



Health Services Research and Development Research Priorities (Updated September 2021)

HSR&D's mission is to advance knowledge and promote innovations to improve the health and care of Veterans and the nation. HSR&D funds studies that examine the organization, financing, management, and social factors of health care and their effects on the quality, safety, equity, cost, access, and outcomes of the health care provided to Veterans. The HSR&D purview includes studies about health care services and health care delivery models that are available or feasible in regular clinical settings. The “laboratory” for VA health services research studies is the real world of Veterans Health Administration, and its 180 hospitals, over 1000 clinics, long-term care facilities, as well as the multiple services paid for by the VA but delivered outside of our system. The national scope of the VHA provides several unique advantages to VA health services researchers: they can use natural variation across the system to uncover factors influencing quality, safety and costs; they can test interventions in multiple different settings under “real world” conditions; they can study the process of taking new innovations to scale; and they can take advantage of more than two decades of rich clinical data on the 9 million patients enrolled in VA. Health services research in the VA also benefits from inputs from a broad array of stakeholders and end-users, including Veterans, their caregivers, frontline providers/clinical managers, and health care leaders, to ensure that the research is patient-centered, aligned with health care priorities, and practical to implement in real-world practice.

The VA Office of Research and Development (ORD) Health Services Research and Development (HSR&D) program announces **updated research priorities** effective September 2021 for its investigator-initiated Parent RFA and other funding mechanisms. The updated priority areas are in response to the changing VA health care system and the changing needs of Veterans. They also reflect current events that are affecting health care in general and VA care in particular, including: 1) rapid growth of new technologies (e.g., virtual care, mobile health) enabling care delivery outside the clinic walls; 2) increased desire from patients and families to be involved in health care decisions; 3) increased awareness of the role social determinants play in health and health equity; 4) greater demand from health care leaders to show how research leads to rapid quality improvement, and 5) changing laws and policies regulating health care, and the challenge of making these policies work at the provider and clinic levels (See Figure 1).

Several cross-cutting principles inform the priorities of HSRD:

- 1) Questions should be informed by existing VHA data and research should be targeted at demonstrated priority areas for improvement, including those affecting selected sub-populations or regions.
- 2) Gaps in care can be due to: a) insufficient knowledge about effective practices, b) difficulty implementing those practices, or c) organizational barriers that make execution difficult (e.g., hiring). Research approaches need to be specific to what

- we know about the underlying problem.
- 3) Solutions should be able to be integrated as much as possible into existing care, rather than depending on new personnel and new resources. A plan for sustainment should be part of any intervention requiring new commitments of staff or resources.
 - 4) Few veterans have only one chronic disease. Approaches to improving care should support the coordination and integration of care for Veterans and the role of the PACT team rather than building new interventions around single diseases.
 - 5) HSRD uses several mechanisms to continually update the state of research in specific areas and to highlight priorities for research. The Evidence Synthesis Program addresses evidence and evidence gaps concerning specific clinical questions nominated by partners. The annual HSR&D State of the Art (SOTA) Conferences examines the evidence in a broader clinical priority area (for example, non-opioid therapies for chronic musculoskeletal pain), in association with clinical partners. Research recommendations from each SOTA are published and incorporated into new solicitations. Finally, in 2019 HSR&D established 4 Consortia of Research (CORES) – in suicide, pain/opioids, connected care, and access – that are responsible for building partnerships with clinical stakeholders, conducting an inventory of current research, identifying priority research gaps, and building a collaborative network of researchers to address those gaps.

VA as a Learning Health Care System As in other U.S. health care systems and as articulated in recent reports on VHA health care, including recent U.S. [Government Accountability Office](#) reports, the U.S. health care system is changing, and health services researchers must respond to the changing needs of VA, one of the largest single providers of health care in the U.S., as well as the changing needs of Veterans (e.g., [Atkins et al, 2018](#)).

Two related sets of principles are guiding the evolution of VA healthcare, those of the **Learning Healthcare System** and of the **High Reliability Organization**. A **Learning Health Care System** is defined by the [National Academy of Medicine Future of Health Services Research report](#) as the process by which “clinical informatics, incentives, and culture are aligned to promote continuous improvement and innovation, with best practices seamlessly embedded in the delivery process and new knowledge captured as an integral by-product of the delivery experience.” **High-reliability Health Care Organizations (HRO)** 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 ([Weick & Sutcliffe, 2015](#)). Detailed information and resources are available on the VA SharePoint link to HROs: [HRO SharePoint](#). For further background on research related to HROs, see the HSR&D Evidence Synthesis Program recent report: [ESP report-HRO](#). Health services research can be an essential part of both frameworks, by improving our ability to turn data into knowledge, by advancing our ability to implement knowledge into change, and by studying the ways a complex organization can support a culture of open communication, awareness, and resilience to detect and prevent potential quality problems.

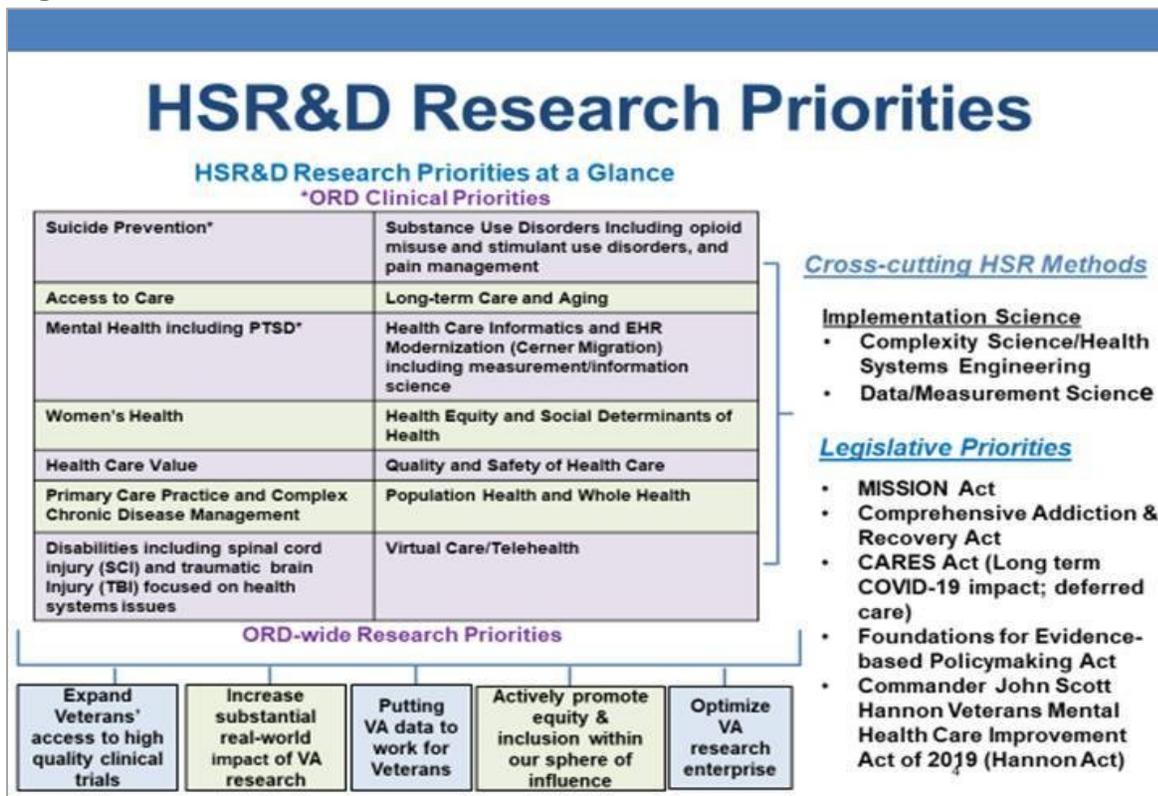
A) HSR&D Research Priorities

The following sections outline the research priorities for HSR&D program applications. NOTE:

information about HSR&D's RFAs and application instructions can be found at: [HSR&D RFAs](#).

Priority areas for HSR&D fall into three broad categories: A) priority areas identified by VHA/ORD based on the health care needs of Veterans; B) health services priorities related to current policy, changes in VA or key legislation; and C) priorities for advancing health services research methods, especially in areas that cut across conditions or care settings. Details about each of these priority areas is described below. HSR&D highly encourages research that addresses at least one of the priority areas and addresses more than one where appropriate (for example, a study using new health services research methods to examine a clinical priority area or to evaluate the impact of legislation). Figure 1 summarizes the current research priorities for HSR&D.

Figure 1. HSR&D/VHA Veterans Healthcare Research Priorities



Suicide Prevention (Point of Contact: Dr. Robert O'Brien (robert.o'brien2@va.gov))

HSR&D encourages effectiveness and implementation studies that focus on developing, improving and disseminating evidence-based practices that will prevent suicide among Veterans. These may include population-based, individual-based, and system level studies that improve identification and engagement of Veterans at risk, examine and improve the delivery of suicide prevention interventions and strategies, while drawing from the perspectives of patients, caregivers, providers, and managers, as well as from the relevant datasets available for this purpose.

Currently, HSR&D/ORD has been partnering with the Office of Mental Health and Suicide Prevention on a number of activities related to the Commander John Scott Hannon Veterans Mental Health Care Improvement Act. Signed into law on October 17, 2020, the Act will advance

the efforts by VA, other Federal partners, and local communities in preventing suicide and promoting mental health and well-being among Veterans. In the short term, the Act will strengthen VA's mental health workforce to serve more Veterans and improve rural Veterans' access to mental health care through VA telehealth services. In the long term, the Act will enable VA to research causes of mental health issues to identify, improve, and expand mental health treatment protocols. In addition, HSR&D is collaborating with various external partners such as DoD, NIH and other external funding agencies in these areas.

For additional information related to suicide prevention, refer to SPRINT (Suicide Prevention Research Impact NeTwork) CORE (COnsortium of Research): [SPRINT](#). VA's Evidence Synthesis Program (ESP) in partnership with CIVIC (Center for Improving Veteran Involvement in Care) also has prepared a compendium of Systematic Reviews of Suicide Prevention Topics: [Compendium of Suicide Prevention Topics](#).

Access to Care (Point of Contact: Dr. Stephen Marcus (stephen.marcus@va.gov))

Ensuring timely access to high-quality and appropriate care is fundamental to the VA's mission. Historically, the VA has defined access as an individual's ability to obtain the health care they need within an appropriate time frame. A more recent access model highlights 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 to 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 healthcare 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 in the Digital Age and accounts for the digital connectivity that enables synchronous and asynchronous communications between patients and providers. For general information regarding access to care, refer to the Access CORE website: [Access CORE](#) and the Evidence-based Synthesis Program report on access [ESP report-Access](#).

The VA has implemented several programs (including those responsive to the CHOICE Act and recently, the MISSION Act) to improve access by increasing opportunities to obtain health care in the community. HSR&D is committed to supporting a comprehensive program of research related to the implementation of key components of the MISSION Act (novel research to enhance access to care for Veterans in VA as well as non-VA settings), as well as other issues relevant to improving access to health care. For additional information related to HSR&D priorities in the area of access to healthcare related to the Mission Act, please refer to [MISSION Act](#).

Mental Health including PTSD (Point of Contact: Dr. Robert O'Brien (robert.o'brien2@va.gov))

Given the high prevalence among Veterans, mental health is a high priority research area for HSR&D. Mental health supported by HSR&D primarily focuses on research targeting PTSD, depression, suicide, and serious mental illness, as well as substance/alcohol use disorders and smoking cessation. HSR&D also 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 evidenced based practices/medications. HSR&D is less interested in studies that focus on single sites or narrowly

target specific mental health conditions (e.g. CBT for depression). HSR&D also supports research specifically addressing the knowledge and programmatic needs of the Office of Mental Health and Suicide Prevention ([OMHSP](#)).

PTSD is one of the most common psychiatric sequelae of war, and rates among military Veterans returning from deployments in Iraq and Afghanistan are much higher (20%) than that found in the general population. Currently, about 400,000 Veterans enrolled in VA are diagnosed with PTSD. Those who suffer from PTSD often have diminished functioning and a poorer quality of life as evidenced by elevated rates of suicide, hospital admissions, poverty, and unemployment. Although there are treatments available that have demonstrated effectiveness among individuals with diagnosed PTSD, many people who have PTSD may not be diagnosed and many who are diagnosed do not pursue mental health treatment. Of those who do seek treatment, prolonged delays are common. Examples of interest areas for HSR&D related to PTSD research include:

- Interventions to increase the engagement and retention of Veterans in evidence-based therapies.
- Studies of optimal care for PTSD outside of mental health settings, especially in primary care as well as care in underserved areas
- Use of virtual care or e-health technologies to enhance access to evidence-based psychotherapies
- Optimal combinations of psychosocial and pharmacologic treatments for PTSD, including treatment response across different Veteran populations, the use of sequential multiple assignment randomized trials (SMART) or similar adaptive designs, and
- Incorporation of patient preferences and caregiver support for Veterans living with PTSD.

Women's Health (Point of Contact: Dr. Robert O'Brien (robert.o'brien2@va.gov))

Research on women Veterans' health has expanded in recent years in its breadth and depth. Historically, the majority of research among women Veterans was focused on mental health conditions, chiefly in the areas of posttraumatic stress disorder (PTSD) and the consequences of military exposures, including military sexual trauma. Now, efforts to build a broader and stronger evidence base across the lifespan have yielded new research on primary care and prevention, reproductive health, access/rural health, suicide prevention, intimate partner violence, the care for complex chronic conditions, and the long term care needs of older women Veterans. Deployment and post-deployment health research is a major portion of the VA women's health research portfolio, extending knowledge into the health and healthcare needs of women who served on active duty during Operations Enduring Freedom, Iraqi Freedom and New Dawn (OEF/OIF/OND), as well as women still in active duty service. For information related to ongoing initiatives to accelerate women Veterans' healthcare research, please refer to:

- VA Women's Health Research Network: [VA Women's Health Research Network](#)
- The Women Veterans Healthcare CREATE: [CREATE](#),
- EMPOWER Quality Enhancement Research Initiative (QUERI): [EMPOWER](#)
- Office of Patient Care Services: [Women's Health Services](#)
- Office of Mental Health and Suicide Prevention: [Mental Health and Suicide Prevention](#)
- VA's Office of Patient-Centered Care and Cultural Transformation: [Partnered Evaluations](#)
- National Center for PTSD: [PTSD](#)
- NIH Office of Research on Women's Health: [NIH Women's Health](#)

Health Care Value (Point of Contact: Dr. Stephen Marcus (stephen.marcus@va.gov))

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): [Value in Health Care](#) and [IOM: Value and Science-Driven Health Care](#)

The following is a sample of research areas that HSR&D is especially interested:

- Validation and implementation of 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 enhance health of Veterans
- Critical studies of health care interventions on their relative value from multi-stakeholder perspectives, and
- Strategies focused on de-implementation of low-value interventions or other health care practices

Primary Care Practice and Complex Chronic Disease Management (Point of Contact: Dr. Cathie Plouzek (cathie.plouzek@va.gov))

HSR&D primary care and care of complex chronic conditions priorities include the full continuum of health care from health promotion, disease prevention, diagnostics, therapeutic and rehabilitative to recovery and palliative care using innovative approaches and technologies through interdisciplinary collaborations both within and outside VHA. HSR&D assumes the VA priority of a whole health approach, and has utilized a PACT (Patient Aligned Care Team) model that assists in transforming Veterans' care by providing patient-driven, proactive, personalized, team-based care resulting in improvements in Veteran satisfaction, improved healthcare outcomes, and costs. This approach focuses on treatment, self-empowerment, self-healing, self-care, and improving social determinants of health. VA aims to improve Veteran health outcomes by shifting from a system focused on disease management to one based on partnering with Veterans throughout their lives and focused on whole health. VA will stress preventive interventions for healthy Veterans that eliminate or significantly reduce conditions that impair Veteran quality of life, such as diabetes, obesity, chronic pain, addiction, chronic kidney disease, and other similar conditions. This includes incorporating complementary and integrative health care practices to reduce addiction, manage chronic pain, and improve mental health and other conditions that respond well to these interventions as part of [VA's Strategic Plan](#). In addition, HSRD *prioritizes high quality health care by enhancing ways to improved provider and staff morale (e.g., low/high burnout, job satisfaction, or turnover rates) which is a priority for HSR&D* ([Rubenstein et al, 2019](#)).

Disabilities related to Military Exposure including Spinal Cord Injury (SCI) and Traumatic Brain Injury (TBI) (Point of Contact: Dr. Robert O'Brien (robert.o'brien2@va.gov))

HSR&D disability research addresses health system, facility level, and broad health policy considerations as well as access, equity, mental health care, population health that includes Veteran caregiver and family issues, and non-VA community services such as care provided in the Veterans' home or by Long-term Social Support providers. HSR&D is also interested in coordination of community health services with VA and their costs as well as biopsychosocial factors that affect outcomes and their variability.

TBI accounts for a significant portion of combat casualties from the ongoing conflicts in

Afghanistan and Iraq. Concussive or mild TBI (mTBI) is the most common form of combat-related injury, which can occur even in those not directly hit by a blast, without obvious external injuries, and without loss of consciousness. Problems with memory, lack of concentration, increased anxiety and irritability are common hallmarks of mTBI. In addition to mTBI, service men and women close to blasts experience severe injuries. Those with moderate to severe TBI can have persistent difficulties in executive function, sensory difficulties, and emotional disturbances, resulting in permanent difficulties with memory, reasoning, emotion, and expression making it difficult to hold steady employment or regain pre-injury quality of life.

HSR&D is also interested in studies related to the specific impact of 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 in-patient 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 the VA and from outside the VA for multi-symptom illnesses and for other diagnosed and unusual health conditions they have. The VA is especially interested in studies that can provide comparisons of care patterns in Gulf War Veterans relative to other Veterans with comparable conditions or needs, and the impact of such care on Veteran outcomes and care experience.

Substance use/misuse, including Opioid Misuse and Stimulant Use Disorders, and their impact on Chronic Pain Management (Points of Contact: (Dr. Maciej Gonek (Maciej.Gonek@va.gov) and Dr. Robert O'Brien (robert.o'brien2@va.gov))

Priorities for research on opioid use/misuse and the treatment of opioid use disorder are highlighted in a current service-directed research solicitation ([RFA-Opioid Safety and Opioid Use Disorder](#)). HSR&D is also interested in funding studies related to opioid misuse and their impact on chronic pain management. Veterans with combat-related injuries often have unique mental and physical comorbidities that exacerbate their risk for the development of chronic pain and/or opioid use disorder (OUD). HSR&D aims to fund studies that focus on developing and implementing effective clinical practices for opioid prescribing, for long-term opioid therapy and tapering, and for treating veterans with OUD. Beyond opioids-related projects, studies examining and developing pain management strategies are vital to care for Veterans in pain including complimentary and integrative health, psychological interventions, exercise and movement, and development of non-opioid pharmacological treatments. Our research program aims to fund studies to support Veterans with pain, Veterans with opioid use disorder, and Veterans with co-occurring pain and OUD.

Stimulant overdoses in the Veteran population also have increased substantially over the past few years yet we do not have a clear idea of what is driving this trend. We aim to fund health services research that will examine the cause of the increase in stimulant use disorder and overdoses with the goal of identifying mechanisms to address it. These research studies aim to improve the understanding and prediction of the development of stimulant use disorder and stimulant overdose risk, develop and evaluate new and existing models for implementation of contingency management programs for stimulant use disorder, or examine existing education and monitoring practices in place for opioid safety efforts to see if they may be leveraged to reduce stimulant overdose risk, among other research questions.

Long Term Care and Aging (Point of Contact: Dr. Lynne Padgett (Lynne.Padgett@va.gov))

The population of Veterans is aging, with the median age for male Veterans at 65, and 51

for female Veterans in 2017. It is essential to ensure that VA health services are providing the best possible clinical outcomes as well as quality of life for older veterans living in VA community living centers (CLCs), in contract facilities and in the 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 ([Ramchand et al, 2014](#)). Innovative research is needed to examine care for older Veterans in non-institutional settings such as Medical Foster Homes, Residential Care Programs, or other community facilities (e.g. adult homes, assisted living facilities) and whether enhanced care can allow more aging veterans to stay at home as they age. Research on how the process of aging affects needed care, and the ability to self-care, is needed. 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, coordination of clinical consultation across multiple sites, specialty care, durable medical equipment, prosthetic care, oxygen services and customizing Veteran homes for easier ADL care are all driving the changing focus of VA delivered 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 the comprehensive family assistance to caregivers under the MISSION Act ([MISSION Act](#)). For more details, see *VA Maintaining Systems & Strengthening Integrated Outside Networks* [Strategic Plan](#).

Health Care Informatics and EHR Modernization (Cerner Migration) including Measurement/Informatics Science (Point of Contact: Dr. Kevin Chaney (Kevin.Chaney1@va.gov))

Putting VA Data to Work for Veterans

A major advantage of VA research is the robust set of clinical data that are available to researchers through over two decades of electronic health record data. Numerous data sets are incorporated into the VA Corporate Data Warehouse, and into the research repository on VINCI. Other important sources of data exist outside of VHA, including data from VBA, Medicare claims, geographic information systems, census data, wearable devices, social media, among others. HSR&D research is interested in proposals that apply novel informatics methods to VA data or use novel data sources for new insights. Potential types of research studies under this methods area include the use of machine learning, natural language processing, and artificial intelligence to more accurately diagnosis health conditions, predict clinical and population health outcomes, especially using data sources beyond administrative data, including electronic medical record, mobile health, e-health/web-based data, wearable devices, genomics data, and population health determinants data. We encourage studies that also involve innovative methods to capture patient and provider experience (e.g., burnout) and patient-reported outcomes, as well as data on quality of care from non-VA settings.

Electronic Health Record (Cerner) Modernization: VHA is undergoing a transition in electronic health records not seen in decades. As in settings outside the VA, adoption of new electronic medical record formats has substantial impact on clinician workflows and information sharing and will also bring forth the potential to use novel tools to enhance patient care coordination, quality, and safety. With the VHA's electronic medical records transformation on the horizon over a 10-15-year period, health services researchers have unprecedented opportunity to study how the transition to a new EHR impacts not only traditional health services outcomes.

The following topics have special needs for timely research on EHRM. In pursuing many of these areas, it is desirable to partner with clinical or operations-based offices and VAMCs where "go live" with the initial capability set is expected to take place late 2020 or early 2021. Applicants are encouraged to reach out to and collaborate with the Coordinating Hub to Promote Research Optimizing Veteran-centric EHR Networks (PROVEN): [PROVEN](#).

1. **Access to care.** Including many dimensions of Access such as specialty, time, place, and care modality (e.g., e-consultation), and effects of appointment scheduling.
2. **Usage, attitudes, and experiences.** Responses, attitudes, and challenges experienced by users and implementers, effective EHR user support, how to foster patient-centered care.
3. **Human factors.** How useful, usable, and learnable are the systems that are emerging through EHRM? Patient safety, burnout, cognitive load, and cognitive function.
4. **Electronic professional communication.** How are professionals interacting with each other via the EHR, inside and outside VA, in teamwork and consultations?
5. **Data quality.** How well is the EHR capturing, with validity and reliability, important factors in care? Extractability and analyzability of data, backward compatibility with legacy programs.
6. **Visualization, alerts, decision-making, and decision support.** How have visualization of data, alerts, and medical decision-making, changed with EHR modernization, and what are the outcomes?

Outcomes of interest may include measures of any of the following: access to analyzable data, access to care, access to clinically usable data, activities in coordination and communication of care, dissemination and adoption of EHR-related practices, effect of clinical decision support, follow-up of diagnostic testing, medical errors, patient engagement, referrals and consultations, safe prescribing of medications, satisfaction, specific dimensions of quality, system interoperability, time and efficiency, tracking of tasks, turnover of clinicians, and usability.

Health Equity and Social Determinants of Health (Aligns with ORD Priority: Promotion of Equity within VA) -Points of Contact: (Dr. Robert O'Brien (robert.o'brien2@va.gov) and Dr. Naomi Tomoyasu (Naomi.Tomoyasu@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 are "conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks." 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. 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&D strongly 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.

NOTE: Priorities for research on the social determinants of health are also highlighted in a current service-directed research solicitation: [RFA-Social Determinants of Health](#).

Quality and Safety of Health Care (Point of Contact: Dr. Cathie Plouzek (cathie.plouzek@va.gov))

Working with key operational partners, HSR&D prioritizes evidence-based research that addresses existing gaps in identifying and/or implementing approaches to increasing safety, reducing errors, and promoting continuous quality improvement for Veterans and the VA healthcare system. HSR&D supports various research in these areas including effective de-implementation strategies to reduce diagnostics and therapeutics that are ineffective, contraindicated, or of low value to Veterans, as well as research related to hospital acquired infection control. HSR&D also encourages research involving systems redesign in health care that optimizes the delivery of care from primary care, the emergency department, acute care and transitions post-discharge to improve the quality, efficiency and 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 more recently, in developing effective treatment and prevention approaches that address the impact of COVID-19 on the quality and safety of care provided to Veterans and providers (e.g. infection control, long term sequelae of COVID-19, deferred non-COVID care) through the CARES Act.

For more information on approaches to delivering quality and safe care, refer to: [Health Care Excellence](#).

For specific information on de-implementation of low value care, refer to: [Improving Safety and Quality](#).

For general information on the MISSION Act, refer to: [MISSION Act](#).

For information on the CARES (Coronavirus Aid, Relief, and Economic Security) Act, refer to: [CARES Act](#).

Whole Health and Population Health (Point of Contact: Dr. Stephen Marcus (Stephen.Marcus@va.gov))

For the past 6 years, the US Department of Veterans Affairs has been promoting patient-centered care through the implementation of a Whole Health approach ([Whole Health](#)). 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; it focuses 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.

A few examples of areas for future research include: the impact 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 these components of care in different VA healthcare settings and to examine the effect of whole health services on employee health and well-being.

Virtual Care/Telehealth (Point of Contact: Dr. Kevin Chaney (Kevin.Chaney1@va.gov))

VHA has adopted virtual care (VC) technologies to support health care delivery earlier and more widely than any other health system, yet evidence has lagged regarding how best to implement such technologies, their impacts on care, and the associated experiences of Veterans and clinical team members. Applicants pursuing Virtual Care research topics are encouraged to reach out to and collaborate with [Virtual Care Consortium of Research \(CORE\)](#).

Research topics under the Virtual Care priority include but are not limited to:

1. Build evidence on emergent virtual care modalities (including mobile apps, VA Video Connect, VA Health Chat, and text messaging)
2. 'Develop a set of standardized outcomes to monitor and evaluate the implementation of the Virtual Care model in pilot sites and nationwide
3. Determine how to effectively implement and integrate virtual care technologies (including VA loaned tablets, mobile apps and/or patient generated data, VA Video Connect, VA Health Chat, and text messaging) into routine clinical operations across all service lines and under the EHR modernization efforts, including harms of telehealth.
4. Examine how virtual modalities can augment care coordination, including development of an algorithm to optimize workflow, clinical applications, and patient experience.
5. Develop the evidence for the use of virtual modalities in the setting of a disaster or emergency.
6. Test different implementation strategies to increase the uptake of virtual care by providers and patients and integrate virtual care technologies in patient care.
7. Build knowledge about costs and value of integrating/incorporating virtual care technologies in patients care.

B) Cross-cutting HSR Methods

Priorities for advancing health services research methods in areas that cut across conditions or care settings (Point of Contact: Dr. Amy Kilbourne (amy.kilbourne@va.gov))

Implementation science is the scientific study of the use of strategies 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. Moreover, barriers to implementation are attributed to a lack of capacity in designing interventions to be implemented in routine practice (see [Brownson et al, 2013](#); [Proctor et al, 2011](#)), lack of efficiency in use of existing staffing or resources, and/or lack of deep understanding of the interactions across providers and between patients and providers.

HSR&D is especially interested in the development and testing of different implementation strategies that are highly specified, theory-based methods used to improve uptake of effective practices, or in some cases, de-implement ineffective or low-value treatments. 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 that demonstrate real uptake of effective practices in routine care. Particular consideration will be given to hybrid designs involving development and testing of innovative implementation strategies that help close the gap between research and practice, particularly for underserved health care settings (e.g., limited exposure to research studies or lower published quality of care), to ultimately increase the substantial real-world impact of research.

Innovative use of pragmatic trial designs, hybrid effectiveness-implementation designs ([Curran et al, 2012](#)), stepped-wedge or similar designs, as well as adaptive or sequential multiple assignment randomized trial (SMART) designs is also highly encouraged. Studies involving the testing of implementation strategies should also specify how fidelity to the effective practice is measured, as well as how the cost of implementation will be estimated. For more information visit the VA Quality Enhancement Research Initiative ([QUERI](#)) program and QUERI Center for Evaluation and Implementation Resources ([CEIR](#)).

Complexity Science and Health Systems Engineering (Point of Contact: Dr. Stephen Marcus (stephen.marcus@va.gov))

There has been a growing interest in applying approaches and tools from Health Systems Engineering (HSE) and Complexity Science to solve many healthcare problems in the VA. Health systems engineering/engineering systems (HSE) views healthcare as a complex adaptive system and applies the principles and methods of complexity science to achieve its goals. 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. 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 inform optimization of health care services in post-deployment care, community care, care transitions, and other situations that cross health system/community boundaries. VA national programs, notably the Veterans Engineering Resource Center (VERC), National Center on Patient Safety, and Product Effectiveness offices apply HSE concepts to day-to-day VA practice. Further research is needed to apply existing and develop and test new conceptual frameworks and methods from complexity science and modeling and simulation approaches from HSE to the VA health care setting, with the hope to generalize successful models and approaches.

C) Health services priorities related to current policy or key legislation

HSR&D highly encourages research that is focused on major national legislative initiatives affecting Veteran care: notably the MISSION Act, CARA, the CARES Act, and Foundations for Evidence-based Policymaking Act.

Mission Act (Point of Contact: Dr. Stephen Marcus (stephen.marcus@va.gov))

HSR&D strongly encourages research that addresses key provisions of the *VA Maintaining Systems & Strengthening Integrated Outside Networks (MISSION Act)* notably with a focus on community care program implementation, including the coordination of VA and non-VA care, virtual care (e.g., telemedicine), use of value-based payment models, enhancing access to and quality of care in VA medical service lines, and improving access to and quality of care in medically underserved areas.

With the implementation of the MISSION Act, Veterans are being given more options for where to receive care, and more care is being delivered in the community outside the VA Healthcare System.

For general information on the MISSION Act, and specific priority areas within Titles I and Title 4 supported by VHA operations leaders please refer to: [MISSION Act](#).

Comprehensive Addiction and Recovery Act (CARA) (Points of Contact: Dr. Robert O'Brien (Robert.Obrien2@va.gov)). Passed in 2016, the Comprehensive Addiction and Recovery Act ([CARA](#)) emphasizes research on prevention and treatment for opioid use disorder and pain, including the feasibility, safety, long-term efficacy, and implementation of these programs. The following is a sample of priority areas of interests to HSR&D:

- VA and non-VA care coordination for pain management, including innovative strategies to enhance uptake of prescription monitoring (Prescription Drug Monitoring Program, also in the MISSION Act) and guideline-based pain care in the community, particularly for tracking opioid and polypharmacy prescribing among VA and non-VA providers
- Testing and/or implementing theory-driven patient-centered interventions that apply collaborative care models, health behavioral change techniques and complementary and integrative health best practices for chronic pain/opioid use.
- De-implementation of problematic prescribing practices by PCPs and within VA facilities.
- Comparisons of alternative strategies for medication-assisted treatment (MAT), including novel ways to expand access to MAT.
- Treatment of long-term opioid users, including tapering regimens, detection and management of underlying opioid use disorders (OUD), management of co-existing pain and OUD. Assessing the efficacy, the acceptance and use of the VA/DoD clinical practice guidelines (CPGs) for treating pain in PC
- Studying safety and efficacy issues related to long-term opioid therapy among aging Veterans and Veterans with mental health (non-pain) conditions, including issues related to polypharmacy (e.g., benzodiazepines and opioids, SSRIs/SNRIs and opioids, etc.)
- Improving access through innovative virtual technologies including implementation of

telehealth and other virtual services for pain/opioid management for Veterans, especially in rural areas.

CARES (Coronavirus Aid, Relief, and Economic Security) Act: (Point of Contact: Dr. Maciej Gonek (Maciej.Gonek@va.gov))

In March 2020, the \$2 trillion stimulus Coronavirus Aid, Relief, and Economic Security Act ([CARES Act](#)) was passed to blunt the impact of an economic downturn set in motion by the global coronavirus pandemic. The stimulus plan also addresses both direct and indirect health care needs during the emergency and financing for treatment and prevention. In alignment with goals of the CARES Act, HSR&D is interested in funding projects that examine the process of care and the medical and psychosocial outcomes for suspected and confirmed patients of COVID-19 infection. HSR&D supports projects that may provide short term answers to inform VA policy over the next 1-2 years, as well as long term studies to explore in greater depth the factors that influenced how the COVID-19 epidemic affected Veterans, their families, VA providers and the health system. These include projects that examine the impact of COVID-19 on non-infectious disease outcomes (e.g. care of cardiovascular disease) and the changes in care that have resulted from VA's response to COVID-19. We are interested in studies that both examine "what happened" but also "why it happened". For questions related to specific ideas directly or indirectly related to COVID-19, please consult with Scientific portfolio managers.

Foundations for Evidence-based Policymaking Act of 2018 (Evidence Act, U.S. Public Law 115-435) (Point of Contact: Dr. Amy Kilbourne (Amy.Kilbourne@va.gov))

The Foundations for Evidence-based Policymaking Act of 2018 requires that all cabinet level agencies including the Dept. of Veterans Affairs (VA) ensure their budgets and policies are tied to, supported by, and justified by evidence. Since 2019, HSR&D's Quality Enhancement Research Initiative (QUERI) has coordinated VA Operations response to the Evidence Act and, in concert with the 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), 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&D 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 (peprec@va.gov) or visit: <https://www.congress.gov/bill/115th-congress/house-bill/4174/text?q=%7B%22search%22%3A%5B%22HR+4174%22%5D%7D&r=1&s=3>