Targeting Access to Kidney Care Via Telehealth: The VA Experience

Susan T. Crowley, Justin Belcher, Devasmita Choudhury, Cassandra Griffin, Raymond Pichler, Brooks Robey, Rajeev Rohatgi, and Bessie Mielcarek

The Veterans Affairs (VA) is the largest integrated health care system in the United States and is responsible for the care of a population with a disproportionately high rate of CKD. As such, ensuring access to kidney health services is a VA imperative. One facet of the VA's strategy to reduce CKD is to leverage the use of teletechnology to expand the VA's outreach to Veterans with kidney disease. A wide array of teletechnology services have been deployed to both pull in Veterans and push out kidney health services to Veterans in their preferred health care venue. Teletechnology, thus, expands Veteran choice, facilitates their access to care, and furthers the goal of delivering patient-centered kidney specialty care. The VA has demonstrated the feasibility of virtual delivery of kidney specialty care services and education via synchronous and asynchronous approaches. The challenges ahead include determining the relative health care value of kidney telehealth services, identifying Veterans most likely to benefit from specific technologies and optimizing the adoption of effective kidney telehealth services by both providers and patients alike to ensure optimal and timely kidney health care delivery.

Published by Elsevier Inc. on behalf of the National Kidney Foundation, Inc.

Key Words: Telemedicine, Health services, Access to health care, Kidney disease, Patient education as topic

INTRODUCTION

The Access to Care Challenge

The VA is the largest integrated health care system in the United States. Although it is widely acknowledged that VA health care quality is high, it is access to care that presents a challenge.[1] Currently, 3.2 million VA enrollees (36% of total enrollees) reside in rural areas, nearly a million of whom have a service-connected disability.[2] Demographics such as these present any health system with formidable obstacles to the traditional model of health care delivery. In response to these challenges, the VA has developed infrastructure to improve the delivery of care via telemedicine and has made its utilization a metric of care.

Access to kidney care is especially challenging, for both Veterans and non-Veterans alike. As reported by community-screening campaigns for kidney disease, nephrology care is received by only a fraction of people with moderate-to-severe chronic kidney disease (CKD), and many affected patients are unaware that they have CKD.[3,4] The impact of access to care is profound in patients with kidney disease, and a growing body of literature continues to describe the dire consequences of geographic impediments to care for people with kidney failure.[5-8]

With an estimated 1,000,000 Veterans with moderate-to-severe CKD, the VA is the largest provider of health services in the nation for patients with CKD.[9] Although the VA is a primary care-based health care organization, it has been the leading provider of kidney specialty health services in the United States for decades.[10] In fact, in fiscal year 2015, there were 340,129 encounters for nephrology (not including dialysis).[11] Recent research indicates that the intensity of VA-delivered nephrology care positively affects intermediate and "hard" outcomes and is associated with lower costs of care.[12,13] It is incumbent then on the VA to continue initiating delivery systems that will ensure unstinting access to kidney care for all Veterans affected by kidney disease.

Receipt of predialysis kidney care has been shown to be similar among Veterans using VA care exclusively compared with those using Medicare alone.[14] Timeliness of access to kidney care, however, was best for exclusive VA users compared with Medicare or dual users. Regardless of source of care, a third of veterans with advanced CKD lacked nephrology care before initiating dialysis highlighting an a substantial unmet need for Veteran access to kidney care. Reasons for the gap are not precisely known but are postulated to include the following: (1) a lack of personal awareness among Veterans about prevalent kidney disease, (2) a lack of provider recognition of CKD, and (3) limited access to nephrology specialty care because of geographic inaccessibility of care.

From the Department of Medicine, Section of Nephrology, VA Connecticut Healthcare System, West Haven, CT; Department of Medicine, Section of Nephrology, Yale University School of Medicine, New Haven, CT; Department of Medicine, Section of Nephrology, Salem VA Medical Center, Salem, VA; Department of Medicine, Section of Nephrology, Virginia Tech Carilion School of Medicine, Roanoke, VA; Department of Medicine, Section of Nephrology, VA Puget Sound Healthcare System, Seattle, WA; Division of Nephrology, University of Washington School of Medicine, Seattle, WA; Department of Medicine, Section of Nephrology, VA White River Junction VAMC, White River Junction, VT; Department of Medicine, Section of Nephrology, Dartmouth School of Medicine, Hanover, NH; Department of Medicine, Section of Nephrology, VA Northport Healthcare Systems, Northport, NY; and Department of Medicine, Section of Nephrology, State University of New York at Stony Brook School of Medicine, Stony Brook, NY.

Financial Disclosures: The authors declare that they have no relevant financial interests.

Support: Drs Pichler and Young received funding through the VA Puget Sound Health Care System and are supported by clinical grants from the VA Office of Specialty Care and the VA Office of Rural Health. The opinions expressed here are those of the authors and do not constitute policy of the US government.

Address correspondence to Susan T. Crowley, MD, VA Kidney Disease National Program, Renal Section VA CT HCS, VA Connecticut Healthcare System (111F), 950 Campbell Avenue, West Haven, CT 06516. E-mail: susan.crowley@va.gov

Published by Elsevier Inc. on behalf of the National Kidney Foundation, Inc.
1548-5595/$36.00
http://dx.doi.org/10.1053/j.ackd.2016.11.005

Addressing Access Gaps Through New Paradigms of Care

Highlighted in recent legislation, access to health care via expanded provider networks warrants top strategic priority for the Veterans Health Administration.[1,15,16] To meet the charge to create a high performance, integrated community of care through redesign, the VA has adopted a new paradigm of care. Leveraging the advent of teletechnology and combining it with health informatics and case management, the VA has expanded the reach of health care services available to Veterans into their community and home settings. We describe here the portfolio of VA kidney specialty care telehealth services that have evolved to enhance Veteran awareness about kidney disease, to facilitate access to kidney care, and ultimately to improve the health of Veterans with kidney disease.

The development of kidney telehealth services within the VA provides proof of concept of the feasibility of health care delivery system redesign, even by a massive health care system. The enthusiastic adoption of telehealth services within the VA also demonstrates the burgeoning demand by patients and providers for alternative modalities of care beyond the traditional health care setting. With reform of regulatory barriers to telehealth services in the non-VA community, it would be reasonable to anticipate an equally enthusiastic uptake of kidney telehealth services by the broader non-VA health care community.

CLINICAL SUMMARY

- The portfolio of mechanisms for the delivery of VA nephrology services is growing to maximize use of agency resources and guarantee Veteran access to kidney specialty care.
- The venues for receipt of kidney health care are being transformed by teletechnology from fixed settings to mobile applications, from direct specialist delivery to enhanced care in the primary care setting, from provider delivered to patient self-management, and from the medical center to the community clinic, the home, and the patient on-the-go.
- Veteran-customized patient education tools fostering self-care by Veterans with kidney disease include both a Web-based virtual "clinic" and its mobile extension to a smart phone application (VA ***e***-kidney mobile application).
- Both synchronous and asynchronous forms of kidney telehealth are available including specialty-to-primary care provider consultation via Specialty Care Access Network-Extension for Community Healthcare Outcomes consultation and e-consultation and provider-to-patient clinic video consultation. Additional kidney telehealth growth opportunities are being pursued to further extend telehealth combined with patient education into the home and inpatient arena.

Defining Telehealth

VA defines telehealth as the "use [of] health informatics, disease management, and telecommunication technologies to target care and case management to improve access to care, [and] the health of Veterans."[17] Using this tripartite model, the VA is transforming where and how medical and health education services are routinely delivered to Veterans with kidney disease.

VA kidney telehealth uses both synchronous and asynchronous forms of technology. Defined as the delivery of health services in real-time mode, synchronous telehealth involves establishing a communication link between people to permit immediate exchange of information. Clinical Video Telehealth (CVT) is a form of synchronous telehealth using videoconferencing equipment as the communication link, with peripheral devices that can aid in a virtual examination. Asynchronous telehealth occurs when medical data are transmitted between participants for assessment offline. This store and carry forward telehealth method allows access to data at times convenient to both parties. The focus of this article is to describe 3 telehealth-enabled services that are changing the traditional paradigm of the delivery of kidney health services to Veterans within the VA and include virtual primary care provider (PCP) support, kidney provider-patient consultation, and patient self-management through education.

VA KIDNEY TELEHEALTH SERVICES FOR PRIMARY CARE PROVIDER SUPPORT

Specialty Care Access Network-Extension for Community Healthcare Outcomes

Specialty Care Access Network-Extension for Community Healthcare Outcomes (SCAN-ECHO) represents a "provider-to-provider" real-time videoconferencing platform that links PCPs in rural areas with specialists at a tertiary care center. SCAN-ECHO was originally modeled after "Project ECHO," which was launched in 2003 at the University of New Mexico by Dr. Sanjeev Arora. Project ECHO was designed as a novel means by which to deliver improved hepatology care to Hepatitis C-infected patients in rural New Mexico via telehealth. The goal was to enable rural PCPs to treat patients infected with Hepatitis C under the guidance of specialists. As published in 2011, the use of telemedicine to deliver specialty care resulted in treatment outcomes at least as successful as those achieved at the parent academic center with fewer complications.[18] Based on Dr. Arora's experience, the VA adopted a modified model of ECHO in 2011, entitled SCAN-ECHO, for the delivery of multiple different medical specialties and funded several pilot programs to implement this new type of telemedicine.

Development of a VA Kidney SCAN-ECHO Telemedicine Program—The Example of Seattle VA/VISN 20

Tasked with delivering kidney specialty health care to Veterans spread across 3,535,932 square miles of land in the continental United States, Alaska, and Hawaii, the Department of Veterans Affairs faces a geography challenge,