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Commentary

Increasing Rural Veterans' Access to Care Through Research

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Excellence in medical care is a product of research, innovation, and a passion for patient care. Nowhere is that more evident than at the U.S. Department of Veterans Affairs (VA). When a Veteran walks through the door of a VA medical facility it is our responsibility to deliver consistent, high-quality care—regardless of where the Veteran lives. However, in our routine efforts to identify new treatments and deliver existing ones, we sometimes overlook one of our most vulnerable populations: rural Veterans. Their advanced age, comorbidities, and combat-related injuries complicate their care, and when compounded by provider shortages and the simple reality of distance to care, rural Veterans may find themselves at a disadvantage. To the extent that rural Veteran dependency on VA health care continues to grow relative to urban reliance, it is imperative that researchers strengthen their efforts to focus on Secretary Shulkin's priorities of access and modernization to give Veterans "true choice."

It is fair to say that the demographic and health-related characteristics that define "rural" may well be the harbinger for what is to come, and has lessons that will apply to an aging, medically complex, and increasingly reliant *urban* population. Rural to urban dissemination of research and innovation in health care is already happening in VA. The research community knows this, and the partnerships that the Office of Rural Health has with so many of their number bear witness. Nonetheless we need to do more.

The health care of America's 5.2 million rural Veterans is at risk. While 18 percent of the U.S. population lives in rural America, only nine percent of primary care physicians and seven percent of psychologists practice there. In addition, since 2010, 1.2 million rural patients lost access to their nearest hospital—30 of which closed in the past two years alone.

These constraints are amplified when we consider that over half of VA-enrolled rural Veterans are age 65-plus.[1] According to the American Geriatric Society, those over age 65 use a disproportionate percentage of health care services and more than 80 percent require care for chronic conditions such as hypertension, arthritis, and heart disease. Aging rural Veterans, who need health care the most, have the hardest time accessing it.

The Office of Rural Health (ORH) was chartered by Congress in Public Law 109-461 "to work with all personnel and [VA] offices to develop, refine, and promulgate policies, best practices, lessons learned, and innovative and successful programs to improve care and services for [rural] Veterans..." As we look to solve future challenges, ORH has identified significant research gaps in the areas of transportation, rural women's health, and rural mental health services.

For many rural Veterans, simply getting to care is the challenge. An average rural Veteran travels over 30 minutes to receive primary care, and almost 90 minutes to

Director's Letter

The problems of rural America are high in the minds of politicians and policy makers these days. Part of this is due to the role of rural voters in electing Donald Trump, but an even bigger role is the explosion of problems such as opiate abuse and suicide which have been especially devastating in rural areas and smaller towns.[1] The way we think about the health problems of rural Veterans has changed as well. Previously, much of the focus has been on problems of access for Veterans who live farther from major VA medical centers. In response, VA has made great strides in expanding programs to serve distant Veterans, as described in some of the articles in this issue: expansion of community-based outpatient clinics, major investments in telehealth, increasing virtual communication such as secure messaging, and programs like SCAN-ECHO which help train up the abilities of rural and other primary care providers. As VA expands into a world of "Choice" and community partnerships, providing access will increasingly draw on community providers. But truly supporting the needs of rural Veterans must go beyond providing health care access—recent reports from the Centers for Disease Control and Prevention indicate that rural Americans have higher mortality from each of the five leading causes of death—heart disease, cancer, accidental injury, lung disease and stroke.[2] Especially worrisome are the recent rises in what have been termed "deaths from despair"—suicide, drug overdose, and alcoholism. Although rural communities can be tight-knit communities, isolation can also be a problem, especially for individuals struggling with unemployment, mental health issues, or substance abuse. As we take a population health approach, and especially as we tackle suicide, VA will need to focus on how we can more effectively reach out to our Veterans outside of their health encounters—to promote prevention, provide better social support, and to promote connectedness. This will involve partnering with community groups, faith organizations, and other social services, much like what has been done so successfully with homelessness. The solution isn't simple, but the need is compelling.

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Director, HSR&D

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receive specialized care—this is almost two times farther than the average urban Veteran. Telehealth technology alleviates some of the burden for technologically savvy rural Veterans, but long travel distances with limited public transit, income challenges, and inclement weather continue to significantly impact Veterans' ability to seek medical treatment. Further research to address, quite simply, "how do we get rural Veterans to treatment?" is not only necessary, but urgent.

Rural women Veterans face additional challenges because the VA system is underequipped to treat the 180,584 rural women enrolled in VA for care. A study of VA health care data found that rural residents are less likely to receive women-specific health services, but more likely to use primary care, which suggests inequity in the availability of specialized services. ORH works with partners to develop programs that train practitioners on the specific health care needs of women from gynecological health to pregnancy issues to ovarian and cervical cancers. But more gender-specific condition research is needed to expand health care to our rural women Veterans.

If we ever hope to end the plague of Veteran suicide, we must invest more in research and development in rural suicide prevention. We know that of the 1.5 million Veterans that received mental health care in 2015, 435,000 lived in rural areas. These Veterans are more likely to experience depression than their urban counterparts, even after controlling for socioeconomic status and race.[2] Additionally, rural residence by itself is a risk factor for depression among Veterans, even after controlling for mental health care accessibility.[3] Recognizing these risks, ORH initiated research, funded telemental health hubs, and expanded mental health training for clergy based in rural areas in order to combat rates of rural Veteran suicide. To close this perilous health care access gap, more research and development into practical innovations for suicide prevention is critical.

Nobody knows Veterans better than VA. And while we offer care second to none, without new research and innovation, VA will fall short in caring for those who reside in rural communities. We need researchers' help in order to examine issues related to transportation, women's health and suicide prevention, but I have a larger ask. Simply, that more of you consider making rural health care an integral part of your models. Fully one-third of our enrolled population is rural, and rurality may provide unanticipated explanatory power for both rural and urban populations. The cost of inclusion will likely outweigh the unanticipated cost of exclusion, and will just as likely provide clues to the effective dissemination of innovation based on your research. Let's flip the urban to rural paradigm.

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Response to Commentary

Partnered Research to Improve Health of Rural Veterans

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The health and health care of rural Veterans is a major priority for the VA Health Services Research and Development Service (HSR&D). The VA research community has undertaken highly partnered, rigorous work to develop and test innovative implementation strategies that help ensure delivery of evidence-based care for rural Veterans. Indeed, several HSR&D-funded centers, known as Centers of Innovation (COINs), focus on strategies for optimizing care among rural Veterans.

COINs: Optimizing Care for Rural Veterans

The COIN located in Salt Lake City, Utah (Informatics, Decision-Enhancement and Analytic Sciences Center (IDEAS 2.0)) partners with the Veterans Rural Health Resource Center, Western Region, and includes a significant focus on rural health. Recent work from IDEAS 2.0 found that women Veterans in rural areas identified access to local dental, mental health, and gender-specific care options as important health care needs.[1]

The COIN located in West Haven, Connecticut, (Pain Research, Informatics, Multi-morbidities, and Education (PRIME) Center) partners with at least nine VA and non-VA entities. One goal of PRIME is development of strategies that will reduce ethnic, racial, *geographic,* gender- and age-related disparities in access to and delivery of effective pain care. PRIME investigators have examined geographic variations in the use of telementoring as a means to improve pain management for Veterans.[2]

In 2014, HSR&D funded the Collaborative Research to Enhance and Advance Transformation and Excellence (CREATE) Initiative. CREATEs consist of interrelated research projects to produce deliverables and new knowledge that offer a distinct advantage over pursuing individual projects separately. The CREATE hosted by the VA HSR&D COIN (Center for Mental Healthcare and Outcomes Research (CeMHOR)) in North Little Rock, Arkansas focuses on the delivery of high-quality mental health care to rural Veterans. Four projects are in progress in partnership with the VA Office of Mental Health Services, the VISN 16 Mental Health Service Line, and the VA Office of Rural Health. The projects address access to, engagement in, and quality of care through a coordinated set of initiatives that target the community-based outpatient clinic setting. An important preliminary finding from these projects is that rural Veterans include systems of care, and experiences of care and treatment in how they think about access to health care. This finding suggests that these concepts should be considered in future interventions for access to care among rural Veterans.

QUERI: A Strong Commitment to Rural Veterans

Like HSR&D, the VA Quality Enhancement Research Initiative (QUERI) has a strong commitment to partnered projects that improve access to health care for rural Veterans. For example, the Virtual Specialty QUERI is evaluating the use of clinical video-telehealth with home-based cardiac rehabilitation (CR) for Veterans who live far from CR services. Key partners for this initiative include the Office of Rural Health, VA Telehealth Services, and the VA Office of Connected Care. In 2015, QUERI and the VA Office of Rural Health funded a partnered evaluation center known as the National Rural Evaluation Center (NREC). NREC is in the process of conducting a nationwide needs assessment for rural Veterans and examining the relationship between social determinants of health and domains of access to health care.

To understand the barriers to accessing care among rural Veterans, the NREC is conducting geospatial analyses that examine variations in access to care among rural Veterans across the United States. The NREC leveraged existing VA and non-VA data including the Survey of Enrollees (SOE) and the Survey of Healthcare Experiences by Patients (SHEP). To better understand the views of Veterans themselves, NREC investigators have conducted over 200 qualitative interviews with Veterans living in rural areas across the country. Early findings suggest that access to care among rural Veterans is a function of the number of barriers rather than a specific access domain. Interestingly, many Veterans who live in areas with poor geographic access (i.e., living more than 40 miles from VA health care), report that they perceive themselves as having good access to care.

Despite progress through these partnered, innovative projects, the research timeline is a major challenge in conducting highly partnered research that impacts rural health care. It typically takes one to two years to obtain funding for a given project. Once funded, the research project typically takes place over one to three years meaning that, at minimum, three years elapse before the average project has results to share with the clinical and administrative communities. Rural Veterans need real time solutions that move more quickly through this timeline.

Current research initiatives to improve health and health care of rural Veterans are critical and are expected to yield actionable outcomes. However, it is essential that new, innovative funding mechanisms are identified that can enhance partnerships between researchers and VA program.

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Research Highlight

The Virtual Specialty Care QUERI Program: Improving Access to High-Quality Specialty Care for Rural Veterans

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Virtual care teams are groups of clinicians and patients working across time, space, and organizational boundaries using digital modes of communication (e.g., telehealth, ehealth, mhealth, and electronic exchange of health information). The goal of the Virtual Specialty Care (VSC) QUERI is to support operational partners (Office of Rural Health, Office of Connected Care, and Mental Health Services) in the national rollout of promising clinical practices that incorporate virtual care technologies in order to improve access to high-quality specialty care for rural Veterans.

Due to the remote locations of rural Veterans and the rapidly evolving technologies used in interventions designed to better reach them, it is challenging to conduct traditional randomized controlled trials (RCTs) with this population. While the technology could theoretically be "frozen in time" and the effectiveness of the technology-facilitated clinical intervention evaluated using traditional clinical trial methods, the technology would be obsolete by the end of the trial and results would not inform practice, policy or science.[1]

As a result, there are relatively few RCTs that have established a strong evidence base for technology-facilitated clinical interventions designed to improve access and outcomes for rural Veterans. Thus, the challenge for VSC QUERI investigators is to not only develop, evaluate, and refine implementation strategies for promising practices targeting rural Veterans, but also to evaluate the clinical effectiveness of promising practices that incorporate rapidly evolving virtual care technologies. Using hybrid effectiveness-implementation trial designs, VSC QUERI projects simultaneously collect data about the impact of the technology-facilitated intervention on clinical outcomes and data about the impact of the implementation strategy on provider adoption and reach into the rural Veteran population.

The traditional research-to-practice paradigm is founded on the assumption that clinical interventions are optimized and perfected prior to implementation during efficacy and effectiveness RCTs. Clinical interventions are typically standardized with protocols, and implementation efforts focus on maximizing fidelity and minimizing deviations from the intervention protocol during deployment. Alterations to the intervention protocol during deployment are assumed to negatively impact outcomes and are considered "voltage drop."

In stark contrast to the traditional research-to-practice pathway, the VSC QUERI program embraces the philosophy that clinical interventions incorporating virtual care technologies will be constantly evolving and improving over time. The VSC QUERI program is conceptually based on the Dynamic Sustainability Framework, which argues that an intervention can only be optimized through ongoing development, evaluation, and refinement across a variety of technological platforms and clinical contexts. The VSC QUERI emphasizes protocol flexibility over fidelity to maximize fit between the clinical intervention and the preferences, needs and resources of the practice setting in which it is being deployed. The Dynamic Sustainability Framework also acknowledges that practice settings and policies will change over time and that the clinical intervention will need to adapt over time in order to maintain sustainability.[2]

There are currently no implementation science paradigms for deploying clinical interventions that rely on virtual care technologies. The introduction of a new disruptive technology directly impacts patient and provider task behaviors; individuals must change their behavior to accommodate the new technology. Implementation is even more difficult when the introduction of the technology challenges existing workflows and routines of care teams. Successful implementation of the technology may be determined less by features of the technology and more by the complex interaction between the technology and team dynamics. Because clinical workflow often varies across care teams, technologies that might be successfully adopted in one clinical context may not work in another. It is critical to approach the implementation of technology-facilitated clinical interventions as a site-specific team learning process.

VSC QUERI implementation strategies combine elements of Rapid Ethnographic Assessment (REA) techniques and Systems Redesign methods. REA is an anthropologic technique that relies upon first-person observations of practices on site and open-ended interviewing to develop a real-time understanding of how an intervention fits into the existing clinical workflow. A critical element of Systems Redesign is mapping the existing clinical workflow, sometimes called flow-mapping.[3] Once the clinical workflow map is completed, the facilitation team can help frontline providers determine how to modify the existing clinical workflow to incorporate the new technology-facilitated clinical intervention. In addition, the facilitation team can help frontline providers

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Research Highlight

Building an Adequate VA Care Network: Evaluating the Impact of Choice Providers

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In response to concerns about inadequate access to health care services for Veterans, Congress passed the Veterans Access, Choice and Accountability Act (Choice) of 2014, thereby expanding VA health care networks with the addition of community care providers. This expansion affected rural Veterans especially, since 97 percent of U.S. rural counties lack a VA medical facility.[1] In this article, we review the results of a recently completed operations evaluation of approved Choice providers and discuss how VA can optimize future health care network expansion.

The key dimensions of an adequate health care network are wait times to see the provider, travel distance to the provider, and specialty of the provider. An adequate health care network must have the appropriate specialist within a reasonable drive distance from a Veteran's home with availability in a reasonable time frame. For example, if a Veteran lives 10 miles away from a VA medical center, but the wait time for an appointment is 35 days, the network is inadequate. If a Veteran lives 15 miles from a clinic offering primary care, but 100 miles away from a VA cardiologist, the network is inadequate. Optimizing network adequacy therefore requires recognizing the distribution of resources across wait time, location, and specialty.

Evaluating the Impact of Initial Choice Providers

The Choice Act sought to increase Veterans' access to health care by adding community care providers to the VA health care network. Community care providers have the potential to positively impact VA health care network adequacy if they are located in geographic areas where there are inadequate VA resources. Therefore, we sought to assess the impact of approved Choice providers on VA network adequacy by identifying what proportion of these providers were located in areas of low VA network adequacy.

Our results demonstrated that understanding the impact of Choice providers requires a specialty specific understanding of network adequacy.

We examined primary care and cardiology Choice providers in a primarily rural network (VISN 19) and a primarily urban network (VISN 10). We identified 3,362 unique Choice provider practice locations as of September 1, 2015. We performed a provider-level analysis by assessing if each Choice provider was located outside of existing service areas (i.e., an area of low network adequacy). We implemented two definitions for low network adequacy areas. Consistent with the Choice Act, we first defined network adequacy areas by generating 40 mile drive-time service areas around all VA clinics and medical centers. We next identified which clinics and medical centers had active cardiology and primary care clinics based on completed appointments data. We then generated 40 mile service areas around the sites with active primary care and cardiology clinics. For each Choice provider, we then examined two possible results. First, is this Choice provider located within 40 miles driving distance of an existing VA clinic? Second, is this Choice provider located within 40 miles driving distance of a VA clinic with the same specialty available?

In VISN 10, an urban network, we found that the first definition of network adequacy based on the 40 mile service area of all VA sites essentially covered the entire geographic space in the VISN. Therefore, very few Choice providers were located outside of existing service areas (1 percent of primary care and none of the cardiology Choice providers). However, when we changed the definition of service areas to be specific to VA sites with cardiologists, we found that 36 percent of the cardiology Choice community providers were located outside of existing service areas.

In VISN 19, a rural network, results were substantially different. After applying the first definition of network adequacy based on the 40 mile service areas of all VA sites, a large amount of geographic space was located outside of the service areas. Despite this, we found only 15 percent of primary care and 9 percent of cardiology Choice providers were located outside of existing service areas. After applying the second definition using only VA sites with cardiologists to generate service areas, we found that 56 percent of the cardiology Choice providers were located outside of existing service areas.

Optimizing Future Community Care Networks

Our results demonstrated that understanding the impact of Choice providers requires a specialty specific understanding of network adequacy. As VA continues to commit resources to the growth of community care networks, optimizing the allocation of these resources is critical. The highest value of external care providers will be those located where the current VA network has low adequacy. A Veteran-level, geospatial analysis using current data on clinic activity and wait times will allow VA to identify locations of low network adequacy. In many rural areas, locations of low VA network adequacy may also be health care shortage areas. These rural areas can be targeted for technology-based health care program expansion. Optimizing internal VA care, community care, and technology-based care is vital to meeting the future health care needs of rural Veterans.

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Research Highlight

Identifying Barriers to Engagement in Mental Health Care: Perspectives of Rural Veterans and Providers

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Historically, rural residents have used fewer mental health services than urban residents despite equal or greater need. This difference has been documented nationally across the general population and, more specifically, within the Veteran population. VA is aggressively addressing structural barriers to rural Veterans' access to mental health care by opening community-based outpatient clinics (CBOCs), reaching out through mobile clinics and telemedicine, and contracting with community providers, most recently through the Veterans Choice Act. Reducing structural barriers (e.g., distance/time, lack of transportation) is an essential step in reducing rural/urban disparities in Veterans' use of VA mental health care; however, this step alone is unlikely to be sufficient. After need and structural barriers are taken into account, differences in personal characteristics, especially attitudinal characteristics, may still lead to different patterns of help-seeking and service use. Several studies have suggested that attitudes, beliefs, and behavioral norms may have a stronger influence on mental health service use than do structural barriers. However, little empirical evidence has been available on attitudes that influence initiation and sustained use in the rural Veteran population to inform VA program planning.

In this article, we briefly summarize findings from the initial, qualitative component of a sequential mixed-methods study designed to better understand the ways in which attitudinal characteristics influence treatment-seeking and sustained mental health service use among rural Veterans.[1]

We conducted in-depth, semi-structured interviews with 25 rural Veterans and 11 VA and non-VA rural mental health care providers in four states (Arkansas, Colorado, Maine and Wisconsin). Participants were asked about the attitudinal factors they thought most influenced rural Veterans' decisions to seek and sustain mental health care.

Veterans identified three attitudes that posed significant barriers both to initial help-seeking and to sustained engagement in mental health care: 1) emphasis on self-reliance (not needing help or support from other people); 2) emphasis on stoicism (endurance of pain or hardship without complaint and resisting treatment-seeking until it becomes unavoidable); and 3) stigma (negative attitudes toward mental health treatment-seeking). Veterans were most adamant about an emphasis on self-reliance creating a barrier to service use. They ascribed its origin to military norms, rural norms, and/or male gender-role expectations. In each of these "cultures," seeking mental health care has historically been seen as a sign of weakness. A fourth, prevalent impediment was raised with regard to initial treatment-seeking only—lack of trust in the VA health care system. Prior to enrolling in VA health care, Veterans said they had often avoided VA because they thought it would be non-responsive, ineffective, and uncaring.

Despite these concerns, over 80 percent of study Veterans had overcome their attitudinal barriers to seeking treatment and were currently using VA mental health care. The two factors they most frequently described as driving initial treatment-seeking were: 1) perceived need for care; and 2) encouragement and support from family and friends, most notably, from other Veterans. Once receiving care, the two factors that seemed to drive ongoing involvement were: 1) the perception that treatment was effective and, most critically, 2) a growing trust in their providers. In describing the latter, Veterans talked about providers showing that they respected and cared about the Veterans as individuals. Importantly, those providers made themselves accessible by giving Veterans their direct telephone numbers and being willing to talk with Veterans outside of regularly scheduled appointments and after clinic hours. Both the barriers and facilitators raised by study participants were consistent across participant-types (Veterans, VA providers, and non-VA providers) and geographic areas.

While many of the issues raised in the study are familiar, findings are especially timely as VA has prioritized increasing access and restoring trust in the system. Participants' comments offer guidance in addressing calls for interventions to improve treatment initiation and retention in VA mental health care. Veterans' and providers' perspectives on the importance of the Veteran-to-Veteran bond in initiating care provide support for continuation and expansion of VA's highly regarded peer support programs. These programs' emphasis on communication and caring provides support for the integrated primary care and mental health service initiative that facilitates warm handoffs from medical to mental health care. Our findings are consistent with the literature on cultural/attitudinal deterrents to service use.

Attitudes, such as self-reliance, commonly associated with rural culture may play an important role in underutilization of needed mental health services. System support for peer and provider behaviors that generate trust and demonstrate caring may help overcome attitudinal barriers to treatment-seeking and sustained engagement in mental health care among rural Veterans.

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Research Highlight

VHA-Indian Health Service Collaborations Reveal Opportunities to Improve Rural Health Care

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VA Home Based Primary Care (HBPC) is an interdisciplinary, longitudinal program for Veterans who are vulnerable to poor outcomes because of complex, intertwined functional and medical needs. HBPC thrived in urban settings, but the feasibility and patient-level impact was unknown in rural areas where access is limited for all types of noninstitutional long-term care (NILTC). In 2009, VA Office of Rural Health funded expansion of HBPC to rural areas and to American Indian reservations, where health care is also provided by Indian Health Service (IHS) or Tribal Health Programs (THP) in accordance with a Memorandum of Understanding between VA and IHS. By using the "natural laboratory" of these expansion programs, the research team was able to identify the key barriers and facilitators to implementing NILTC for vulnerable rural populations.

This observational study used a mixed methods approach. In qualitative Phase I, we used key respondent interviews to characterize organizational contexts and processes of care for rural HBPC models. In quantitative Phase II, we used a retrospective pre/post comparative design to analyze outcome correlates at the patient-level (i.e., use of hospital and emergency departments) and organizational-level (i.e., enrollment for VA medical benefits) based on linked and merged secondary data from VA, IHS, and Medicare records. We compared utilization pre-admission to HBPC in two 90-day quarters with utilization post-admission to HBPC in four 90-day quarters for one year follow-up.

Phase I Findings

Six innovative expansion models independently emerged at 12 VA medical centers (VAMC) reflecting different staffing patterns and strategies for providing HBPC: 1) expansion to a satellite site, such as a community-based outpatient clinic; 2) streamlined staffing, including nurse working out of own home; 3) purchased-care from community home health nursing to supplement HBPC; 4) use of a mobile clinic; 5) integrated partnerships with joint privileging of key medical staff by a VAMC and a partner IHS/THP facility; and 6) reimbursed-care for IHS or Tribal primary care to enrolled HBPC users.[1] The latter two were used exclusively with IHS/THP, which retained responsibility as primary care provider of record. Some HBPC programs with multiple teams or service areas used more than one organizational model.

Qualitative analyses revealed that most of these HBPC programs were successful in building and restoring trust in VA and improving access to quality care. Two key elements contributed to this success. First, program coordinators either had previous knowledge about interacting in Native communities or were willing to engage and learn from Tribal members. Second, program clinical staff maintained goodwill within communities and their IHS/THP counterparts through multiple visits to care for elders, coordination of care to optimize resources, and, in some cases, participation in community activities. Program coordinators also used a number of localized strategies to coordinate care, including templates for referral to VA HBPC from IHS/THP or ad hoc case management.

Phase II Findings

HBPC rural expansion included non-Indian communities as well as Tribal communities that are served by IHS. Like IHS beneficiaries (n=88), non-IHS beneficiaries (n=288) were characterized by >30 percent impairments in ≥2 Activities of Daily Living (ADL); further, both subpopulations had similar rates of chronic disease. However, IHS beneficiaries were a significantly younger population of HBPC users than non-IHS beneficiaries ($p < 0.001$).

Hospital admissions and emergency department visits decreased significantly ($p < 0.001$) in the quarter following admission to HBPC, and these improvements were maintained over one year. The study detected the same pattern when accounting for IHS versus non-IHS beneficiary status or for ≥2 ADL versus ≤1 ADL impairments.

Initiation of HBPC programs in rural areas increased enrollment for 83 (22.1 percent of the sample) Veterans who met criteria as new users of the VA medical benefit. The proportion of new VA enrollees was significantly greater for IHS beneficiaries (43.2 percent) than for non-IHS beneficiaries (15.6 percent, $p < 0.001$).

Expansion of HBPC to rural American Indian reservations demonstrates opportunities to coordinate clinical care between federal health care organizations; this expansion also serves as a model for delivery of patient-centered care in rural areas. VA Office of Rural Health has recently funded the expansion of an additional 50 HBPC programs for rural areas to aid broader dissemination of strategies for clinical care coordination. The success of HBPC programs also establishes groundwork to expand other programs, including telehealth to distant communities or improved coordination of care that is performed by IHS/THP under reimbursement agreements with VAMC. This study also begins to address a gap in the literature on rural populations and HBPC that was noted in a recent Agency for Healthcare Quality and Research evidence synthesis review.

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determine whether and how the clinical intervention itself needs to be customized to fit into the existing clinical workflow. VSC QUERI projects will help determine whether these implementation strategies are more effective than standard approaches when deploying promising clinical practices that incorporate virtual care technologies in VA.

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