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## The Clinical Resource Hub initiative: First year implementation of the Veterans Health Administration regional telehealth contingency staffing program

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### Abstract

**Importance:** Healthcare systems face challenges providing accessible healthcare across geographically disparate sites. The Veterans Health Administration (VHA) developed regional telemedicine service focusing initially on primary care and mental health services.

**Objective:** To describe the program and progress during the early implementation.

**Results:** In its first year, the Clinical Resource Hub program provided 244,515 encounters to 95,684 Veterans at 475 sites. All 18 regions met or exceeded minimum implementation requirements.

**Conclusion and relevance:** The regionally based telehealth contingency staffing hub met early implementation goals. Further evaluation to review sustainability and impact on provider experience and patient outcomes is needed.

### Keywords

Telehealth; primary care; mental health

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## Introduction

Similar to U.S. healthcare systems, the Veterans Health Administration (VHA) has a growing shortage of health care clinicians, including primary care and mental health providers. Staffing deficits due to provider and staff turnover, temporary absences, or expansions in demand often result in the need for contingency staffing.<sup>1</sup> These deficits cause reductions in patient access to care, particularly in rural or other sites where staff recruitment is challenging.<sup>2</sup> The VHA provides care to over 9 million Veterans across all 50 states through 18 regions, called Veteran Integrated Service Networks (VISN). The VISNs are the interface between national policy, funding streams, and medical centers. Within each VISN, healthcare systems consist of medical centers that operate local community-based outpatient clinics (CBOCs). The VHA operates 171 medical centers and over 1,000 CBOCs. Many of the CBOCs are in geographic areas with substantial numbers of Veterans but low availability of healthcare professionals. Nationally, the VHA medical facility staffing vacancy rate is 11% (>24,000 positions)<sup>3</sup> and an expected upcoming retirement surge may exacerbate the deficit.<sup>4</sup>

As one effort to address staffing deficits, the VHA developed a pilot telehealth program in 2015 aimed at improving access to mental health services for rural Veterans through a hub and spoke model of primarily virtual healthcare delivery.<sup>5</sup> VHA launched a similar primary care telehealth program in 2017.<sup>6</sup> The Veterans Affairs Maintaining Internal Systems and Strengthening Integrated Outside Networks Act of 2018 (MISSION Act)<sup>7</sup> included support for the national CRH program, providing further opportunity to build on these pilots and on VHA's substantial prior investments in telehealth modalities<sup>8</sup> to improve access to care in underserved areas. VHA leadership initiated implementation of a national telemedicine initiative, the Clinical Resource Hub (CRH) program, in 2019 that is arrayed in a hub and spoke configuration.<sup>9</sup> The CRH program aimed to focus on non-catastrophic but unpredicted deficits, or gaps, in staffing on a contingency basis, with an emphasis on practices within underserved medical centers. As mandated by the MISSION Act, each medical center was ranked according to a numerical score to define underserved facilities<sup>10</sup>

Few published studies have described large-scale programs to develop national telemedicine programs and provide virtual contingency staffing in healthcare. We assessed implementation of CRH during its first year, in relation to scope of care delivery and key elements that were defined prior to initiation of the program.

## Program Description

In 2018, a CRH was established in every VISN, incorporating earlier primary care and mental health telehealth hub pilot programs. The first year of operation under the unified national initiative was fiscal year (FY) 2020 (October 1, 2019 – September 2020). Each hub is staffed with primary care providers, registered nursing care managers, clinical pharmacists, behavioral health clinicians, and other support staff. Primary care and mental health providers are deployed in response to requests made using an online tool that can originate from a medical center-based clinic or CBOC (as illustrated in Figure 1) based upon temporary absences, resignations, or increasing volume of Veterans. The CRH prioritizes requests based on current site staffing, prioritizing team-based care, as well as the size and needs of the Veteran population.

The CRH staff of program managers and clinicians in each VISN comprise a virtual team that typically telework from home. CRH virtual clinical encounters can be delivered by telephone or use the VHA's telehealth audio and video platform, VA Video Connect, to connect to Veterans either in a spoke site clinic or at home; during the coronavirus pandemic, these capabilities enabled a major shift from "video to clinic" to "video to home".<sup>6, 11</sup> For video into the clinic visits, CRH clinicians are supported by spoke site clinic staff and can use physical exam equipment (e.g., otoscope and stethoscope).

When the CRH has identified a spoke site that will receive CRH clinical support, CRH leadership and the requesting spoke site engage in training and process development required to initiate services. CRHs typically provide clinical services to a spoke site anywhere from 6 to 24 months. Bidirectional communication between the CRH and the spoke site occurs throughout the coverage timeframe to address any barriers to care delivery and determine when the CRH support is no longer needed.

The CRH program has a multidisciplinary National Advisory Board to monitor organizational alignment, strategic direction, and progress. A National CRH Operational team is responsible for implementing the national strategy as directed by the Advisory Board. The CRH National Advisory Board reports to the VHA National Healthcare Delivery Committee, which makes decisions on national clinical operational priorities. The National CRH Operational Team is comprised of experts in business operations, primary care, clinical pharmacy, nursing, and mental health. The operational team developed a National CRH Operational Manual and the CRH Roadmap to guide VISN CRH development and implementation. The first National CRH Advisory Board strategic planning meeting occurred in October 2018 and identified the following five strategic priorities for the first year of operation: standardization, communication, support for the roll out of a new electronic medical record, service expansion, and scheduling. Based on these priorities, the CRH Advisory Board standardized early program implementation around core elements and developed a timeline for implementation. The CRH roadmap was developed to help guide the implementation of the care delivery model across all 18 VISNs (Table 1). In the first year of the national initiative, each VISN CRH program was expected to 1) establish a VISN governance structure; 2) submit quality and evaluation metrics to the CRH National Advisory Board; 3) use an online portal for managing coverage requests; and 4) develop a process to identify sites of greatest need. During Year 2 (Fiscal Year 2021), CRH programs

were required to develop a process for deploying services for emergency situations (called Telehealth Emergency Management). By the start of Year 3 (Fiscal Year 2022), programs are expected to 1) complete staffing for primary care and mental health services; 2) develop a plan to support patient call centers and nurse advice lines; 3) and develop a plan to support transition to a new electronic medical record.

## Methods

We conducted an observational evaluation of early implementation progress and report interim data on service delivery. We used Clinical Resource Hub (CRH) organizational key informant surveys and electronic administrative data to assess the extent to which national program implementation achieved expected early implementation milestones specified in the CRH roadmap. We developed an implementation progress measure based on data from key informant surveys and program documents. The evaluation reported here was undertaken as part of quality improvement and has been deemed non-research.

### Measures and Data Sources:

**Surveys:** We conducted two key informant surveys of CRH Directors (or their designees) in June and October-November 2020. CRH Directors have the overall responsibility for CRH implementation and ongoing operations and are best positioned to provide information on achievement of required program features such as governance, staffing, and service provision. For the June 2020 survey, we developed survey questions based on eight required program features specified in the CRH implementation roadmap. CRH program leaders also reviewed the survey and provided input on priority topics. The survey questions were tested using a cognitive interviewing approach with a former senior VA leader and a current CRH Director, resulting in minor modifications to question wording and response options. The remaining 17 CRH Directors received email invitations to complete the online survey, with up to five follow-up reminders by email, phone, and instant message. An abbreviated version of the survey was administered in October to update information for the end of the fiscal year. Response rates were 100% (n=18) for the June survey and 94% (n=17) for the October survey.

### Administrative Data:

**Program documents:** We used budget requests made by each VISN CRH to obtain information for each CRH about planned staffing for year 1.

**VSSC operational reports:** The VHA Support Service Center (VSSC) assembles operational reports based on data extracts from the Corporate Data Warehouse (CDW), the VHA electronic repository of health and administrative data. We used several pre-existing operational reports as part of our evaluation.<sup>12</sup> (1) The CRH FTE report provides monthly and quarterly information on dedicated FTE and staffing and includes the number of primary care and mental health providers. (2) The CRH coverage report provides provider and spoke site specific information and their associated monthly workload of encounters. The data obtained from the coverage report is used to determine the which sites that received CRH support and how long. To establish our cohort of Veterans who received CRH services in

year 1 (FY20), we used utilization data from the Patient Details Audit Report in the VSSC CRH report hub (October 1, 2019 - September 30, 2020).

**VHA Corporate Data Warehouse (CDW):** We extracted data directly from VHA's CDW to assess the quantity and cost of CRH care delivered during year 1. We collected practice-level information from the Veterans Affairs Site Tracking (VAST) data, a repository of all VHA service sites which includes geospatial data elements such as rurality.<sup>12</sup> We used these data to identify each practice's location as urban, rural or highly rural. Clinic distance from the Veteran's primary residence was extracted from the Planning Systems Support Group (PSSG) quarterly data. For patients in the CRH cohort, we used CDW patient enrollment tables to collect demographics (including age, gender, sex, and race/ethnicity), as well as income, eligibility status, and disability status.

**Implementation progress measure:** Using organizational key informant survey data, budget requests and the CRH FTE report, we developed an implementation progress scale assessing the degree to which each CRH achieved 8 roadmap elements in relationship to the expected timeline shown in Table 1. The measure has 4 achievement levels: 1) no implementation: did not meet implementation expectations for Year 1 or beyond; 2) low implementation: fully or nearly achieved all roadmap elements for Year 1 but showed no progress on later milestones; 3) medium implementation: fully achieved roadmap elements for Year 1 and made progress on other elements due by Year 3; and 4) high implementation: fully achieved all roadmap elements due by Year 3, including hiring 100% of planned staff.

**Data analytic approach:** We used descriptive statistics (frequencies, means, medians) to describe program implementation and report on healthcare services provided in year 1.

## Results

Based on the implementation progress measure, all hubs met minimum year 1 implementation requirements. Among the 18 VISN hubs, twenty-eight percent met requirements for adequate progress); 61% for medium progress), and 11% for high progress. From the organizational key informant survey, 39% of CRHs reported receiving all requests for services through an online portal set up for requests, 39% reported most and 17% reported some requests were made through the portal (1 don't know and 1 missing). In addition to using the portal Clinical Resource Hubs (CRH) reported receiving requests via email/phone (39%) and directly from regional or healthcare system leaders (44%). Eighty-three percent of CRHs reported actively working to identify sites of greatest need (1 no, 1 don't know, 1 missing), identifying sites by attending meetings or through discussion with regional and healthcare system leaders (50%) and/or direct outreach to sites based on data or performance reports for wait times, staffing vacancies, community care referrals, etc. (28%). To make decisions about which sites requesting help they should provide services to, CRH directors report the three most important factors are: 1) the site is willing and able to work through the set-up process to receive services (89%), 2) the site is in the top 20 underserved facilities identified as part of MISSION Act requirements (50%), and 3) the site has providers with panels that are not full (e.g., could cover unassigned patients from a provider who is absent or has left) (50%).

Figure 2 shows the growth of service delivery over the first year of implementation by primary care and mental health services. In Year 1, the CRH program served 95,684 Veterans, conducted 244,515 visits, and provided services at 475 sites—41% of which were rural. The number of monthly encounters increased from 7,360 to 14,436 from October 2019 to September 2020 for mental health services, and from 5,747 to 12,019 for primary care services. Among the Veterans served by the CRH program, approximately 89% were male and the average age was 60 years old; 64 years old in primary care, 53 years old in mental health (Table 2). Seventy-three percent of Veterans served were Non-Hispanic White while 14% were Non-Hispanic Black. Most Veterans (63%) did not have a copay, either due to income level or disability, with substantially more Veterans seeking mental health not required to pay a copay than those seeking primary care (75% vs. 59%). Lastly, Veterans in rural and urban areas were evenly represented overall; however, when comparing mental health to primary care, proportionally more Veterans seeking mental health were from urban areas (51% vs. 44%). Veterans receiving care at multi-specialty CBOCs received the majority of CRH services (53%) and the Veteran's average drive distance to the clinic where they received CRH care was 18.6 miles. In addition, based on the MISSION Act underserved definition, approximately 25% of the Veterans receiving CRH services were in spoke clinics that were designated as underserved.

In the first year of implementation a total of 636 clinicians were employed by the 18 hubs. Clinical services provided in Year 1 included primary care, clinical pharmacy services, integrated behavioral health services (called primary care mental health integration - PCMHI), and specialty mental health care. Table 3 displays the types of providers hired in the CRH program. In primary care, physicians were the largest proportion of providers (45%), followed by nurse practitioners/physician assistants and clinical pharmacy specialists (21% and 22% respectively). Psychologists and physicians were the largest proportion of providers (42% and 30% respectively) in mental health. Within primary care mental health integration, psychologists (71%) followed by social workers (21%) were the predominate provider types hired.

In year 1, a total of \$85,586,188 from the VHA Office of Rural Health was distributed to regional hubs for hiring CRH leadership and administrative staff, clinicians, and equipment. Each of the 18 VHA regions received a different funding amount as well as contributed a proportion of additional funding based on the rurality of the region. The total contribution cost from all 18 regions for year 1 was \$41,365,003.

## Discussion

Based on evidence from previous pilot interventions,<sup>6, 11</sup> VHA has developed the Clinical Resource Hub program, a robust telemedicine structure to provide contingency staffing for primary care and mental health across a national integrated healthcare system. Rather than having patients travel for care, the program's approach aims to strengthen locally based VHA sites by supplementing their staffing resources from a distance during times of unexpected staffing loss. By organizing resources regionally, VHA can ensure that resources are focused to areas of greatest need within the region. This approach shows promise for ensuring equitable staffing across geographically diverse sites. Achievement of



pre-established CRH implementation milestones was on track or ahead of the program's expected timeline. A substantial and increasing number of Veterans received CRH care; in the first year of operation, the CRH program provided primary care and mental health services to over 90,000 Veterans. Over 40% of CRH clinical services was delivered to rural sites that were its primary target. Although primary care and mental health services were the focus of the first years of implementation, existing CRH infrastructure will support specialty care expansion and educational initiatives as the program develops.

An ongoing 6-year evaluation uses mixed methods and includes assessment of patients, providers, and costs. The use of a variety of data sources strengthens this evaluation and enhances VHA's ability to assess the value of the program. While evaluation of early implementation as reported here is formative, it provides evidence that the CRH approach is feasible. In addition, by initiating evaluation early, findings can provide a foundation for learning from the program's experiences over time. The program description provided here may also support across-system learning about how to design, organize and manage regional virtual care.<sup>13</sup> For example, the system of Federally Qualified Health Centers (FQHCs) is expanding telehealth capacity<sup>11</sup> and, like VHA, must overcome challenges of working with state and territorial health agencies. Elements of the CRH approach address these issues, building on the Anywhere to Anywhere 2018 federal regulations to overcome barriers due to state telehealth laws and licensing restrictions.<sup>14</sup>

There are limitations of the current evaluation and model of care. This model may not be applicable to smaller non-integrated systems. Implementation progress was based on self-report in organizational key informant surveys and is subject to recall and other biases. All administrative measures were derived from data collected for patient care and administrative purposes. These data are routinely analyzed for accuracy but are not validated by site visits or direct observations. Early implementation of the CRH program was based on seed funding from the national VHA program offices to support implementation of the regional infrastructure. Future research will be needed to explore the potential long-term sustainability of this type of program at the regional level.

Results of our early implementation evaluation demonstrate the feasibility of establishing regional hubs to provide contingency staffing using primarily telehealth modalities. Although some CRH design elements and experiences are unique to the VHA system, overall experience with telehealth hubs – including attempts to improve capacity for service provision, increase access and deployment of telehealth services – are likely highly relevant to other healthcare systems.

## Acknowledgements:

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## References:

1. Steinbauer JR, Korell K, Erdin J, Spann SJ. Implementing Open-Access Scheduling in an Academic Practice. *Family Practice Management*. March 2006; 13(3): 59–64. [g](#)
2. Rubenstein L, Hempel S, Danz M, et al. Eight Priorities for Improving Primary Care Access Management in Healthcare Organizations: Results of a Modified Delphi Stakeholder Panel. *Journal of General Internal Medicine*. February 2020; 35(2): 523–530. [PubMed: 31728895]
3. Department of Veterans Affairs: Improved Succession Planning Would Help Address Long-Standing Workforce Problems. (2019).
4. Federal Retirement: OPM Actions Needed to Improve Application Processing Times. (2019).
5. Deen TL, Godleski L, Fortney JC. A description of telemental health services provided by the Veterans Health Administration in 2006–2010. *Psychiatric Services*. Nov 2012; 63(11): 1131–3. [PubMed: 23117510]
6. Lu AD, Gunzburger E, Glorioso TJ, et al. Impact of Longitudinal Virtual Primary Care on Diabetes Quality of Care. *Journal of General Internal Medicine*. Sep 2021; 36(9): 2585–2592. [PubMed: 33483815]
7. VA MISSION Act of 2018 (S. 2372). (2018).
8. Heyworth LM, Kirsh S, Zulman DM, Ferguson JM, Kizer KW. Expanding Access through Virtual Care: The VA’s Early Experience with COVID-19. *NEJM Catalyst: Innovations in Care Delivery*. July 1. <https://catalyst.nejm.org/doi/full/10.1056/CAT.20.0327>
9. Pearson E, Kirsh S, Pizer SD. Modeling Underservedness: An Evidence-Based Approach to Managing Access To Care. *Health Services Research*. Mar 3 2022:
10. Barr K, Pizer S, Kirsh S, Minegishi T, Pearson E. Modeling and Managing Access to Primary Care Services in the Veterans Health Administration. 2020. July.
11. Cantor JH, McBain RK, Kofner A, Stein BD, Yu H. Availability of Outpatient Telemental Health Services in the United States at the Outset of the COVID-19 Pandemic. *Medical Care*. Apr 1 2021; 59(4): 319–323. [PubMed: 33480660]
12. Leung LB, Yoon J, Escarce JJ, et al. Primary Care-Mental Health Integration in the VA: Shifting Mental Health Services for Common Mental Illnesses to Primary Care. *Psychiatric Services*. Apr 1 2018; 69(4): 403–409. [PubMed: 29241440]
13. Kearly A, Oputa J, Harper-Hardy P. Telehealth: An Opportunity for State and Territorial Health Agencies to Improve Access to Needed Health Services. *Journal of Public Health Management and Practice*. Jan/Feb 2020; 26(1): 86–90. [PubMed: 31764574]
14. Department of Veterans Affairs Office of Public Affairs. VA Expands Telehealth by Allowing Health Care Providers to Treat Patients Across State Lines. 2018. May 11. <https://www.va.gov/opa/pressrel/pressrelease.cfm?id=4054>

**Key Points**

**Question:**

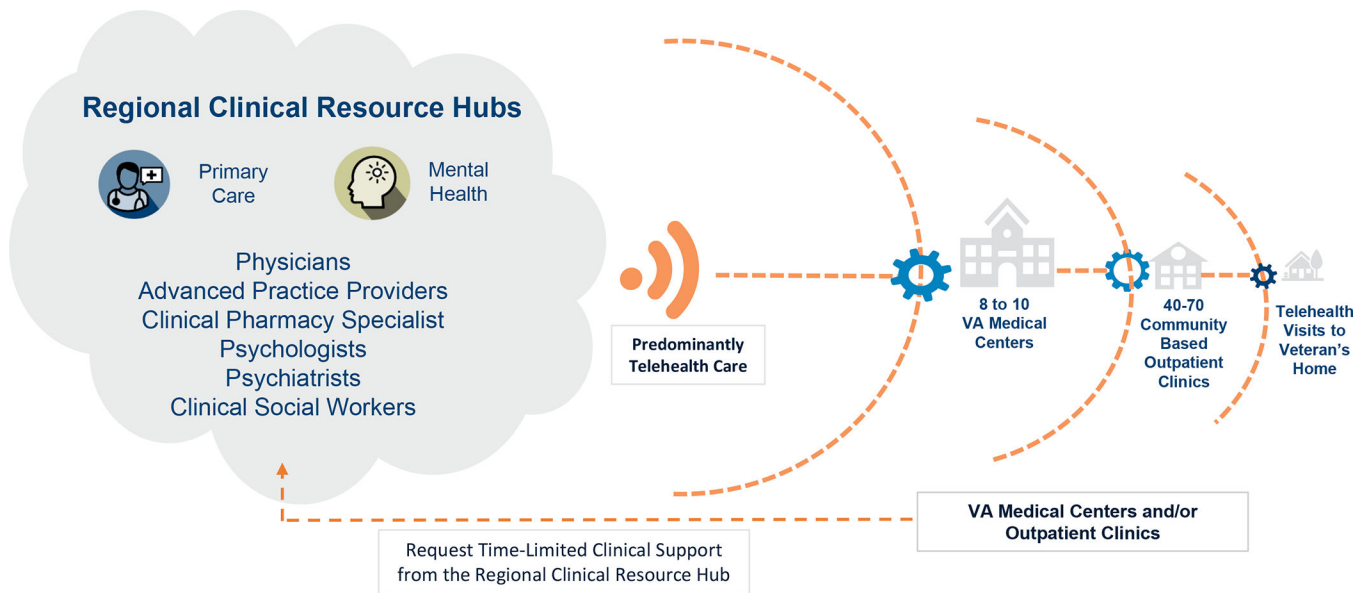
Can a national telemedicine initiative provide contingency staffing across an integrated health care system?

**Findings:**

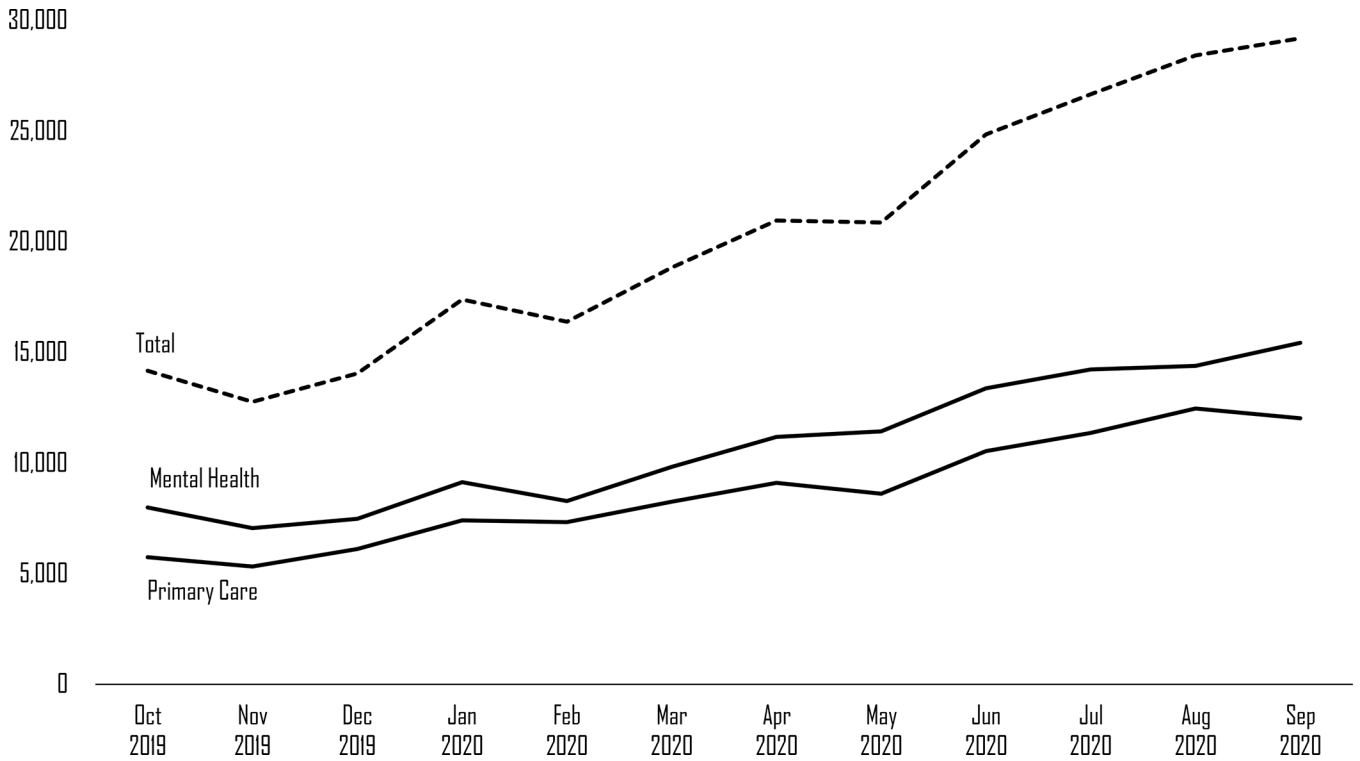
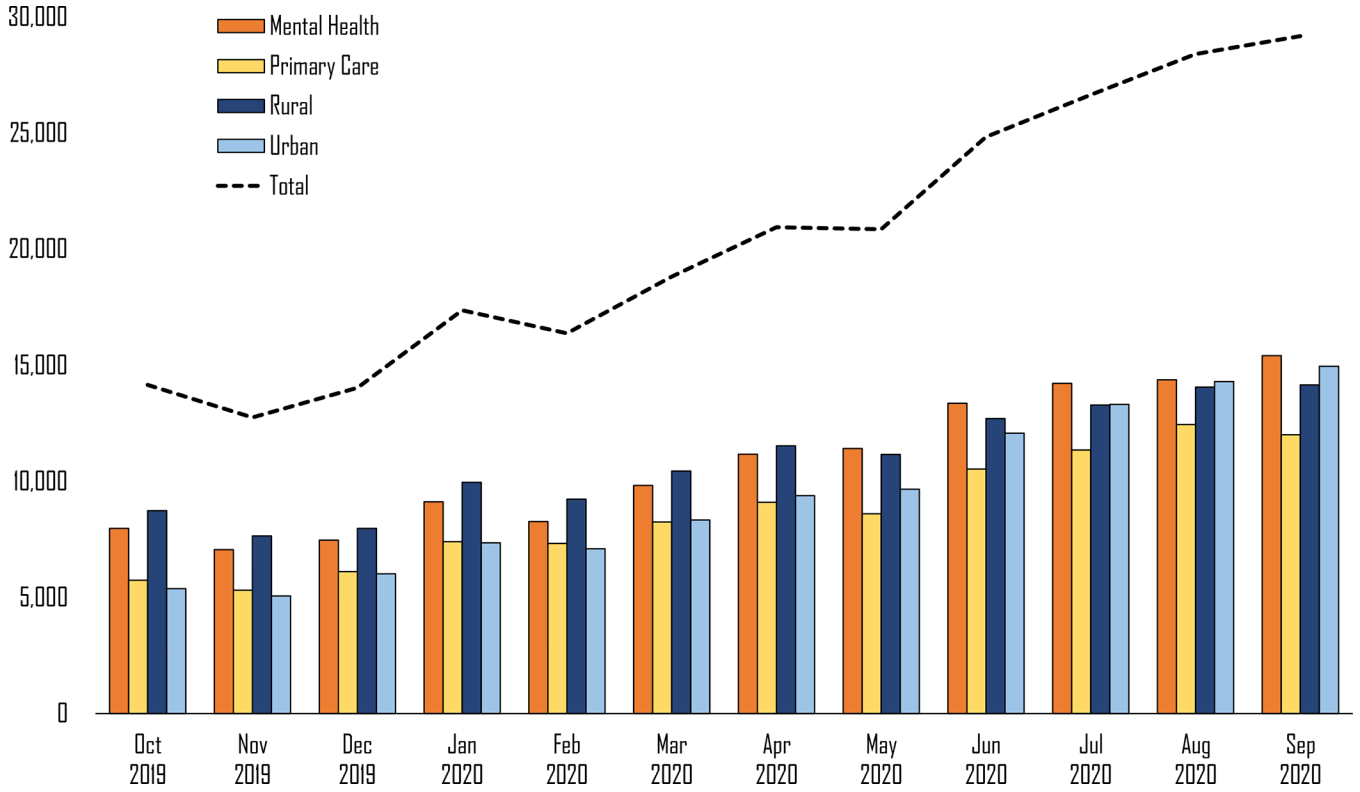
We present a description and preliminary evaluation of a national contingency staffing program featuring 18 regional telemedicine hubs called Clinical Resource Hubs (CRHs) in the Veterans Health Administration (VHA) which demonstrate the feasibility of a national contingency staffing program to provide primary and mental health care for Veterans in medically underserved areas.

**Meaning:**

This integrated health care delivery model could be considered by government, state, and private health care systems to supplement “on-site” staffing shortages and overcome patient geographic barriers to access care.



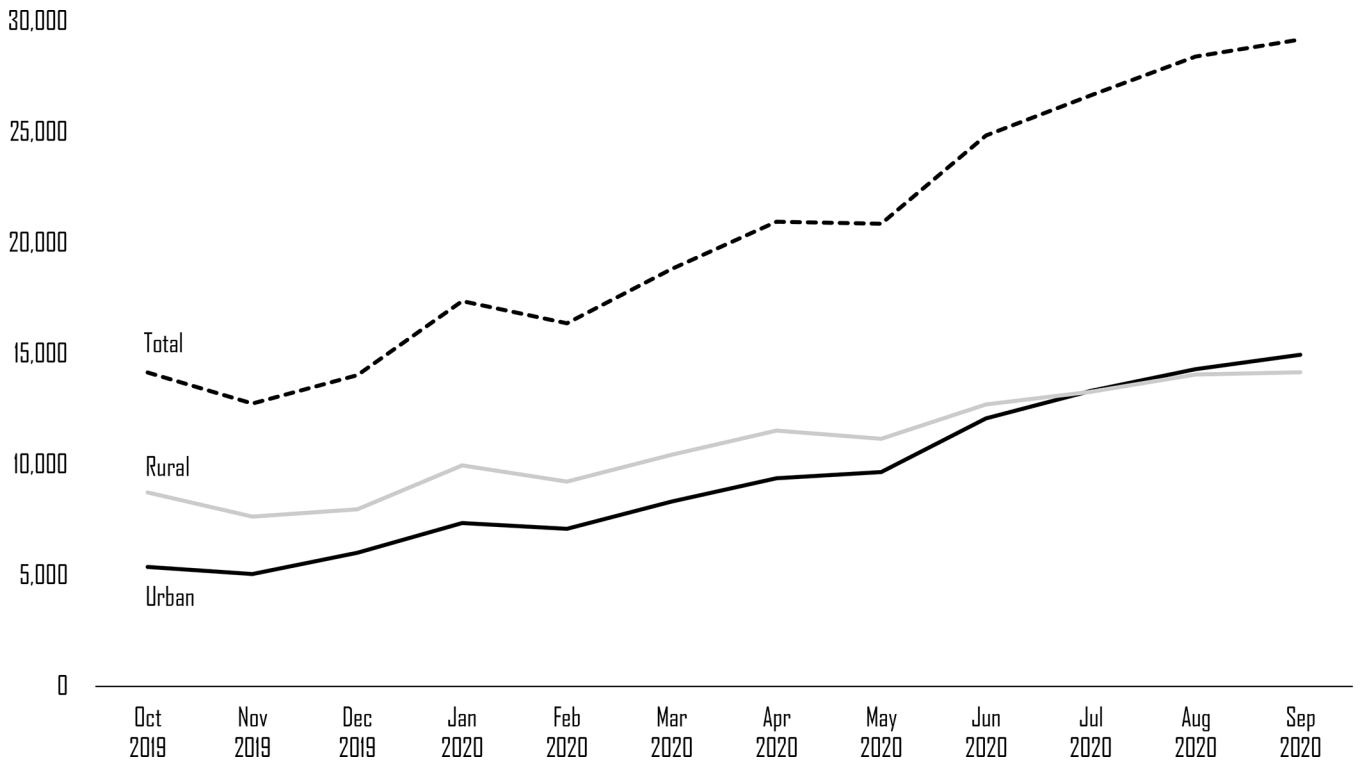
**Figure 1.**  
Clinical Resource Hub Care Delivery Model



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**Figure 2.** Unique encounters by month of Clinical Resource Hub implementation, Year 1 (Fiscal Year 2020), by service provided and urban/rural status  
Figure 2a. Unique encounters by month of Clinical Resource Hub implementation, Year 1 (Fiscal Year 2020), by service provided  
Figure 2b. Unique encounters by month of Clinical Resource Hub implementation, Year 1 (Fiscal Year 2020), by urban/rural status

**Table 1.**

Description of Clinical Resource Hub (CRH) Implementation Roadmap Elements and Criteria for Assessing Implementation Progress

CRH Roadmap Elements	Timeline	Assessment Criteria	# of CHRs meeting criteria (n=18)
<b>Infrastructure</b>			
CRH ownership, administrative infrastructure, and governance	Year 1	CRH leadership in place; has regional governance board with CRH and regional leaders	17
		Governance board has met at least once	16
<b>Planning</b>			
Facilities utilize a single, standardized online request tool for CRH services	Year 1	Any use of online portal for making service requests	17
Clinical services are directed to areas (facilities) of greatest need		CRH reports “actively working” or using tools provided to identify sites with greatest need	18
<b>Service Delivery</b>			
CRHs provide primary care and mental health services, at a minimum (due by Oct 1, 2023)	Years 1 – 3	More than 25% of CRH staffing complete by end of first year (10/2020)	18
		CRH has seen at least one patient by Oct 1, 2020	18
		CRH hired at least 1 of each primary care provider, mental health provider, clinical pharmacy specialist, and registered nurse by end of first year (10/2020)	11
<b>Support</b>			
CRHs provide support to Telehealth Emergency Management when activated and appropriate	Years 1 – 2	CRH Primary Care staff are available for emergency deployment at least one week/year	17
		CRH Mental Health section leader is available for three weeks/year of emergency deployment coverage	14
		CRH leadership disseminated information regarding Telehealth Emergency Management volunteering	17
CRHs support provider requirements for clinical contact centers	Years 1 – 3	CRH has plan in place or is working on a plan to support clinical contact centers	15
CRH supports implementation of the new electronic medical record system		CRH has plan in place or is working on a plan to support new electronic medical record transition	10
<b>Monitoring and Reporting</b>			
Metrics are submitted on a predefined schedule and upon request	Year 1	CRH is entering data into an online application to populate reports	18

Year 1 = Fiscal Year 2020, Year 2 = Fiscal Year 2021, Year 3 = Fiscal Year 2023

**Table 2.**

Patient and clinic characteristics among recipients of Clinician Resource Hubs (CRH) services, Year 1

Patient Characteristics count (%)	Overall N = 95,684	Primary Care N = 57,088	Mental Health N = 29,760 <sup>1</sup>	Primary Care Mental Health Integration N = 2,843	Pharmacy N = 3,492	p-value <sup>2</sup>
<b>Age (mean(stddev))</b>	60.0 (16.2)	63.8 (15.2)	52.6 (15.8)	51.4 (16.3)	62.35 (14.37)	<0.001
<b>Gender (%)</b>						
Male	85,226 (89%)	52,823 (93%)	24,601 (83%)	2,322 (82%)	3,092 (89%)	<0.001
Female	10,441 (11%)	4,259 (7.5%)	5,149 (17%)	521 (18%)	399 (11%)	
<b>Race/Ethnicity (%)</b>						
White, Non-Hispanic	69,457 (73%)	41,870 (74%)	20,927 (71%)	1,977 (70%)	2,467 (71%)	<0.001
Black, Non-Hispanic	12,909 (14%)	7,416 (13%)	4,329 (15%)	473 (17%)	583 (17%)	
Hispanic	8,067 (9%)	4,872 (8.6%)	2,645 (8.9%)	221 (7.8%)	255 (7.3%)	
<b>Copay (%)</b>						
Copay due to low-income	12,800 (37%)	9,652 (41%)	2,032 (25%)	260 (31%)	378 (32%)	
No copay due to disability	9,855 (28%)	5,566 (24%)	3,409 (42%)	337 (40%)	355 (30%)	<0.001
No copay due to means or other	12,265 (35%)	8,369 (35%)	2,765 (33%)	239 (29%)	451 (38%)	
<b>Patient Rurality (%)</b>						
Rural	44,219 (46%)	27,518 (48%)	12,776 (43%)	1,268 (45%)	1,452 (42%)	<0.001
Urban	44,924 (47%)	25,355 (44%)	15,184 (51%)	1,404 (49%)	1,769 (51%)	
Highly Rural/Insular Islands	6,394 (7%)	4,176 (7.3%)	1,698 (5.7%)	167 (5.9%)	269 (7.7%)	
<b>Clinic characteristics count (%)</b>						
<b>Clinic Size</b>						
Small	40,090 (41.9%)	23,961 (42%)	12,597 (42.3%)	1,209 (42.5%)	1,371 (39.2%)	<0.001
Medium	22,223 (23.2%)	14,039 (24.6%)	6,548 (22.0%)	680 (23.9%)	392 (11.2%)	
Large	33,384 (34.9%)	19,092 (33.4%)	10,618 (35.7%)	957 (33.6%)	1,732 (49.6%)	
<b>Facility Type (%)</b>						
Health Care Center	4,007 (4.3%)	1,346 (2.4%)	1,937 (6.8%)	271 (9.6%)	158 (4.5%)	<0.001
Multi-Specialty Community Based Outpatient Clinic	48,516 (51.9%)	28,415 (50.8%)	15,470 (53.9%)	1,200 (42.7%)	1,898 (54.5%)	
Other Outpatient Services	4,146 (4.4%)	1,863 (3.33%)	1,910 (6.7%)	156 (5.6%)	215 (6.2%)	
Primary Care Community-Based Outpatient Clinic	36,756 (39.3%)	24,326 (43.5%)	9,365 (32.7%)	1,186 (42.2%)	1,209 (34.7%)	
<b>Distance (miles) to Clinic (mean/SD)</b>	18.5 (20.9)	18.9 (20.8)	17.7 (20.7)	18.0 (22.9)	21.1 (25.0)	<0.001
<b>Underserved (%)</b>	23,983 (25.3%)	14,237 (25.1%)	7,153 (24.43%)	1,051 (37.2%)	1,131 (32.5%)	<0.001

**Note:** 2,501 CRH users receiving care that was uncategorized not reported

5,251 Veterans identified as multi-race (2%), AI/AN (2%) Asian (&lt;1%) Native Hawai'ian (&lt;1%)



**Table 3:**

Types of clinicians within Clinical Resource Hubs for Year 1 (Fiscal Year 2020)

	Clinical pharmacy specialists	Psychologists	Social workers	Nurse Practitioners and Physician Assistants	Physicians	Registered Nurses
<b>Primary Care (N =195)</b>	42 (22%)	9 (4%)	2 (1%)	41 (21%)	87 (45%)	14 (7%)
<b>Mental Health (N = 351)</b>	19 (5%)	161 (46%)	50 (14%)	12 (3%)	94 (27%)	15 (4%)