HSR Priority Research Areas

(Updated September 3, 2024)

A. Summary:

This document provides additional detail regarding VA Office of Research and Development (ORD) Health Systems Research (HSR) broad portfolio priorities based on the HSR Notice of Special Interest (NOSI). Further information can be found in the publication <u>The foundational science of learning health systems</u> (Kilbourne, Borsky, O'Brien, Braganza, Garrido, 2024)).pl

HSR Research Priorities: HSR supports groundbreaking science focused on the organization, financing, and delivery of health care in order to improve Veteran outcomes and advance VA as a national Learning Health System. HSR studies are responsive to ORD, VA and VHA priorities as well as Legislative/Congressional priorities. The following 2025-2029 HSR priorities have been identified by VA leaders, frontline providers, and other affected groups per the strategic planning process developed by HSR's Quality Enhancement Research Initiative (QUERI) program, based on the <u>VA Strategic Plan</u>, VA Legislative priorities, and <u>ORD priorities</u>:

- Connect Veterans to the soonest and best care: optimize Veteran access, quality, efficiency, experience, and equity of care across in-person, virtual, and community care services
- Implement value-based care solutions: design and refine value-based care models and tools to ensure care provided in the community leads to improved quality of care and outcomes for Veterans
- Build an integrated delivery network to meet the diverse and changing needs of Veterans: identify efficient staffing and care models for primary, specialty, mental health, and other health care services across different regions and settings, with an emphasis on caring for the aging Veteran population
- Retain, invest in, and support VA employees: implement and evaluate programs focused on employee health and well-being, education, zero harm, innovation, leadership development, and technology training
- Drive a culture of learning, knowledge translation, and innovation: identify opportunities where emerging digital health technologies (e.g., artificial intelligence, virtual reality, large language models) can make VA services more efficient and reduce provider burden
- Prevent Veteran suicide: prevent Veteran suicide using a public health approach, including partnerships with community service organizations (also see the Suicide Prevention Actively Managed Portfolio NOSI)
- Address health disparities: ensure at-risk, underserved, and older Veterans receive early interventions and supportive services to address social determinants of health and preventable harm

HSR studies seek to improve Veteran Quintuple Aim goals: access, outcomes, equity, experience, and value (<u>Matheny, NAM 2019; Cahan, 2020; Nundy 2021</u>) using foundational Learning Health Systems (LHS) methods (<u>Friedman, 2022</u>, Lannon et al., 2020; Friedman et al. 2024), including implementation, data, engagement, systems, and policy sciences:

- Implementation Science: Discover and optimize strategies to get effective treatments to Veterans faster and sustain their use in real-world practice.
- Data Science: Design, validate, and apply data science and knowledge management tools that improve Veteran care.
- Engagement Science: Create and test novel approaches for engaging end-users, e.g., Veterans, providers, communities, etc., that support improved outcomes.
- Systems Science: Design and apply new systems science methods, including to improve Veteran provider workforce effectiveness, satisfaction, diversity, and retention.
- Policy Science: Develop, assess, and improve VA and national policies to improve Veteran outcomes, with a focus on underserved populations.

These foundational LHS methods also represent tools to directly improve health and health care for Veterans (e.g., apply implementation strategies validated through research) that are used by HSR's QUERI program, thus enabling investigators to respond to scientific research priorities with pragmatic solutions the VA healthcare system to use immediately. Funded through the VHA clinical appropriation, the mission of QUERI is to improve Veteran health by more rapidly implementing research evidence into practice. QUERI funds VA-employed investigators to conduct implementation, quality improvement, and evaluation initiatives focused on time-sensitive, national VA priorities affecting Veteran health, and has its own <u>separate funding mechanism</u>.

Background on HSR Foundational Methods and Research Scope

The "laboratory" for HSR studies is the real world, including the Veterans Health Administration (VA)'s over 170 hospitals, 1,000+ clinics and long-term care facilities, as well as the multiple services paid for by VA's different branches (e.g., Veterans benefits, community or purchased care). The national scope of the VA health care system provides several unique opportunities for investigators:

- Using natural variation across the system to uncover factors influencing Quintuple Aim goals (improve outcomes, including quality and safety of health care, increase access, ensure equity, decrease cost/improve value, and improve experience/support workforce)
- Testing interventions delivered by existing providers in multiple settings in real world conditions
- Studying the process of taking innovations to scale
- Leveraging the rich clinical and administrative data on the 9 million patients enrolled in VA.
- Engaging partners in the design and conduct of research that addresses their priorities, including
 operational and program leaders, managers, and frontline employees, as well as Veterans, family
 members, and their caregivers
- Apply LHS methods to improve Veteran care at the national level through QUERI

HSR foundational methods and priorities reflect trends described in National Academy of Medicine's Future of Health Services Research report that affect Veteran and general population health, e.g.,

- **Rapid growth of new technologies** (e.g., virtual care, digital health) enabling more efficient care delivery as well as the rapid expansion of big data (e.g., artificial intelligence)
- Increased desire from patients and families to be involved in health care decisions
- Increased need to address the role that social determinants play in health
- Greater demand from health care leaders to show how research improves health care value
- Changing **laws and policies** regulating health care, and the challenge of making these policies work at the health system and community levels for patients.

In contrast to quality improvement, research on HSR foundational methods create generalizable knowledge to make a broader impact on Veteran health based on the Quintuple Aim. Appropriate comparison groups should be used to ensure representativeness and generalizability especially when testing hypotheses related to new organizational changes, technologies, policies, or implementation strategies. Solutions should be able to be integrated as much as possible into <u>existing care</u>, rather than dependent on new personnel and resources.

HSR investigators rely on operational partners and end-users (e.g., providers, patients) to help identify the problems to be solved so that they work on a shared agenda to improve outcomes for Veterans and the providers who care for them. HSR and QUERI investigators are often one and the same, and their respective projects focus on the same priorities identified by operational partners and end-users. Nonetheless, the timeline, management, and specific goals of HSR versus QUERI projects vary given that HSR focuses on creating generalizable knowledge that builds the science of learning health systems, whereas QUERI focuses on application of LHS methods to national scale-up and spread of effective practices using evaluation and quality improvement methods (Kilbourne, Borsky, O'Brien, Braganza, Garrido, 2024). Both HSR and QUERI are informed by the priorities emanating from the larger ecosystem of local, regional, and national VA providers and policymakers using the QUERI priority-setting process that is described in the <u>VA 2022-2028 Strategic</u> Plan (also see: Braganza, et al, 2022).

HSR studies, together with QUERI initiatives, also support VA's fulfillment of the <u>Foundations for Evidence-based Policymaking Act</u>, which requires U.S. Government agencies including VA to use evidence and evaluation to justify priorities and budgets. Additional HSR and QUERI resources for evidence generation and evaluation include the <u>Evidence Synthesis Program</u> (ESP), State of the Art (SOTA) Conferences and field-based meetings, <u>COnsortia of REsearch (COREs)</u> and practice-based research networks such as the <u>Elizabeth Dole Center of Excellence for Veteran and Caregiver Research</u>, the <u>Women's Health Research</u> <u>Network</u>, the <u>HSR Consortia of Research (COREs)</u> and national network of <u>QUERI initiatives</u> can provide the necessary infrastructure to conduct multisite collaborative research.

B. HSR Foundational Methods Areas

The following is a detailed description of the HSR foundational learning health systems methods and how they are aligned with current HSR priorities. Please see the HSR NOSI for more information.

1. Implementation Science

Point of Contact: Dr. Amanda Borsky (<u>Amanda.borsky@va.gov</u>), backup Dr. Kara Beck (Kara.Beck@va.gov)

Implementation science, or knowledge translation, is the scientific study of strategies used to promote the uptake of effective interventions or treatments in clinical and community settings in order to improve Veteran health. The need for implementation science came from the realization that effective interventions are often developed within single sites and rarely get translated elsewhere due to organizational barriers and/or lack of provider time or resources, thus resulting in lost opportunities for spread and sustainability. A variety of implementation strategies exist (Powell et al. 2015) that range from performance-focused strategies (i.e., "push") such as audit and feedback and performance incentives, to motivation-focused strategies (i.e., "pull") such as Evidence- based Quality Improvement, Facilitation and Community Engagement (Atkins et al, 2017). Yet few have been empirically tested to determine if and how they sustain implementation beyond research studies. Particular consideration will be given to the use of hybrid designs (Curran et al, 2012; Curran et al. 2022) that develop and test innovative implementation strategies that help close the gap between research and practice, particularly for underserved populations to ultimately increase the substantial real-world impact of research. Another emerging priority area of implementation research is the role of information technology, digital health, and artificial intelligence in the development, testing and sustainment of implementation processes in real-world settings (Trinkley et al. 2024). HSR is particularly interested in optimizing implementation strategies that use highly specified, theory-based methods to improve uptake of effective practices, or in some cases, de-implement ineffective or low-value treatments. Rigorous assessment of value (e.g., cost-effectiveness) of specific implementation strategies is also encouraged to enable end-users to "own" the implementation process (sustainment). For more information including training opportunities in implementation science and how to develop and test implementation strategies visit the QUERI Evidence. Policy, and Implementation Center (EPIC) and Center for Evaluation and Implementation Resources (CEIR).

2. Data Science

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Data Science (Measurement/Informatics Science) in health involves the use of different scientific fields (e.g., statistics, scientific computing, anthropology, knowledge management) to garner insight into health and healthcare outcomes from unstructured and structured data to inform the use of computable biomedical knowledge in practice. Data can include quantitative and qualitative sources from digital health modalities such as mobile and wearable devices, telehealth/virtual care (for more information see the Virtual Care Consortium of Research-CORE), electronic health records, social media, digital images, communications, or other sources. While numerous electronic health data sets are incorporated into the VA Corporate Data Warehouse and research repository, instigators are also encouraged to consider population health data sources including those form the Veterans Benefits Administration, Medicare claims, geographic information systems, and census data. For more information on these resources see ORD's VA's Informatics and Computing Infrastructure (VINCI) and VA Information Resource Center (VIREC). HSR is interested in research that applies novel data science methods to improve Veteran health, including use of machine learning, large language models, data standardization, natural language processing and other artificial intelligence (AI) methods. Other priorities include use of strategies that maximize trustworthy use of AI, ethical use of data, and mitigating potential algorithmic bias in health care (e.g., London 2022; Ferryman, 2020). Additional priorities include use of social media, conversational analysis, mobile health/e-health, precision health/genomic data, population health/social determinants data, and other sources that capture patient-reported outcomes and provider experience in care (also see Engagement Science). Other priority areas include use of digital health/AI methods to improve quality measurement and implementation strategies (Trinkley et al. 2024). Studies involving sites that have adopted the new Oracle Cerner electronic health record (EHR) must include comparison sites using legacy software (see QUERI EHR-focused centers: EMPIRIC, SCHOLAR).

3. Engagement Science

Point of Contact: Dr. Amelia Schlak <u>(Amelia.Schlak@va.gov</u>), backup Dr. Crystal Henderson (<u>Crystal.Henderson1@va.gov</u>)

Engagement science (i.e., science of Veteran, provider, and other operational partner engagement) involves the systematic incorporation of end-user input across multiple interested parties (e.g., Veterans, including their families and caregivers, frontline providers, clinical managers and other employees, leaders, policymakers, and community members) to inform all stages of the research from its inception to dissemination and sustainment. HSR is particularly interested in research that develops and tests novel strategies to optimize input and involvement of patients, caregivers/families, providers, communities; leveraging existing networks of end-users to assess experience and promote sustained involvement to ensure health equity, access, and other goals. Other research areas include application of user-centered design or co-design of effective interventions and implementation strategies to improve practice uptake

Veteran Engagement: HSR is interested in advancing the science of <u>Veteran engagement</u> by examining strategies that optimize end-user and community engagement in order to improve Veteran Quintuple Aim goals. In particular, HSR studies seek to develop, test and scale novel strategies to optimize engagement of Veterans, caregivers/families, providers, communities, and other interested parties in the research process, including research priority-setting, incorporation of Veteran-centered outcome and lived experience data, and intervention development and implementation. Research areas can include:

- The most effective ways to engage Veterans and community members (including caregivers) in research, their health care, community linkages, etc.
- Best practices for levels of engagement in different phases of the research process
- The process of sustaining Veteran and other end-user engagement throughout studies
- How to ensure diversity, equity, and inclusion in Veteran and other end-user engagement and/or the importance of engaging Veterans with specific experiences of different diseases
- Developing metrics to measure how Veteran engagement impacts the research process.
- Incorporation of Veteran-centered outcomes in routine scientific and clinical practice
- Comparative studies of different types of engagement or systematic reviews

Provider Engagement/Workforce: HSR is also interested in research that assesses the impacts of health care workforce programs and policies on Veteran outcomes including novel approaches to develop clinical, organizational, and leadership capacity among frontline staff and clinical managers, especially among underserved patient populations. In 2021, VA established the Reduce Employee Burnout and Optimize Organizational Thriving (<u>REBOOT</u>) Task Force to address employee workload and promote professional fulfillment and provides opportunities to attain more rigorous evidence of the effect of these interventions on reducing burnout. Investigators are encouraged to design research that leverages REBOOT initiatives and provides strong assessment of the REBOOT implementation streams. HSR also encourages interventional studies including organizational or system level interventions to improve workforce well-being (e.g., maximizing employee autonomy; improving working relationships; addressing resources and reducing workload; improving administration, leadership, and management support).

4. Systems Science

Points of Contact: Dr. Amelia Schlak (<u>Amelia.Schlak@va.gov</u>), backup Dr. Amanda Borsky (<u>Amanda.Borsky@va.gov</u>)

Health systems science, often referred to as health systems engineering (HSE), is the process of understanding how health care as a complex adaptive system can lead to generalizable improvements in the way health care and other services are delivered for Veterans. There has been a growing interest in applying approaches and tools from HSE and Complexity Science to solve many health care problems in the VA. HSE requires a variety of quantitative and qualitative tools for analyzing and interpreting system models. These tools come from fields such as psychology, computer science, operations research, management, economics, and mathematics. Specifically, HSR is interested in the development, validation, and application of systems science or engineering models to enhance the effectiveness, quality, safety, and efficiency of health care for Veterans across different settings (e.g., primary, specialty, mental health, inpatient, emergency, long-term, and community-based care settings). This priority is aligned with ORD's priority to increase the substantial real-world impact of research and speaks to the need to improve the access, efficiency, and delivery of quality

health services to Veterans, to optimize post-deployment care, community care, care transitions and other situations that cross health system/community boundaries. Research topics of particular interest include systematic study of organizational structures, design and delivery methods to improve the efficiency and quality of care for Veterans, development and validation of systems science or engineering models including high-reliability and mechanistic models to enhance the effectiveness, quality, safety, and efficiency of health care, validation and application of ethnography, data science, informatics, and/or systematic process mapping of clinic workflows to improve efficiency, value of health care, and modernizing care and payment models to improve VA and community care access, quality, and efficiency, including by not limited to value-based payment models and care coordination and care management models.

As underscored in the landmark <u>National Academy of Medicine Future of Health Services Research report</u>, more attention is needed on solving the complex health system and implementation issues facing large health care organizations, such as VA, in a timely manner. A High Reliability Organization (HRO) in VA is in response to the recent <u>Government Accountability Office</u> report highlighting the need for VA to deliver health care to Veterans optimally and consistently across different settings. HROs empower frontline providers to lead performance improvement, where health care leaders encourage a culture focused on operations through preoccupation with failure, reluctance to simplify, deference to expertise and commitment to resilience (<u>Weick</u> and <u>Sutcliffe</u>, 2015). HSR research informs the HRO initiative through foundational methods that address existing gaps in identifying and/or implementing standardized processes or approaches to increasing safety, reducing errors, and promoting continuous quality improvement. For further background, see the <u>Evidence</u> <u>Synthesis Program</u> report on HROs.

Research on Nursing Workforce and Nursing Practice: HSR is also interested in research on nursing as outlined by the VA Nursing Research Agenda on the <u>HSR State of the Art (SOTA) website</u>. The US is faced with a national nursing shortage and understanding VA nursing workforce trends is essential to keeping VA hospitals, community living centers, and clinics open. Similarly, as nursing accounts for the largest VA workforce, improving the care that nurses deliver is vital to improving Veteran access, quality, outcomes, and experience. Thus, HSR is seeking research on how to optimize nursing practice and support the nursing workforce to improve Veteran care. To prioritize research on nursing, a State of the Art (SOTA) Conference was held and included researchers, clinicians, and health system leaders to create a VA nursing research agenda. Organizing partners included the Office of Nursing Services, the Office of Research and Development, Health Systems Research, and Rehabilitation Research, Development. The SOTA prioritized research questions in the following areas: Understanding VA nurse staffing trends and the influence on Veteran, workforce, and health system outcomes; improving the environment that nurses work in; optimizing nursing practice for pressure injury prevention, detection, and treatment; evaluating the role and contribution of nurses in VA care coordination models; and re-imagining the role of nurses in addressing the social determinants of health to improve health equity.

5. Policy Science (including Policy Analysis and Evaluation)

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A major area of focus in policy includes the implementation and assessment of the impacts of programs and policies especially for underserved, at-risk, or marginalized Veteran populations (see <u>VA Strategic Plan</u>), including but not limited to populations experiencing homelessness, women Veterans, LGBTQ+ Veterans, aging Veterans, those living in rural settings, those with complex chronic physical or mental health conditions, and Veterans with disabilities. HSR studies on policy analysis and evaluation focus on services such as Veterans benefits, legislative mandates, national standards of care, Veterans justice programs, etc. that address gaps in Veteran health equity or social determinants of health. HSR also encourages research that is focused on major national legislative initiatives affecting Veteran care, notably the Foundations for Evidence-based Policymaking Act (Evidence Act), MISSION Act, PACT Act, and other legislative mandates. In addition, novel research on the impact of Veterans benefits (e.g., equity in receipt of benefits on health outcomes, new policies or programs to address social determinants of new programs or policies at the national level that address social determinants of new programs or policies at the national level that address social determinants of new programs or policies at the national level that address social determinants of ceg., housing), priority Veteran populations (e.g., Veterans living in rural settings, homelessness-experienced Veterans, women Veterans, at-risk, marginalized Veteran populations), national clinical standards of care, justice programs. Studies should also consider using novel

data sources with agencies external to VA (e.g., federal, state agencies), and application of social media, economic data, etc.to assess, validate, and implement programs and policies. Other research areas include improving Veterans' experience and outcomes with disability claims, including policies that enhance equity in Veterans' benefits related to health conditions screening and means testing, improving Veteran housing and economic security outcomes, including preventing and ending homelessness, enhancing Veteran caregiver support, research that addresses the underlying environmental, social, and economic determinants of poor outcomes and health behaviors such as substance use disorders (e.g., employment, education incentives, justice system and incarceration diversion programs) and/or complex, co-occurring conditions. Other topic areas include enhancing VA workforce capacity, effectiveness, and retention, including policies that enhance employee and trainee recruitment and experience and improving outcomes of Veterans with military and environmental exposures through enhanced health and disability benefits and access to and quality of care for exposure symptoms.

Applications pertinent to this foundational method should also address how the study helps VA fulfill the <u>Foundations for Evidence-based Policymaking Act of 2018, which</u> requires that all cabinet level agencies, including VA, ensure their budgets and policies are tied to, supported by, and justified by evidence. Since 2019, HSR's QUERI has superintended VA/VHA's response to the Evidence Act and, in concert with the VA Office of Enterprise Integration OEI, produced required deliverables to the U.S. Office of Management and Budget (e.g., learning agenda, evaluation plans, and capacity assessment, as detailed in the recent <u>VA</u>. <u>Strategic Plan</u>), and provided consultation to VHA program offices on evaluation methods and budget justifications. Because the Evidence Act requires that all program budgets are eventually justified by evidence, VHA national program offices partnering with HSR may increasingly turn to investigators to conduct research activities to help inform their program investments. To this end, investigators are encouraged to work with their operations partners to conduct studies that will help inform program and policy decision-making. For more information on the Evidence Act, contact QUERI's Partnered Evidence-based Policy Resource Center (<u>peprec@va.gov</u>) or click <u>here</u>.

MISSION Act and Community Care

The VA has implemented several programs (including those responsive to the Maintaining Systems and Strengthening Integrated Outside Networks (MISSION Act) and previously the Choice Act) to improve access by increasing opportunities for Veterans to obtain health care in the community. HSR is committed to supporting a comprehensive program of research related to implementing key components of the MISSION Act (novel research to enhance access to care for Veterans in VA as well as non-VA settings). Specific topics of interest include coordination of VA and non-VA care; facilitation of virtual care (e.g., telemedicine); optimizing and improving access to health care especially in rural areas, such as network adequacy, costs, quality and equity of care; value-based payment models; and improving access to and quality of care in medically underserved areas and populations. For more information related to HSR priorities regarding access and the MISSION Act, please refer to: <u>About MISSION Act</u> and <u>Access and Community Care CORE</u>.

C. Specific HSR Topic Areas

HSR studies can also address specific topic areas that focus on a particular setting or population that have been emphasized by operational partners. Studies focused in these topic areas must address priorities listed in the NOSI and on the first page of this document, and also address Veteran Quintuple aim and Learning Health System methods goals.

HSR topic areas fall into the following broad categories:

- 1. Health Care System Organization and Delivery (Access, Emergency Medicine, Rural Health, Community Care, Women's Health)
- 2. Mental and Behavioral Health, including Suicide Prevention
- 3. Health Care, Clinical Management, and Policy (Primary Care Practice and Complex Chronic Disease Management, Disabilities and Military Exposure, Opioid/Pain)
- 4. Long-Term Care, Aging and Support Services
- 5. Behavioral, Social and Cultural Determinants of Health (Health Equity, Whole Health, Homelessness)
- 6. Quality, Safety and Value

1. Health Care System Organization and Delivery

Rural Health Access

Also see Policy Science; Point of Contact: Dr. Crystal Henderson (Crystal.Henderson1@va.gov) One of the top priorities of the Veterans Health Administration is to "connect Veterans to the soonest and best care." Historically, the VA has defined access as "an individual's ability to obtain the health care they need within an appropriate time frame" and has emphasized the importance of measuring how Veterans perceive their access to care rather than more standard measures (e.g., the number of available providers or wait-times for a patient's first appointment (Fortney et al, 2011)). Access in this model represents the "fit" between the clinical needs of patients and the ability of the health care system to meet those needs. This updated conceptualization of access also accounts for the impact of new technology on access, redefining how to measure access with the advent of virtual care, digital health tools, and other technologies. HSR focuses on interventions that improve access to care for rural Veterans with a focus on achieving Quintuple Aim goals including access and equity of care, especially for those who are underrepresented or have experienced disparities in VA care; across VA and community providers (Kaboli & Shimada 2023). In addition to VA-direct care, many VA enrolled Veterans are eligible for VA-purchased community care or enrolled in other non-VA health care. There are a number of research gaps regarding how to improve the guality of community care in comparison to VA-direct care; how virtual care can be used in all settings to address Veteran needs; understanding Veteran preferences and experiences in navigating choices between VA, community, and virtual care; development and validations of access to care measures that clinicians can use in needs assessments and care management. For more information, refer to the Access and Community Care CORE website and the Evidence-based Synthesis Program report on access. In 2022, HSR convened a Rural Health State of the Art Conference (SOTA) that identified themes and research priorities, including culturally appropriate interventions that address rural Veteran needs, addressing issues of diversity and inclusion among the rural Veteran population, innovative technologies that address gaps in care for rural Veterans, and addressing the specific needs of rural Veterans' mental health and overall well-being.

Emergency Medicine

Also see Systems Science: Point of Contact: Dr. Amanda Borsky (Amanda.Borsky@va.gov)

To understand and prioritize research on emergency care for Veterans, HSR convened the State of the Art Conference on VA Emergency Medicine (SAVE) with researchers, operational leaders and stakeholders in attendance (more details are available <u>here</u>). Specific focus areas identified include:

- Older Veterans: Examining variation in care and the impact on patient outcomes, utilization, and costs; quality of Emergency Department (ED) care transitions and strategies to improve them; impact of geriatric care improvement initiatives; and use of geriatric assessment tools in the ED.
- Veterans with Mental Health Needs: Assess variation in staffing and delivery models and the impact on patient outcomes, utilization, and costs, such as embedding mental health staff in EDs; enhancing staff retention and recruitment; examining geographic differences in care; and improving mental health and substance use screening, along with evidence--based interventions in a Veteran and provider-centric manner.
- Community Care: Assessing patterns of use and costs in VA and community care (CC) as a result of
 recent policy and coverage changes (with an emphasis on modifiable factors); understanding quality,
 safety and Veteran experience differences between VA and CC settings; and a better understanding of
 follow--up needs among Veterans who have received CC emergency or urgent care and how well those
 needs are being met.
- **Telehealth/virtual care** including the quality, safety, and effectiveness of telehealth at the point of care for access to specialty care during acute emergencies.

Women's Health

Point of Contact: Dr. Amanda Borsky (Amanda.Borsky@va.gov)

Women Veterans continue to be among the fastest growing segment of new VA users, with unique health care needs and lingering gender based disparities in care. VA women's health research prioritizes:

- Care for older women Veterans, including aging, menopause, and long-term care.
- Health care needs and interventions for post-deployment health that account for military experiences and exposures (e.g., how military experiences affect VA care utilization, tracking care after military exposure screening)
- Translational research and evidence across the lifespan and across services, including primary care/prevention, reproductive health, mental health (e.g., suicide prevention, intimate partner violence,

military sexual trauma, and PTSD)

- Access and community care, including coordination of community care women's health services, coordination of community-provided pregnancy and post-partum care, and rural health care
- Coordination of care for complex chronic conditions and multimorbidity (including cancer care)

More research is needed in these areas, as well as strategies to enhance trauma informed care, end harassment and intimate partner violence, and explore the effectiveness of gender-tailored interventions where needed. For information related to ongoing initiatives to accelerate women Veterans' health care research, please refer to:

- Executive Order on Advancing Women's Health Research and Innovation | The White House
- <u>VA Women's Health Research Network</u>
- Women's Operational Military Exposure Network Center of Excellence (WOMEN CoE) War Related Illness and Injury Study Center (va.gov)
- EMPOWER Quality Enhancement Research Initiative (QUERI)
- VA Office of Women's Health
- <u>National Center for PTSD</u>
- <u>NIH Office of Research on Women's Health</u>

2. Mental and Behavioral Health

ORD has separate portfolios devoted to research on Brain, Behavioral, and Mental Health (including Actively Managed Portfolios for Traumatic Brain Injury-TBI- and Suicide Prevention). Investigators are encouraged to review the NOSIs and request for applications from these portfolios for HSR- relevant topic areas reflected in these mechanisms. Specific areas relevant to HSR are described below, and the *Points of Contact for the other Portfolios include:*

- Suicide Prevention Actively Managed Portfolio: Dr. Joe Constans (Joseph.Constans@va.gov)
- TBI Actively Managed Portfolio: Dr. Stuart Hoffman (Stuart.Hoffman@va.gov)
- Brain, Behavior and Mental Health Broad Portfolio (includes PTSD): Dr. Miriam Smyth (Miriam.Smyth@va.gov)

HSR encourages research focused on developing, improving, and disseminating evidence-based practices to prevent Veteran suicide that use foundational learning health systems methods and focus on achieving <u>Veteran Quintuple Aim goals</u>. Studies may include population-based, individual-based, and system-level studies that improve identification and engagement of at--risk Veterans and examine and improve the delivery of suicide prevention interventions and strategies, all while drawing from the perspectives of patients, caregivers, providers, and managers. For additional information related to suicide prevention, refer to the <u>SPRINT</u> (Suicide Prevention Research Impact NeTwork) CORE (Consortium of Research), as well as the VA's Evidence Synthesis Program (ESP), which in partnership with CIVIC (Center for Improving Veteran Involvement in Care), has prepared a number of reviews related to suicide prevention research and a <u>Compendium of Suicide Prevention Topics</u>.

Mental Health Systems Research (including PTSD)

Given the high prevalence of mental health issues/PTSD among Veterans, mental health is a high priority research area for HSR. Mental health research supported by HSR primarily involves cross-diagnostic interventions that include PTSD, depression, and serious mental illness, as well as substance/alcohol use disorders and smoking cessation. HSR prioritizes innovative and efficient models of delivery, measurement-based care and primary care-mental health integration; addresses co-occurring disorders (both multiple mental health conditions, including substance use disorder and mental health conditions co-occurring with chronic health conditions); enhances quality of mental health and substance use services across medical centers; and promotes use of evidence-based practices/medications. HSR is less interested in studies that focus on single sites or narrowly target specific mental health conditions (e.g., CBT for depression), please see the BBMH Notics of Special Interest for diagnosis-specific priorities. Examples of interest areas for HSR related to mental health systems research include:

- Interventions to increase the engagement and retention of Veterans in evidence-based therapies.
- Studies of optimal care for mental health conditions outside of specialty mental health settings, including
 primary and community care

- Use of virtual care or digital health technologies to enhance access to effective psychotherapies.
- Optimal combinations of psychosocial and pharmacologic treatments, including treatment response across different Veteran populations, the use of sequential multiple assignment randomized trials (SMART) or similar adaptive designs
- Incorporation of patient and caregiver preferences in treatment for Veterans living with mental disorders

3. Health Care, Clinical Management, and Policy Primary Care Practice and Complex Chronic Disease Management *Point of Contact: Dr. Cathie Plouzek <u>(Cathie.Plouzek@va.gov)</u>*

ORD's Medical Health Broad Portfolio (Point of Contact: Dr. Holly Krull: Holly.Krull@va.gov) is devoted to research on specific medical conditions including infectious and chronic diseases, and a a new portfolio devoted to Pandemic Responses and Infectious Diseases (e.g., COVID; Point of Contact: Dr. Victoria Davey: Victoria.Davey@va.gov) has also been established. Investigators are encouraged to review the request for applications from these portfolios for HSR-relevant priorities reflected in these mechanisms. HSR's research priorities focus on improving systems of care (e.g., implementation science, data science, engagement science, systems, science, policy science) including primary and specialty care services for Veterans with complex chronic conditions (as opposed to a specific diagnosis or condition) so that they benefit from the full continuum of care, from health promotion, disease prevention, diagnostics, therapeutic and rehabilitative care to recovery and palliative care. There is a special focus on using innovative approaches and technologies through interdisciplinary collaborations both within and outside VA, Whole Health, and Patient Aligned Care Team models that provide patient-driven, proactive, personalized, team-based care to improve Veteran satisfaction and health care outcomes while improving costs. This approach focuses on treatment, selfempowerment, self-healing, self-care and improving social determinants of health. VA aims to improve Veteran health outcomes by shifting from a focus on disease management to one focused on the whole person and partnering with Veterans throughout their lives. VA stresses preventive interventions for healthy Veterans that eliminate or significantly reduce diabetes, obesity, chronic pain, addiction, chronic kidney disease and other similar conditions, incorporating complementary and integrative health care practices where appropriate (see VA Strategic Plan).

Disabilities, Military Exposures, Spinal Cord Injury and TBI

Point of Contact: Dr. Crystal Henderson (Crystal.Henderson1@va.gov)

ORD has separate research portfolios devoted to military exposures, available through the **Military Exposures Research Program (MERP);** Point of Contact: Dr. Rudolph Johnson: Rudolph.Johnson3@va.gov), as well as Veterans with traumatic brain injury (TBI), spinal cord injury (SCI), or functional disability through the **Rehabilitation Research, Development and Translation (RRDT) Broad Portfolio** (Point of Contact: Dr. Tricia Dorn: <u>Patricia.Dorn@va.gov</u>). MERP seeks to advance military exposure assessments and to understand the effects of military exposures on Veterans' health outcomes to inform care and policy. Investigators are encouraged to review their respective Portfolio RFAs and NOSIs for HSR- relevant priorities reflected in these mechanisms.

Specific areas relevant to HSR include novel implementation, health systems and policies designed to improve Quintuple Aim outcomes for Veterans experiencing disabilities, TBI, SCI, and/or military exposures. Notably, the <u>PACT Act</u> (Promise to Address Comprehensive Toxics) is a new law that expands VA health care and benefits for Veterans exposed to burn pits and other toxic substances. HSR is interested in prospective data collection (qualitative and quantitative) on the quality of care for Veterans with military exposures, as well as improvements to access to and quality of care for military exposures including Veterans benefits programs; Veteran trust in the system or decision-making; provider experience and workload; and Veteran's perceptions on the implications of environmental exposures and related issues.

The follow is a summary of HSR areas most pertinent to VA national priorities focused on serving Veterans with military and environmental exposures. For more information contact the HSR/QUERI Partnered Evidence-based Policy Resource Center (PEPReC):

- Research to improve quality of care for Veterans with military exposures, including the identification and management of symptoms among Veterans with military and environmental exposures (also see PACT Act and <u>VA 2025 Annual Evaluation Plan</u>)
- Impact of collaborations across the different federal agencies on the implementation of programs and

policies related to military environmental exposures experienced by Veterans.

- Optimizing strategies to implement effective care models to provide comprehensive care for Veterans exposed to military environmental exposures
- Health system, facility -level and broad health policy considerations of services and treatments for Veterans with TBI and disability and co-occurring conditions.
- Veterans' caregiver support, community services, non-VA care provided in-home or by long-term Social Support providers, and other modalities of care beyond the clinic walls for Veterans with TBI and other functional disabilities

HSR is also interested in studies related to the specific impact of the Gulf War on the health and care of Veterans. By mid-2013, Gulf War Veterans accounted for more than 2 million outpatient visits and more than 20,000 inpatient admissions. Although an increase in multi-symptom illnesses has been documented for Gulf War Veterans, relatively little is known what kind of care Gulf War Veterans have been receiving (from within and outside of VA) for multi-symptom illnesses and other unusual health conditions. VA is especially interested in studies that compare care patterns in Gulf War Veterans to other Veterans with similar conditions or needs, and the impact of such care on Veteran outcomes and care experience.

Traumatic brain injury (TBI) accounts for a significant portion of combat causalities from the ongoing conflicts in Afghanistan and Iraq. Concussive or mild TBI (mTBI), which is the most common form of combat--related injury, can occur in those not directly hit by a blast, without obvious external injuries and without loss of consciousness. Common outcomes of mTBI include memory problems, lack of concentration and increased anxiety and irritability. Servicemembers close to blasts may also experience other severe injuries. Moderate to severe TBI can cause persistent trouble with executive function, sensory difficulties, and emotional disturbances, resulting in permanent difficulties with memory, reasoning, emotion, and expression, all of which make it difficult to hold steady employment or regain pre-injury quality of life.

Chronic Pain Management and Opioid Use Disorders

Point of Contact: Dr. Cathie Plouzek (Cathie.Plouzek@va.gov)

ORD's Actively Managed Portfolio (AMP) on Pain/Opioids (Point of Contact: Dr. Audrey Kusiak: <u>Audrey.Kusiak@va.gov</u>) is devoted to research across the translation spectrum on opioid and pain management. Investigators are strongly encouraged to review the PAIN/Opioid AMP NOSI and Request for Applications for HSR-relevant priorities in these topic areas. For more information refer to the <u>Pain/Opioid</u> <u>Consortium of Research (CORE) website</u>.

The follow is a summary of research priority areas most pertinent to HSR's scientific priorities that are also related to chronic pain management and opioid misuse with the goal of supporting Veterans with chronic pain, opioid use disorder (OUD) and/or co-occurring pain and OUD. Veterans with combat-related injuries often have unique mental and physical comorbidities that exacerbate their risk for developing chronic pain and/or OUD. HSR aims to fund studies that focus on the following areas:

- Implementation of novel, evidence-based practices (EBPs) and approaches that enhance pain treatment services and focus on long-term recovery from pain, especially for underserved groups, with a focus on nonpharmacologic interventions that are feasible in VA and community-based settings as well as strategies that focus on patient, provider, and system-level changes to enhance uptake and sustainment of EBPs.
- Effectiveness and implementation studies that assess the impact of interdisciplinary treatments or models of care that address cross-diagnostic conditions, including chronic conditions that directly impact pain, opioid use, or related substance use disorder management (e.g., team-based primary care, integrated behavioral health, peer-support and coaching for neuroscience and medical care, and coordinated VA and community-based services), especially treatment models that address Veteran-centered outcomes.
- Research on programs and policies that address environmental, social, and economic determinants that
 influence optimal pain management and/or prevention of opioid and related substance use disorders,
 including those related to enhancing access to telehealth/virtual care services, enhancing the healthcare
 workforce, and Veterans benefits that address social determinants such as housing and economic security
 and employment/education incentives, justice system and incarceration diversion programs, and provider
 workforce development and retention programs that enhance Veteran access to pain and opioid/substance
 use disorder services, e.g., provider recruitment, professional development, and accreditation incentives.

4. Long Term Care and Aging

Point of Contact: Dr. Amelia Schlak (<u>Amelia.Schlak@va.gov</u>)

The Veteran population is aging and it is essential to ensure that VA health services are providing the best possible clinical outcomes and quality of life for older Veterans living in VA community living centers (CLCs), contract facilities and at home. Most Veterans prefer to be cared for in their homes, yet VA spends a disproportionate share of its budget on institutional care vs. long-term support services. The aging Veteran population, as well as the rising costs of nursing home care, has also increased the demand for home-based care (<u>Ramchand et al, 2014</u>). Innovative research is needed to examine care for older Veterans in non-institutional settings such as Medical Foster Homes, Residential Care Programs, and other community facilities (e.g., adult homes, assisted living facilities), and whether enhanced care can allow more Veterans to stay at home as they age. In 2025, HSR will launch a State of the Art (SOTA) Initiative on Age-Friendly Health Systems; for more information contact Amelia.Schlack@va.gov.

There is also a need for research on how aging affects the care required and the ability to self-care. With Veterans requesting more service delivery in their own homes, there is urgent demand for research on a wide variety of community delivered care services and topics. Specific issues such as technology use, variance of care across VHA settings, coordinating clinical consultation across multiple sites, specialty care, durable medical equipment, prosthetic care, oxygen services and customizing Veteran homes to facilitate activities of daily living, are all driving the changing focus of VA care. Moreover, significant projected increases in the numbers of Veterans with dementia, other mental illnesses and additional multiple service-connected conditions are raising the complexities and challenges for innovative research-based solutions. Hospice and palliative care remain an important area of interest. Caregiver, long-term care, and non-institutional care for Veterans is also emphasized given the expansion of eligibility for comprehensive family assistance to caregivers under the <u>MISSION Act</u>. Investigators are strongly encouraged to contact <u>The Elizabeth Dole Center of Excellence for Veteran and Caregiver Research (va.gov)</u>, the QUERI Learning Health Systems focused on Geriatrics (Point of Contact: Dr. Dawn Bravata: <u>Dawn.Bravata2@va.gov</u>) to also obtain the latest national priorities related to this research area.

5. Behavioral, Social and Cultural Determinants of Health Priorities Health Equity and Social Determinants of Health

Also See Engagement Science and Policy Science priorities: Point of Contact: Dr. Crystal Henderson (Crystal.Henderson1@va.gov)

Recent estimates suggest that clinical care accounts for less than 20% of modifiable health outcomes and that other factors, including social determinants of health, are more significant drivers of morbidity and mortality. Social determinants of health included environmental factors such as where people are born, live, learn, work, play, worship and age that affect a wide range of outcomes including overall health, functioning, and quality of life. These factors include access to safe housing, nutritious food, reliable transportation, clean water and functioning utilities and neighborhood quality, including public safety, concentrated poverty and built environment; employment, job security and occupational safety; educational attainment and health literacy; history of incarceration and access to legal assistance; social connectedness; and exposure to chronic stress, including racism and other forms of discrimination.

Equitable access to high-quality health care is a VA priority and a priority outcome per Quintuple Aim goals. Within the VA health care system, racial disparities for most process-of-care measures are minimal, but racial disparities in health outcomes persist. Despite the importance of social determinants of health in shaping health outcomes, health care utilization and health disparities, the evidence base of best practices in identifying unmet social needs and integrating social care and health care is lacking.

HSR encourages research that will identify, develop, evaluate and/or implement evidence-based practices to mitigate unmet social needs of Veterans, examine structural factors within VA health care that may contribute to disparities and reduce racial disparities in health outcomes and quality of care among Veterans, as well as programs and policies to expand diversity of the VA workforce.

Ending Veteran Homelessness and Housing Insecurity Also see Policy Science; Point of Contact: Dr. Kara Beck (Kara.Beck@va.gov)

The VA Strategic Plan lists ending homelessness as a national priority. The following research priorities have been identified for health services research based on the updated VA National Strategic Plan Learning Agenda Supplement on Homelessness:

Comprehensive studies are needed that allow the VA to better understand and intervene on system, environmental, and social factors affecting Veteran homelessness as well as housing and economic insecurity, including novel programs and policies that involve Veterans benefits. Research is also needed in the area of Veteran-centered risk assessment, including assessment of Veterans' and military service members' potential to predict their own risk of housing insecurity. These studies will inform primary prevention interventions, or methods or strategies that facilitate identification of Veteran-centered outcomes for use in research and evaluation of programs to end Veteran homelessness.

Rigorous studies (e.g., randomized program evaluations) are needed to assess impacts of existing VA programs and policies to end Veteran homelessness and/or housing insecurity, including programs such as peer support services, microlending/financial services (e.g., cash assistance), trauma-informed services supporting housing, as well as low barrier/low demand shelter services, and street medicine. Additional work is required to design and assess strategies that improve implementation and sustainment of effective programs and policies to end homelessness and housing insecurity among Veterans. This includes studies that seek to understand and mitigate barriers to program uptake (e.g., labor shortages, geographic proximity of affordable housing to VA medical centers) as well as program fidelity.

The development and implementation of interventions to improve workforce capacity and well-being among those serving Veterans experiencing homelessness or housing insecurity, including burnout interventions for homeless service providers as well as task-shifting and other policies that enhance workforce capacity. Research that focuses on housing and economic security for at-risk or marginalized Veteran populations is especially needed among women Veterans, aging Veterans, LGBTQ+ Veterans, racial/ethnic minorities, persons with mental disorders, persons with disabilities or other populations, or those traditionally underrepresented in research.

Whole Health

Point of Contact: Dr. Crystal Henderson (Crystal.Henderson1@va.gov)

For the past several years, VA has been promoting patient-centered care through the implementation of a <u>Whole Health approach</u>. Whole Health is defined as an approach to health care that empowers and equips people to take charge of their health and well-being and live their life to the fullest. The goals of the Whole Health approach go beyond patient-centered care; they focus on understanding the Veteran's life meaning, aspiration and purpose (i.e., what matters most to the Veteran) as the foundation for health care delivery. Whole Health integrates allopathic and complementary and integrative health (CIH) care where patients' goals and priorities are incorporated into health care decisions, with peer-led support, personalized health planning, Whole Health coaches and well-being classes. Examples of areas for future research include: the impact of Whole Health initiatives on Veterans with mental illness, chronic illness, women Veterans, and vulnerable Veterans; Whole Health implementation in mental health and long-term care; and how Whole Health can assist in addressing social determinants of health. Research is also needed on effective strategies for implementing Whole Health components of care in different VA health care settings and to examine the effect of Whole Health services on employee health and well-being.

6. Quality, Safety and Value

Quality and Safety of Health Care

Also see Systems Science, Implementation Science; Points of Contact: Dr. Cathie Plouzek (Cathie.Plouzek@va.gov), Dr. Amanda Borsky (Amanda.Borsky@va.gov)

Quality, safety and value are outcomes that are common to most other research priority areas in health services research. HSR also supports work that examines cross cutting questions in quality, safety and value that transcend individual conditions or populations. These include research studies on how to measure quality, organizational factors that influence quality and safety (including work on High Reliability Organizations), and interventions to improve patient safety and reduce errors, increase value of healthcare, and reduce ineffective or low-value care.

HSR also encourages research involving systems redesign in health care that optimizes the delivery of primary care, emergency care, acute care and transitions post-discharge, to improve the quality, safety, and value of care delivery to Veterans. The focus on quality and safety is particularly critical in developing a seamless and integrated system of care with community providers in light of the MISSION Act, and other legislative mandates related to access to care.

The Evidence-based Practice Workgroup (EBPWG) within VHA's Quality and Patient Safety is a joint effort between the VA and DoD that creates and disseminates Clinical Practice Guidelines (CPGs) specific to Veteran and service member care. Subject Matter Experts provide recommended clinical measures associated with CPGs. Although the joint guideline program has been in place for nearly two decades, there are limited data to document the impact of the guidelines on practice or clinical outcomes. There is a need for better understanding of CPG diffusion and the best way to improve the impact of the guidelines on VA practice and Veteran health outcomes. HSR encourages research that aims to assess:

- Awareness, reach and uptake of CPGs, including potential disparities in scale up and spread
- Implementation strategies to increase CPG impact
- Clinical decision support or artificial intelligence tools that enable automated identification of eligible populations or increased engagement with CPGs
- Studies may be observational in nature, leveraging data to understand changes in practice when new CPGs are implemented or prospective wherein investigators are aiming to assess specific interventions to optimize CPG diffusion.

The National Center for Patient Safety has identified the following areas of focus based on review of the VHA Long Range Planning Framework (FY2022-2025):

- Community Care and Patient Safety (MISSION ACT) e.g., handoffs in care, delays in care/treatment, missed diagnoses
- Falls and fall injury prevention; prevention of hospital acquired infections; medication errors and medication deprescribing
- Suicide prevention
- Reducing preventable harm to Veterans using the HRO model.

Health Care Value

Also See Policy Science: Point of Contact: Dr. Amanda Borsky (<u>Amanda.Borsky@va.gov</u>)

The National Academy of Medicine has developed a widely accepted approach that describes high-value health care as: safe, timely, effective, efficient, equitable and patient-centered (STEEEP). See <u>Value in Health</u> <u>Care</u> and <u>IOM</u>: <u>Value and Science-Driven Health Care</u> for more information. While there is substantial research identifying healthcare practices that do not provide high value – due to combinations of high costs and minimal or no benefit – there is much less research defining strategies to reduce the use of low value services or increase the overall value of care. Furthermore, strategies that work to reduce costs in fee-for-service systems may not work in healthcare systems such as VA with a fixed budget and high fixed costs. Proposals need to have input from decisionmakers who would act on information and endorsement of how information could be actionable by demonstrating engagement by the person/role/office that would act on it (e.g., VISN Director, Office of Integrated Veteran Care, etc.)

HSR is especially interested in the following research areas:

- Validating and implementing measures of health and health care value from multiple perspectives (patient, provider, clinical team or organization, VA health system, etc.)
- Health care interventions or policies that improve value of Veteran health care and social services
- Comparative studies of health care interventions on relative value from multi-stakeholder perspectives
- Strategies for de-implementing low-value interventions or other ineffective health care practices.
- Strategies to manage the costs of high-cost interventions including new pharmaceuticals and technologies.
- Strategies that encourage the uptake of high-value care, including preventive care

Investigators are strongly encouraged to contact the <u>Health Economics Resource Center (HERC) (va.gov)</u> and <u>Partnered Evidence-Based Policy Resource Center Home (va.gov)</u> for more information on measuring health care cost and value.

An emerging Program Office partner in the Value space is <u>the Center for Care and Payment Innovation</u> (CCPI), which was established under the MISSION Act (Sect. 152) in 2018 to identify and test new financial and service delivery models. The MISSION Act further authorizes the VA, subject to Congressional approval via joint resolution, to waive statutes and regulations that govern Veterans' benefits related to hospital, nursing home, domiciliary, and medical care in order to test care and payment innovations. CCPI promotes value at VA by piloting innovations in payment, care, and business operations to improve Veteran care and well-being, leveraging its unique waiver authority as needed. CCPI is currently developing strategies to:

- Align VA care to quality, outcomes, and cost
- Model current resources to unlock capabilities and meet unmet patient demand
- Support field training towards Veteran-centric care: organize around patient's care journeys
- Pilot test strategies to optimize outcomes per unit cost