



RAND RESEARCH ON
**HEALTH AND
HEALTH CARE**

RAND PROJECT AIR FORCE

The physical and mental health of U.S. service members is critical to their readiness to fight and ability to win. This document highlights recent RAND Corporation research on health and health care that exemplifies RAND’s capabilities to help the Department of the Air Force (DAF) understand, support, and improve the health of its airmen and guardians.

RESEARCH TOPICS

RAND research on health and health care has addressed several topic areas that may be applicable to similar DAF efforts, including

- tracking health care access, health care quality, and wellness
- modeling health system change
- evaluating health and improving health programs
- supporting the health care workforce
- exploring policy options and providing recommendations.

RESEARCH METHODS

RAND staff include more than 600 doctoral-level researchers with expertise in a variety of topics and methods. RAND houses three federally funded research and development centers (FFRDCs) that conduct national defense-related research: the Arroyo Center, which conducts research and analysis for the Army; Project AIR FORCE (PAF), which conducts research and analysis for the Air Force; and the National Defense Research Institute, which conducts research and analysis for all other national security sponsors. These FFRDCs maintain a core set of researchers with specific expertise and knowledge of their respective armed services to help ensure that our research approach fits the U.S. Department of Defense (DoD) context.

In addition, RAND draws on the expertise of researchers in its

Health Care division and its other research divisions to provide a unique multidisciplinary approach to defense-related research. RAND researchers use a variety of methods to carry out military health and health care projects, including

- descriptive analysis of data from administrative databases, medical records, and surveys
- survey design, administration, and analysis
- simulation approaches to model the potential effect of policy changes
- statistical, econometric, and mixed method approaches to evaluate programs
- interviews and focus groups
- literature reviews and document analysis.

ACTIONABLE INFORMATION AND RECOMMENDATIONS

RAND’s research findings are meaningful and actionable for sponsors. To help the DAF improve the health, well-being, and readiness of its airmen and guardians, we describe example publications of RAND research for each research topic that have identified

- threats to readiness posed by health and wellness issues
- options to maintain and improve health care access and quality
- recommendations to improve specific programs, support the health care workforce, and reform health care delivery and financing systems.



TRACKING HEALTH CARE ACCESS, HEALTH CARE QUALITY, AND WELLNESS

RAND has helped the DoD, Air Force, and Army to track health care access, health care quality, and wellness among service members and their families. Projects in this topic area have used a variety of existing data sources, including administrative data, medical records, and surveys. In addition, RAND has administered and analyzed DoD's Health Related Behaviors Survey (HRBS), identified metrics for monitoring force readiness using literature review and interviews with subject-matter experts (SMEs), and developed a new questionnaire to capture barriers and facilitators to accessing mental health care using SME input, field testing, and statistical analysis.

EXAMPLE PUBLICATIONS IN THIS AREA

Quality of Care for PTSD and Depression in the Military Health System: Final Report

RR-1542-OSD; www.rand.org/t/RR1542

Behavioral health problems are widespread in the military and can affect force readiness. RAND has produced a series of reports on the quality of the behavioral health care received by Military Health Service (MHS) patients with posttraumatic stress disorder (PTSD) and depression. This most recent 2017 report presents 15 quality measures based on three data sources: administrative data, medical records, and symptoms reported by patients. The study included 38,828 service members. This report provides recommendations for measuring, monitoring, and improving the quality of care received by MHS patients with PTSD or depression.

2018 Department of Defense Health Related Behaviors Survey (HRBS): Results for the Active Component

RR-4222-OSD; www.rand.org/t/RR4222

RAND administered the 2018 version of the HRBS, DoD's flagship survey for understanding the health, health-related behaviors, and wellness of service members. The analysis included 17,166 survey responses from Air Force, Army, Marine Corps, Navy, and Coast Guard personnel. The authors used state-of-the-art statistical methods to design the survey sample, adjust for missing responses, and improve the generalizability of results. The final report offers observations to help the DAF identify threats to force readiness and highlights policy implications based on survey results. RAND researchers have also analyzed the results of the 2015 version of the HRBS.

Measuring Barriers to Mental Health Care in the Military: The RAND Barriers and Facilitators to Care Item Banks

RR-1762-OSD; www.rand.org/t/RR1762

The authors developed a repository of survey questions and a short survey to help DoD track barriers that prevent service members from seeking mental health care and facilitators that encourage it. To develop the repository, the authors identified preliminary questions through a broad literature scan and a series of SME and service member interviews. The authors then field-tested items on 3,676 service members, analyzed commonalities across responses, and used the results to create the repository and short survey. The final report presents the DAF with options for using these products to collect data, evaluate interventions, and reduce barriers to care.

OTHER EXAMPLE PUBLICATIONS

Readiness of Soldiers and Adult Family Members Who Receive Behavioral Health Care: Identifying Promising Outcome Metrics

RR-4268-A; www.rand.org/t/RR4268

Behavioral Health Care in the Military Health System: Access and Quality for Remote Service Members

RR-2788-OSD; www.rand.org/t/RR2788

Access to Health Care Among TRICARE-Covered Children

RR-A472-1; www.rand.org/t/RRA472-1

MODELING HEALTH SYSTEM CHANGE

Systems for delivering and financing health care are complex, and changes to these systems can have a variety of consequences—including some that are unforeseen. RAND researchers employ advanced simulation methods for modeling the consequences of health policy change. These include RAND Comprehensive Assessment of Reform Efforts (COMPARE), an agent-based microsimulation model that predicts how individuals and employers will respond to state and national health policy changes, and the Health Care Payment and Delivery Simulation Model, which predicts how providers will respond to such policy changes. RAND researchers have used simulation methods to help the DAF understand the potential effects of national health reform on the Military Health System and to model the effects of expanding insurance coverage and reducing hospital prices on civilian health care systems.

EXAMPLE PUBLICATIONS IN THIS AREA

The Impact of Health Reform on Purchased Care Access: National Health Reform and Modernization of the Military Health System Study

RR-1627-OSD; www.rand.org/t/RR1627

The authors examined how the influx of civilian patients who received health care coverage through the Affordable Care Act (ACA) could affect access to care for TRICARE. Using data from RAND COMPARE, as well as from the Defense Health Agency and public sources, the authors simulated the ACA's effect on TRICARE patients' access to different kinds of physicians and created visual maps of U.S. counties where civilian physicians would be most likely to substitute civilian patients for TRICARE patients. The final report presents a variety of policy options that the DAF could use to mitigate TRICARE purchased care access issues.

Public Options for Individual Health Insurance: Assessing the Effects of Four Public Option Alternatives

RR-3153-WCG; www.rand.org/t/RR3153

In recent years, state and federal policymakers have expressed interest in a “public option”—an insurance plan run or overseen by the government—as a tool to increase health care coverage. The authors used a microsimulation approach to estimate the effect of four public option designs on overall insurance coverage, enrollment in ACA's individual insurance market, and premiums for individual market enrollees. The authors estimated that a public option would likely

result in small enrollment changes and reduced federal spending but would decrease costs for some individuals while increasing costs for others. This final report presents results graphically and discusses policy implications.

Impact of Policy Options for Reducing Hospital Prices Paid by Private Health Plans

RR-A805-1; www.rand.org/t/RRA805-1

Hospital spending is the largest health care spending category in the United States, accounting for one-third of national health care spending. Using data from the RAND Hospital Cost Tool, which makes federal cost report data available in a convenient and well-documented format, the authors estimated the effect of three policy options—regulating hospital prices, increasing price transparency, and increasing hospital competition—on hospital prices and spending. The authors found that price regulation could have the largest impact but could face political challenges and have broader impacts on the health care system.

OTHER EXAMPLE PUBLICATIONS

An Assessment of the New York Health Act: A Single-Payer Option for New York State

RR-2424-NYSHF; www.rand.org/t/RR2424

A Comprehensive Assessment of Four Options for Financing Health Care Delivery in Oregon

RR-1662-OHA; www.rand.org/t/RR1662

EVALUATING HEALTH AND IMPROVING HEALTH PROGRAMS

Across the United States, government and private sector organizations are testing programs to improve health care delivery and control health care costs. RAND offers extensive experience evaluating all aspects of health care programs using a variety of methods, from interviews and focus groups that explore health care processes to statistical analyses that identify a program's effects on desired outcomes. Projects in this area include a set of targeted interviews aimed at understanding the military's use of telehealth in response to the coronavirus disease 2019 (COVID-19) pandemic to a mixed-methods evaluation of a federal demonstration that involved more than 500 federally qualified health centers.

EXAMPLE PUBLICATIONS IN THIS AREA

A Process Evaluation of Primary Care Behavioral Health Integration in the Military Health System

RR-A677-1; www.rand.org/t/RR677-1

Integration of primary care and behavioral health care can improve behavioral health outcomes by making behavioral health care available in more-accessible settings. The authors evaluated DoD's Psychological Health Center of Excellence's primary care-behavioral health (PCBH) program, which integrates behavioral health care into primary care clinics, and provided recommendations to improve the program. As part of this research, the authors interviewed 61 clinicians and other PCBH personnel at Air Force, Army, and Navy installations and coded interview transcripts to understand the PCBH program. The authors then used this information to develop causal loop diagrams—a tool long used to help solve complex problems in the military—that identified facilitators and barriers to PCBH success. The evaluation report concludes with concrete recommendations for the PCBH program to improve behavioral health care for patients.

Military Behavioral Health Staff Perspectives on Telehealth Following the Onset of the COVID-19 Pandemic

RR-A421-2; www.rand.org/t/RR421-2

The COVID-19 pandemic led to a rapid increase in telehealth use by the MHS. To understand military health care provider experiences with telehealth following the onset of the pandemic and identify barriers to expanding effective telehealth use, the authors interviewed 53 staff who delivered or oversaw behavioral health care at ten military treatment facilities. The authors identified specific technological and organizational barriers to widespread telehealth use, as well as

needs and concerns of patients and providers regarding telehealth. The final report concludes with recommendations for specific training, technology, and guidance that could be provided to meet service members' telehealth needs.

Evaluation of CMS's Federally Qualified Health Center (FQHC) Advanced Primary Care Practice (APCP) Demonstration: Final Report

RR-886/2-CMS; www.rand.org/t/RR886z2

RAND conducted an independent evaluation of the Federally Qualified Health Center (FQHC) Advanced Primary Care Practice Demonstration—an initiative to improve care coordination and patient-centered care in FQHCs—for the Centers for Medicare and Medicaid Services (CMS). The authors used a mixed-method approach to understand the ways in which the demonstration affected FQHC structures and processes, as well as measures of health care access, quality, and cost. The evaluation included statistical analysis of quantitative data on patient characteristics and the services that they received, a beneficiary survey, and interviews with leaders at 20 demonstration sites and ten comparison sites. The authors documented improvements in health care processes and outcomes associated with the demonstration and challenges linked to medical home recognition and remaining areas for improvement.

OTHER EXAMPLE PUBLICATIONS

Primary and Behavioral Health Care Integration Program: Impacts on Health Care Utilization, Cost, and Quality

RR-1601-ASPEC; www.rand.org/t/RR1601

Improving U.S. Military Accession Medical Screening Systems

RR-2780-OSD; www.rand.org/t/RR2780

SUPPORTING THE HEALTH CARE WORKFORCE

The skills, capabilities, and well-being of health care providers underlie the effectiveness of any health care system. RAND projects provide the DAF with actionable recommendations to improve the training and readiness of the military's health care workforce and capture best practices to benefit future health care providers. Example projects in this area focus on learning lessons from the wars in Afghanistan and Iraq, capturing knowledge about amputation rehabilitation, and optimizing the use of behavioral health technicians (BHTs).

EXAMPLE PUBLICATIONS IN THIS AREA

Lessons Learned for Provisioning and Delivering U.S. Military Behavioral Health Care, 2003–2013

RR-A391-1; www.rand.org/t/RR-A391-1

RAND carried out a project to capture lessons learned during the first ten years of U.S. military campaigns in Afghanistan and Iraq that could help prepare future military behavioral health care providers. For this project, the authors identified significant developments in military behavioral health care from 2003 to 2013 through a review of policies, reports, media sources, and academic literature. The authors then selected and interviewed 17 SMEs. These interviews yielded insights on provisioning and delivering military health care that can help guide how the Uniformed Services University of Health Sciences and DoD prepare future behavioral health care providers.

Core Competencies for Amputation Rehabilitation

RR-2898-A; www.rand.org/t/RR2898

When health care providers do not see enough patients, their skills can atrophy. To capture the knowledge, skills, abilities, and best practices developed by DoD and providers who rehabilitated amputation patients after a peak year in 2011, the authors identified services needed for optimal amputation rehabilitation and documented core competencies needed by providers who offer such services. To accomplish this task, the authors reviewed academic and gray literature and interviewed approximately 110 patients, family members, providers, and other SMEs. The final report provides five recommendations on adopting and implementing core competencies and behaviors for amputation rehabilitation in a military health setting.

Understanding Behavioral Health Technicians Within the Military: A Review of Training, Practice, and Professional Development

RR-2649-OSD; www.rand.org/t/RR2649

BHTs are enlisted service members who support licensed mental health providers. They perform a variety of activities, including triage, assessment, counseling, and prevention. The authors assessed the military's use of BHTs and provided actionable recommendations for optimizing their roles. This first report documents the training, roles, and scope of practice of BHTs across military branches. A future report will present information on BHTs' perceptions, their involvement in clinical activities in garrison and while deployed, and ways BHTs could be used more effectively based on a survey of BHTs and licensed mental health providers.

OTHER EXAMPLE PUBLICATIONS

Options for Maintaining Clinical Proficiency During Peacetime

RR-2543-A; www.rand.org/t/RR2543

Delivering Clinical Practice Guideline–Concordant Care for PTSD and Major Depression in Military Treatment Facilities

RR-1692-OSD; www.rand.org/t/RR1692

The Role of Special and Incentive Pays in Retaining Military Mental Health Care Providers

RR-1425-OSD; www.rand.org/t/RR1425

Ready or Not? Assessing the Capacity of New York State Health Care Providers to Meet the Needs of Veterans

RR-2298-NYSHF; www.rand.org/t/RR2298

EXPLORING POLICY OPTIONS AND PROVIDING RECOMMENDATIONS



RAND helps policymakers understand complex systems and explore policy options that can help achieve their objectives. Recent projects in this area include a preliminary feasibility assessment of integrated health care purchasing for DoD and the Department of Veterans Affairs (VA) and a report describing the TRICARE prescription drug benefit and identifying approaches for improving prescription drug access or reducing costs. These reports map the legal and policy landscape that surrounds military health programs and leverage qualitative and quantitative information to identify and evaluate options for improving them.

EXAMPLE PUBLICATIONS IN THIS AREA

Integrating Department of Defense and Department of Veterans Affairs Purchased Care: Preliminary Feasibility Assessment

RR-2762-DHA/VHA; www.rand.org/t/RR2762

DoD and VA operate large federal health systems that serve distinct but sometimes overlapping populations and share some broad similarities. The authors assessed the feasibility of integrating care purchasing across the two systems; determined how an integrated purchasing approach could affect access, quality, and costs; and identified challenges to implementing an integrated purchasing program. To do so, the authors reviewed literature on public and private sector practices for purchasing health care; interviewed representatives of DoD, VA, and third-party administrators and health benefits consulting firms; and gathered additional feedback from representatives of military organizations, veterans service organizations, and congressional oversight committees.

Balancing Access and Cost Control in the TRICARE Prescription Drug Benefit

RR-4445-OSD; www.rand.org/t/RR4445

TRICARE—the military health program—seeks to contain prescription drug spending while ensuring appropriate access to prescription drugs. To help DoD achieve these objectives, the authors of this report describe the TRICARE pharmacy benefit and identify six approaches that TRICARE could use to improve prescription drug access, control costs, or both.

OTHER EXAMPLE PUBLICATIONS

Preparing for the Future of Combat Casualty Care: Opportunities to Refine the Military Health System's Alignment with the National Defense Strategy

RR-A713-1; www.rand.org/t/RAA713-1

Critical Care Surge Response Strategies for the 2020 COVID-19 Outbreak in the United States

RR-A164-1; www.rand.org/t/RAA164-1

WORKING WITH US

WHAT WE DELIVER

PAF's studies and analyses are tailored to the needs of the sponsor. Generally, PAF provides

- continuous interaction with PAF SMEs throughout the project
- accessible, timely, and policy-focused reports that address senior leader concerns and recommend courses of action
- descriptive, transparent, and rigorous supporting materials that describe the project's methodology and support the project's conclusions
- as appropriate, additional outreach materials to help socialize the work to other interested stakeholders, such as the DAF, DoD, Congress, or the public.

SPONSOR IDENTIFICATION

All PAF research projects must be sponsored by a USAF general officer (GO) or member of the senior executive service (SES). Most sponsors assign one or more action officers (AOs) to manage the technical and administrative aspects of their PAF projects.

LINES OF FUNDING

DAF organizations can initiate a PAF research project in two ways:

1. **Centrally Funded** (also referred to as “core projects”). Air Force Studies, Analyses, and Assessments (SAF/SA; formerly HAF/A9) employs a rigorous, iterative, GO/SES voting process to select projects for inclusion in its annual research plan. This process accounts for about 70 percent of the projects that PAF will conduct during a fiscal year. Funding

for these projects is part of a line item in the congressional budget and is awarded through the competitive selection process. Project topics are submitted in January and the research plan is approved by a steering group consisting of three- and four-star GOs between June and July. Maintaining a balance of projects across the DAF and the four PAF programs is key to this selection process.

2. **Sponsor Funded** (also referred to as “add-on projects” because they are add-ons to the core research agenda). This process accounts for about 30 percent of the projects that PAF will conduct during a fiscal year. Funding for these projects comes directly from the organization requesting the research and does not require a competitive selection process because the requesting organization is paying for the research (and not competing with others). DAF sponsors may initiate a PAF add-on research project at any time of the year by requesting the work, submitting required documentation, and transmitting organizational funds. Ideas and requests for PAF add-on projects may originate from a variety of circumstances (e.g., continuation of prior PAF work or new challenges). To initiate the process, a sponsor or AO typically contacts the appropriate PAF program director or SME. The timeline of add-on projects is flexible.

PAF also supports DAF organizations in many informal ways. To request RAND research reports highlighted here or to discuss pressing DAF challenges, contact PAF leadership at www.rand.org/paf/about/pafmanagement.

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