support Services
- Behavioral, Social & Cultural Determinants of Health, Homelessness; Workforce, Quality, Safety & Value; Policy (e.g., Veterans Benefits)
HSR Strategic Methodology Areas Foundational to Responding to Agency-wide Priorities (Source: Evidence Act Priority Survey Results)

1. **Hire faster and more competitively.** Improve workforce recruitment, onboarding, and retention of VA employees and trainees

2. **Connect Veterans to the soonest and best care.** Reduce direct care wait times and community care appointment scheduling times by improving clinical availability and scheduling

3. **Promote a culture of safety, learning, and knowledge translation.** Implement and evaluate programs focused on innovation, psychological safety, zero harm, and manager/leader training

4. **Prevent Veteran suicide.** Prevent Veteran suicide using a public health approach (e.g., outside the clinic walls, partnerships with community service organizations)

5. **Serve Veterans with military and environmental exposures.** Improve quality of care, including the identification and management of symptoms among Veterans with military and environmental exposures

6. **Reduce Veteran homelessness.** Ensure more at-risk and underserved Veterans receive early interventions, partnerships and supportive services to avoid homelessness
Strategic Methodology Areas Ensure Alignment with Emerging Veteran, VA Priorities

HSR Strategic Methodology
1. Implementation Science
2. Data Science
3. Science of Engagement
4. Systems Science
5. Policy Analysis/Evaluation

Multi-Level VA Priorities
- National Priorities: VA Strategic Plan, VHA/VA Leadership
- VA National Program Offices, VHA Long-range Goals
- Veterans Integrated Service Network and VA Medical Center Performance Goals
- Service Lines, Frontline providers, Clinical Managers

Research Priorities
- VA Office of Research and Development
- National Research Advisory Council
- QUERI
- Other Federal Partners and Organizations (e.g., NAM, AHRQ, PCORI, NIH, etc.)
- Philanthropic Foundations and Professional Societies
- National Health and Quintuple Aim Goals: Increase Access, Ensure Equity, Support Workforce, Improve Veteran Outcomes, Improve Value

Legislative, Executive, and Veteran Priorities
- Veterans’ and their caregivers’ needs
- Veterans Service Organizations
- Congressional Priorities
  - Megabus/NDAA
  - VA Maintaining Internal Systems and Strengthening Integrated Outside Networks Act of 2018 (MISSION Act)
  - Foundations for Evidence-based Policymaking Act of 2018
  - Comprehensive Addiction and Recovery Act (CARA)
  - 21st Century Cures Act
  - Hannon Act
  - STRONG Veterans Act
  - PACT Act, etc.
- Presidential Executive Orders and memoranda
VA fulfillment of the Evidence Act, which requires VA to justify budgets using evidence.

**Evidence Act is Law (US PL 115-435)**

- Influences agency budgets
- Requires annual evaluation plans on top priorities that inform policies and resource allocations
- Evaluation plans can be HSR or QUERI projects and are made public
- Help leverage other legislative mandates and funding sources

**Priorities will inform VA, ORD, HSR and QUERI Initiatives:**

- Evidence Act National Evaluations
- QUERI Rapid Response Teams
- Advancing Diversity in Implementation Leadership (ADIL)
- HSR Merit and QUERI Partnered Evaluation Centers
- ORD AMPs/BPs
- VA Strategic Plan

**HSR/QUERI Systematic Priority-Setting Process in VA Strategic Plan**

1. Local, regional, and national VA leaders identify priorities via qualitative discussions, national survey
2. National leaders vote and concur on top priorities, informing QUERI Requests for Applications
3. QUERI reports progress to VA leaders, benchmarking on QUERI Impact Framework metrics, eRA commons
4. VA investigators, in partnership with health system leaders, submit applications that undergo peer review
5. QUERI peer reviews and funds teams with the highest quality applications that address priorities

Braganza, Kilbourne et al., HSR 2022
HSR Priorities Inform ORD’s Learning Health System Components

1. Systems of leadership
A set of methods to encourage a network to perform as a system (Learning Community)

2. Governance and management
The way policies, processes, norms, and actions of a network are structured, sustained, regulated, and held accountable

3. Quality improvement
Systematic, continuous actions that lead to measurable improvement in outcomes of health care services and the health status of the network's targeted patient groups (e.g., QUERI)

4. Community-building and engagement
Governance, structures and processes that enable all stakeholders to act on their inherent motivations and become involved in the network

5. Data and analytics
Activities (SOPs) to collect, validate, organize, and standardize data relevant to a network's mission and making these data available to all network stakeholders for clinical care, improvement, research and learning

6. Research
Drive the generation of new knowledge related to the network's clinical focus and knowledge related to improvement of the network itself (e.g., HSR, ORD)

How ORD Envisions Using LHS Components in its AMPs

Lung Precision Oncology Program

Executive Steering Committee
- Veteran Engagement
- Lung Cancer Screening Outcomes

Workgroups
- LCS Scientific Radiomics
- LCS Clinician & Scientific Outcomes

Sub-workgroups

An example of AMP functionality in practice
HSR Foundational Framework: Making LHSs work for Veterans

The Learning Cycle

Priority Goals

Policy

D2K: Data to Knowledge

K2P: Knowledge to Performance

Implementation Science (Hybrid Type 2/3)

Health Problem of Interest

Multi-level Engagement: Veterans, Providers, Leaders

Data Science

P2D: Performance to Data

Formation of Learning Community

Evidence generation (from ORD effectiveness trials)

Infrastructure (People, Process, Policy, Technology)
HSR Learning Health System Framework Informing ORD Enterprise-Wide Initiatives (CSP Implementation Plan)

Fig. 1. Framing for the Implementation Planning Assessment Tool.

- **PHASE 3**: Planning for Sustainment for Effective Trials
  - Provider and patient acceptance
  - Implementation costs
  - Intervention costs

- **PHASE 2**: Implementation Process Data Collection
  - Organizational and contextual factors
  - Fidelity to implementation of intervention or treatment

- **PHASE 1**: Planning, Framing, and Aligning Interested Parties
  - Use of intervention or treatment at the routine practice level

Kowalski et al, JCTS, 2022

This is what we are trying to achieve
The Learning Cycle (Priority Goals)

Policy

D2K: Data to Knowledge

PRE-IMPLEMENTATION

What is the problem?
Who are the interested parties?
What are the best practices?

IMPLEMENTATION

What implementation strategies will be used?
What adaptations or resources are needed for local fit?
What are benchmarks of success?

K2P: Knowledge to Performance

Knowledge to Performance

SUSTAINMENT

How do Veterans benefit?
What is the impact on clinicians and the system?
Who owns the process?

P2D: Performance to Data

Performance to Data

Data Science

Evidence generation (from ORD effectiveness trials)

Implementation Science (Hybrid Type 2/3)

Formation of Learning Community

Infrastructure
(People, Process, Policy, Technology)

HSR LHS Cycle Supported by QUERI Roadmap

(Quinn et al., 2022)
QUERI Implementation Roadmap

- **Problem-focused**: Multi-level operations input, Learning Community
- **Infrastructure**: Data, practice networks, peer-review
- **Agile**: Projects on retainer to take on time-sensitive VA priority work
- **Research & QI protocols** coexist
- **Investigator and staff** implementation and evaluation training opportunities
- **Sustainment** plan: business case, implementation playbooks

CyberSeminar on the QUERI Implementation Roadmap

- Link for recording
- Link for slide deck

Link for QUERI Implementation Roadmap Guide
Examples of HSR Research Topics Aligned with LHS and VA Priorities

- Develop and test implementation or change strategies to improve scale-up and spread of effective treatments for Veterans (or de-implement low-value care), e.g., precision audit & feedback, credentialing, simulated learning

- Develop, validate, and test novel data science methods that optimize application of Veteran-centered data in real-world settings, e.g., machine learning, AI (including ethical issues), social media, conversational analysis

- Develop and validate systems science or engineering models to enhance the effectiveness, quality, safety, and efficiency of health care for Veterans in different settings (NAM HSR Report)

- Assess impacts of health care workforce recruitment and retention initiatives, policies on Veteran access to care

- Develop and test novel strategies to optimize the science of end-user engagement, e.g., Veterans, caregivers/families, providers, communities, etc., e.g., deliberative democracy, community research studios

- Implement and assess impact of programs for underserved and at-risk Veteran populations (VA Strategic Plan)

- Develop and evaluate programs or policies addressing health equity and social determinants of health, e.g., Veterans benefits, legislative mandates, national clinical standards of care, Veterans justice programs
Research That Does Not Fit in HSR

- Clinical interventions that are still regarded as experimental (e.g., efficacy studies)
- Studies involving interventions or treatments for a specific condition or disease that still require approval for use in VA routine clinical settings (these studies while not under the purview of HSR are encouraged to have an implementation feasibility secondary aim- See Cooperative Studies Program Implementation Planning Assessment Tool)
- Epidemiology studies focused on describing the clinical course of disease and not processes of care
- Research studies on the effectiveness of actual screening and treatments relating to prospective clinical trials
- Data science studies that exclusively focus on molecular, physiologic, or genomic modeling
- Computer software development efforts without a focus on their direct application in routine care settings
- Efficacy or effectiveness studies where the primary outcomes focus exclusively on physiologic processes
- Studies emphasizing specific functional outcomes related to individual disabilities
- Studies where behavioral health interventions target specific mental health diagnoses such as anxiety disorder or depression in specialty mental health care
- Studies requiring primary data collection of patient outcomes using specialized rather than general instruments
HSR Strategic Methodology: Summary

• Enable HSR to better respond to emerging VA and Veteran priorities

• Encompass current HSR topics while also expanding HSR’s reach across different operations partners to support VA national priorities related to Veteran care improvement
  - *HSR/QUERI to inform next VA Strategic Planning process*

• Reflected in current HSR RFAs (e.g., implementation, data science, engagement)

• Differentiate HSR from newly created ORD Actively Managed Portfolios and Broad Portfolios

• Ensure investment of cross-cutting Learning Health Systems research with a Veteran focus

• Based on established scholarship and priorities from the HSR community, e.g.,
  - Patient-Centered Outcomes Research Institute (PCORI) Methodology Standards
  - Agency for Healthcare Research and Quality (AHRQ) Learning Health System Core Competencies
  - National Academy of Medicine’s Future of Health Services Research report
HSR Impacts

November 29, 2023

Health Systems Research
Office of Research and Development
Veterans Health Administration
Congratulations to our Recent HSR Awardees!

**2022 Under Secretary’s Award for Outstanding Achievement in Health Services Research**
Sanjay Saint, MD, MPH

**2022 Daniel Deykin Award Outstanding Mentor**
Sarah Krein, PhD, RN

**2022 Health System Impact Award**
Laura Damschroder, MS, MPH

**2022 Best Research Paper Awardees**
Kritee Gujral, PhD
John Piette, PhD
Dave Oslin, MD
NEW! HSR Special Recognition Awards

• Open to HSR staff and Investigators
• Significant and longstanding contributions with key roles on research projects and/or within the research enterprise more broadly
• Nominees are field-based staff or investigator with a role in an HSR, QUERI or operationally partnered initiative
• Nominations due December 19, 2023
• More information and nomination link here:
  https://www.hsrdr.research.va.gov/for_researchers/awards/staff-investigator-award.cfm
HSR and QUERI impacts were featured in the Government Accountability Office (GAO) 2020 report on VA’s Efforts to Prioritize and Translate Research into Clinical Practice

https://www.gao.gov/products/gao-20-211

Many thanks to our HSR investigators, staff, and our Veteran and provider partners for their work to improve the health and healthcare of the Veterans we serve!
# Overall Assessment of HSR/QUERI Impacts (ACTION)

Essential in reporting impacts to VA and ORD Budget Justifications, Congress

<table>
<thead>
<tr>
<th>Domain</th>
<th>Key Measures</th>
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</thead>
<tbody>
<tr>
<td><strong>Alignment</strong></td>
<td>How is the initiative aligned with specific VA priority goals? What specific VA metrics is the study tracking?</td>
</tr>
<tr>
<td><strong>Commitment</strong></td>
<td>Is the study receiving financial or non-financial (e.g., FTE, data) support from the operations partner? Did the study develop new tools, software, products, etc., to be disseminated?</td>
</tr>
<tr>
<td><strong>Tailoring to local context</strong></td>
<td>Reach and Adoption (e.g., RE-AIM) Number of sites involved, patients/providers enrolled</td>
</tr>
<tr>
<td><strong>Informing the field</strong></td>
<td>Were leaders with policy and financial influence briefed on study impacts?</td>
</tr>
<tr>
<td><strong>Observing healthcare change and generating New projects</strong></td>
<td>To what extent did the study lead to or shape new VA programs or policies? Did Veterans get better?</td>
</tr>
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*Braganza et al. 2020*
Examples of HSR and QUERI Impacts
In collaboration with VA operational partners

- Suicide prevention national outreach programs
- Opioid and pain care evidence-based practices (EBPs)
- Medical home model for at-risk Veterans (patient-aligned care teams)
- National health equity dashboard
- Antibiotic stewardship
- Veteran functioning and long-term care
- Optimizing surgical care
- Innovation
Examples of Recent Impacts

Suicide prevention
- Caring Contacts sends messages to Veterans at high risk of suicide → implemented in over 22 VA sites
- Caring letters reached over 200,000 Veterans
- QUERI national evaluation for Transitioning Servicemembers

National rollout of guideline-based opioid use prescribing
- Stepped Care for Opioid Use Disorder Train the Trainer (SCOUTT): >200% increase in patients with OUD receiving evidence-based treatment
- Stratification Tool for Opioid Risk Mitigation (STORM) medication safety dashboard resulted in over 20% reduction in mortality from opioid use disorder
- Consortium to Disseminate and Understand Implementation of Pain & Opioid Use Disorder Treatment (CONDUIT): 7 EBPs for pain implemented in >60 sites
Examples of Recent Impacts (cont’d)

Patient-aligned Care Teams Tailored for Homeless Veterans (H-PACT)
  • Enrolled Veterans had fewer VA and non-VA hospitalizations

Health Equity Dashboard
  • The VHA Primary Care Equity Dashboard has nearly 1,000 users at 119 VAMCs

Antibiotic Stewardship: Spread of Best Practices
  • HSR has funded more than a dozen studies on curbing antibiotic over-prescribing, one study resulted in more than 8,000 fewer days of antibiotics
Diffusion of Excellence and HSR/QUERI Partnership Impacts

- 6-year partnership to scale-up, spread, and sustain evidence-informed practices, e.g., support for 6 National Diffusion Practices:
  - **TeleWound**: Veterans saved an average of 303 miles in travel with a cost savings of $170
  - **FLOW3**: 157 facilities; 30,000 complete prostheses or socket replacements for 17,621 Veterans
  - **VIONE**: 133 facilities; 15,895 providers; 694,826 Veterans

- Rigorous evaluation of the Diffusion of Excellence and development of products to enhance the program impact, e.g., QuickView, Wishlist
  - Shark Tank → 99% VHA parent health systems/facilities submitted 3,281 applications; **88 Promising Practices**: 1,440+ adoptions; 56% facilities sustaining

Diffusion Marketplace Impacts

- **217 INNOVATIONS**
- **4,607 ADOPTIONS**
- **576 VA SITES**
HSR Strategic Methodology Impacts

Engagement Science
- **Surgical Pause** (Diffusion of Excellence) optimizes care for frail Veterans before surgery
- **Strengthening Excellence in Research through Veteran Engagement (SERVE) Toolkit**

Systems Science
- **Advancing Comprehensive Diabetes Care** (with Diffusion of Excellence, Office or Rural Health)
- **Cooperative Pain Education and Self-Management (COPES)** national CBT program for pain

Implementation Science
- Change strategies adopted by VA national program offices, e.g., **Implementation Facilitation** and Leadership for Organizational Change and Implementation (LOCI)
- **STRIDE inpatient walking program**: Over **40 medical centers** impacting more than **7,000 Veterans**
- **CSP Implementation Planning Assessment Tool**
Policy Analysis
• Several HSR and QUERI investigators involved in Reduce Employee Burnout and Optimize Organizational Thriving (REBOOT) initiative to evaluate VA workforce well-being policies
• National evaluations of recent legislative mandates related to women’s health, access to care for underserved communities, mental health, and Veterans benefits

Data Science
• Machine learning to enhance detection of Veterans at risk of homelessness
• Improving value and safety of cancer pharmaceutical use
• Predictive modeling to better evaluate progression to liver cirrhosis among Veterans
Looking Ahead

- HSR/QUERI to inform the next VA Strategic Planning process
- Greater integration with QUERI, ORD, and VA to support priority-setting and interdisciplinary research and evaluation in a learning health system (LHS)
- Expanded opportunities for LHS infrastructure support
- Empower our investigator and staff workforce to leverage opportunities across VA operations (beyond the research appropriation)
VA’s Strategic Plan informs its ~$1 trillion in spending, including VHA, ORD budgets and emerging areas for research and evaluation.

**HSR and QUERI** to support VA’s Office of Enterprise Integration’s update to the VA Strategic Plan by informing priority areas based on multi-level input process.
Rapid Approach to Identifying VA Strategic Plan Priorities
(Beck et al, QUERI Priority Setting process)

Phase I: Identify care gaps and unanswered questions (e.g., environmental scan, evidence inventories or reviews, VA program office strategic plans)

Phase II: Refine priorities using concurrent processes: national surveys/live voting & focus groups with Veteran, provider, leader, investigator groups

Phase III: Delphi consensus panel with interested party representatives rank priorities on urgency, impact, feasibility, identify impact metrics

Candidate priorities for VA Strategic Plan Measures of Impact Ongoing Input

Existing reviews inform focus group, survey questions

Survey and focus group input inform Delphi panel discussion with representatives from different groups

General principles:
1. Priorities should reflect the range of services provided to Veterans (total $1T)
2. In-depth feedback from focus groups to identify priorities not previously realized
3. Broad representation across interested parties via surveys, voting on top priorities
4. Emphasis on perspectives from the field

References:
1. Aligning quality improvement efforts and policy goals in a national integrated health system - Braganza - 2022 - Health Services Research - Wiley Online Library
2. Health System Research Priorities for Children and Youth With Special Health Care Needs - PubMed (nih.gov)
3. Research Lifecycle to Increase the Substantial Real-world Impact...: Medical Care (lww.com)
HSR LHS Cycle Supported by QUERI Roadmap

The Learning Cycle (Priority Goals)

Policy

D2K: Data to Knowledge

Pre-Implementation

- What is the problem?
- Who are the interested parties?
- What are the best practices?

What implementation strategies will be used?

What adaptations or resources are needed for local fit?

What are benchmarks of success?

Knowledge to Performance

Implementation

- How do Veterans benefit?
- What is the impact on clinicians and the system?
- Who owns the process?

Formation of Learning Community

Queri

Data Science

P2D: Performance to Data

Sustainment

- Data to Knowledge
- Performance to Data

Infrastructure (People, Process, Policy, Technology)

Implementation Science (Hybrid Type 2/3)

Evidence generation (from ORD effectiveness trials)
## At a Glance: HSR vs. QUERI

<table>
<thead>
<tr>
<th></th>
<th>HSR</th>
<th>QUERI</th>
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</thead>
<tbody>
<tr>
<td><strong>Aims/Goals</strong></td>
<td>Investigator-initiated research, hypothesis-driven, long-term, generalizable</td>
<td>Non-research driven by time-sensitive operations needs, implementation or evaluation of national-level initiatives</td>
</tr>
<tr>
<td><strong>Operations Partner</strong></td>
<td>Collaborative</td>
<td>Directive</td>
</tr>
<tr>
<td>Involvement, Funding</td>
<td>Research Appropriation</td>
<td>Clinical Appropriation, Matched funding/resources often required</td>
</tr>
<tr>
<td><strong>Study Design</strong></td>
<td>Hypothesis-driven, pre-specified interventions or implementation strategies to inform national scale-up</td>
<td>Rigorous evaluations often within operations time constraints, national level, exploratory</td>
</tr>
<tr>
<td><strong>Approach</strong></td>
<td>Development of intervention, development or testing of implementation strategies, validation of methods, metrics, etc.</td>
<td>Implementation/evaluation of an evidence-based program addressing VA priorities and sponsored by a Program Office or VISN</td>
</tr>
</tbody>
</table>
How HSR and QUERI Align to Address VA Priorities

The most recent QUERI RFA supports investigator-operational partner teams to deploy the data and governance infrastructure to launch research and non-research projects responsive to Veteran-centric goals.

Source: QUERI LHS RFA
Summary of HSR and QUERI Funding Pathways

List of current funded projects:
- Current HSR studies
- Quality Enhancement Research Initiative (QUERI) brochure
**QUERI Projects are Non-Research**

- QUERI projects are non-research because of the **funding source** (medical administration) and their focus on **improvement** within VA.
- Protocols involving data collection are non-research if the **data are fed back to providers or operations leaders** to directly improve care and/or other VA processes.
- Documentation of non-research QUERI projects by sponsoring program office lead in an MOU.
- In situations when a QUERI project wants to collect additional data above and beyond VA improvement efforts, obtain determination through the IRB (VAEDA).

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CyberSeminar: Everything You Need to Know About VHA Non-research Protocols

[Link to Recording]

CyberSeminar: Everything You Need to Know About QUERI Non-research Protocols

[Link to Recording]
HSR Priorities and Future Directions: Bottom Line

• HSR prioritizes research that addresses at least one of the strategic methodology areas
  Implementation Science       Data Science       Engagement Science
  Systems Science              Policy Analysis

• Research priorities also address impacts on Quintuple Aim goals
  Increase Access       Ensure Equity       Support Workforce
  Improve Outcomes      Improve Value

• Research priorities are aligned with VA national priorities
  Hire Faster & More Competitively       Connect Veterans to Soonest, Best Care
  Promote a Culture of Safety, Knowledge Translation       Prevent Veteran Suicide
  Serve Veterans with Military & Environmental Exposures       Reduce Veteran Homelessness

• National thought leader in cutting-edge health systems research that is responsive to the changing needs of Veterans and the VA that serves them
Questions Received from the Field

• **How will CDA applications be impacted by the transition to broad portfolios?**
  CDA applications will still be reviewed by HSR-specific panels, and the priorities related to career development align with those for HSR more broadly.

• **Will the transition benefit projects with multiple operations partners?**
  Projects that bring together a coalition of operations partners will benefit from the updated crosscutting HSR priorities especially if they focus on VA priority goals, and where appropriate, the AMPs as well. One of the goals of the AMPs is to strengthen collaborations between research and operations partners for specific disease-focused areas of high priority to VA and Congress.

• **Can you clarify what types of software/algorithim studies fall under HSR priorities?**
  Development of software or algorithms can still fit under the broader HSR strategic methodology priorities if the research involves ongoing partnerships with end-users, especially patients, providers, and clinical operations partners (e.g., use of engagement science), clinical processes (e.g., systems science) and/or aims that focus on feasibility and dissemination planning (implementation science).
Questions Received from the Field (cont.)

• **Does HSR plan to provide training opportunities to staff akin to QUERI?**
  
  HSR strongly supports more training opportunities for staff especially in specific skills related to the LHS core competencies. One avenue is through AcademyHealth which has trainings in Communicating for Impact. We can also investigate leveraging QUERI training opportunities, and COINs also receive a set amount of funds annually to support professional development. Moreover, academic partners are increasingly offering training opportunities for staff professional development.

• **What is the vision to help support the field of HSR researchers- particularly early career investigators?**
  
  In QUERI we have a saying that our investigators “triple-major:” as subject matter experts, methodologists, and scientific partners working with operations (see LHS core competencies). To this end it is important for early-career investigators to not only pursue a topic that they are passionate about, but to also grow expertise in a methodology that can be applied across areas of research, e.g., one of the five strategic methodology areas. It would also be important to take advantage of HSR and QUERI leadership training opportunities especially in how to work with operational partners (see Kilbourne, et al LHS, 2022).
HSR Priorities—Key Reference Documents

- Patient-Centered Outcomes Research Institute (PCORI) Methodology Standards
- Agency for Healthcare Research and Quality (AHRQ) Learning Health System Core Competencies
- How the VA is training the Next-Generation workforce for learning health systems - Learning Health Systems - Wiley Online Library
- VA Quality Enhancement Research Initiative (QUERI) Roadmap
- National Academy of Medicine’s Future of Health Services Research report
- VA Strategic Plan (including Appendix D, highlighting HSR Priority-Setting)
- VA Agency Priority Goals
- Learning Health System Cycle (Friedman, 2022), Maturity model (Lannon et al, 2020)
- VHA Medical Center and Network Director Performance Plan
- HSR Priorities Document: https://www.hsrd.research.va.gov/funding/PriorityDomains.pdf
HSR and QUERI Funding Opportunities


HSR Updated Priority Domains: https://www.hsrd.research.va.gov/funding/PriorityDomains.pdf

Quality Enhancement Research Initiative (QUERI) implementation training: https://www.queri.research.va.gov/training_hubs/

QUERI Advancing Diversity in Implementation Leadership (ADIL) Initiative queri.research.va.gov/QUERI-ADIL.pdf

HSR Funding:  

QUERI Funding: