# Veterans' Ambulatory Care Experience During COVID-19: Veterans' Access to and Satisfaction with Primary Care Early in the Pandemic

**Brice Thomas** ( bricetms@gmail.com )
Baylor College of Medicine https://orcid.org/0000-0001-6962-2199
**Aanchal Thadani**
Baylor College of Medicine
**Patricia Chen**
Baylor College of Medicine
**Israel Christie**
Baylor College of Medicine
**Lisa M Kern**
Weill Cornell Medicine
**Mangala Rajan**
Weill Cornell Medicine
**Himabindu Kadiyala**
Michael E DeBakey VA Medical Center
**Drew Helmer**
Michael E DeBakey VA Medical Center

**Research Article**

**Keywords:** access, COVID-19, primary care, pandemic, satisfaction, veterans

**Posted Date:** March 10th, 2022

**DOI:** https://doi.org/10.21203/rs.3.rs-1053050/v1

## Abstract

# Background

The COVID-19 pandemic caused widespread practice changes to healthcare in all settings, but little is known about veterans' experience with primary care during the early phase of the pandemic.

# Objective

To characterize how COVID-induced changes affected the ambulatory care experience, specifically access and satisfaction, among Veteran users of primary care at a large urban Veterans Health Administration (VHA) medical center.

# Design:

We employed a semi-structured telephone interview consisting of 56 questions to capture quantitative and qualitative data. We randomly selected potential participants from among patients who were scheduled to see any of 31 primary care physicians between March 1 – June 30, 2020 at a single location. We evaluated quantitative data using descriptive statistics and categorized open-ended qualitative responses using a matrix analysis.

# Participants:

The study sample of 40 veterans largely consisted of men, almost equally split between non-Hispanic Whites and African Americans. The majority (22, 55%) of the veterans were members of Priority Group 1, the VHA eligibility group that requires either a greater than 50% disability rating or deemed unemployable. Many of the veterans had other insurance coverage, including TRICARE (21, 52.5%), Medicare (8, 20%), and private insurance (5, 12.5%).

# Main Measures/Approach:

We sought to characterize veterans' perceptions of access to and satisfaction with their primary care experience at VHA and their non-VHA primary care source. We also explored the context of veterans' daily lives during the pandemic, knowing that many people's mental health, relationships, and employment were impacted.

# Key Results:

Veterans completed (mean 2.6) more appointments than scheduled (mean 2.3) due to urgent or 'sick' visits with a shift to virtual modalities like telephone (mean: 2.1) and video (mean: 1.5). Those who reported decreased access to care (27, 67%) as compared to before the pandemic cited administrative barriers (15, 56%) and lack of physician availability (9, 33%) as key factors. While most veterans (31, 84%) were highly satisfied with their care, 9 (24%) reported a decrease in satisfaction since the pandemic. The few veterans who utilized non-VHA physicians were slightly more satisfied with their care. None of the veterans interviewed contracted COVID-19 during the study period, but many experienced indirect psychosocial effects such as the worsening or development of mental health conditions (6, 15%), anxiety concerning the virus (12, 30%), social isolation (8, 20%).

# Conclusions

While the quantitative data suggests continued adequate access and satisfaction, the numerous comments regarding barriers to care illustrate a disconnect between veterans' perceived experience and the quantitative findings. Given the VHA system's efforts to scale up virtual care and pandemic-related messaging, the comments of this sample of veterans suggest that enhanced or different approaches may be warranted to maintain perceptions of access and satisfaction with primary care during times of crisis.

# Background

The COVID-19 pandemic massively impacted life in the United States, leading to unprecedented disruptions to daily life and over 600,000 deaths as of July 2021.[1] The pandemic also impacted health care utilization in all settings. For example, while the use of telehealth rapidly increased to address needed care,[2] more than one in three adults (36%) reported delaying or foregoing care due to worry about exposure or lack of services.[3] In addition to deaths directly caused by COVID-19, delays in care likely contributed to a 22.9% increase in all-cause mortality in the US population from March 1, 2020, to January 1, 2021.[4]

Similar to other health care systems, the VHA system rapidly shifted to virtual care in the beginning of the pandemic.[5] Little is known, however, about the pandemic's effects on the overall ambulatory care experience of veterans who primarily seek care within the Veterans' Health Affairs (VHA) system.

We sought to characterize how the COVID-19 pandemic and its resultant disruptions impacted the experience of veterans who utilize ambulatory care services in the VHA system especially in term of access, the ability to obtain healthcare services when needed,[6] and satisfaction, the extent to which patients are content with the care received.[7]

We also explored the context of veterans' daily lives during the pandemic, knowing that many people's mental health, relationships, and employment were impacted. We suspected that these contextual factors

impacted veterans' lives as much or more than systemic changes to the delivery of their health care.

## Methods

# Overview:

After receiving institutional review board approval (IRB) from Baylor College of Medicine and VA Research and Development Committee approval, we performed a mixed-methods evaluation of access and satisfaction among current users of primary care. This was performed in partnership with primary care leadership of the Michael E. DeBakey VA Medical Center in Houston, Texas.

# Population and Sampling:

Primary care leadership identified 31 primary care providers (PCPs) out of 40 at a single location appropriate for inclusion (full time clinic, active panel). Using an online random number generator, we selected 5 patients from each physician's list with scheduled appointments from March 1 – June 30, 2020, and mailed them a letter explaining the project and how they could opt out. Our research team mailed a total of 155 letters and received 0 opt-out responses. Trained team members called the patients approximately 10 days after the letters were mailed and requested verbal consent to conduct the semi structured interview. If a patient did not respond on first try, two additional attempts were made on subsequent business days at different times. Upon consenting to participation, co-authors (either BT, AT) conducted the interview with the patient. The interviewer recorded responses and any additional notes into an excel database stored on a secured drive accessible only to specific research personnel.

We framed our questions around the March-June 2020 period to coincide with the scheduled primary care appointments and at the beginning of the pandemic when Houston experienced its first wave of COVID infections. The number of infections in the Houston area increased from a total of 5 new cases on March 4th to almost 2,000 daily cases by June 30$^{th}$[8]. In mid-March, hospitals and other healthcare providers dramatically limited routine in-person clinical encounters and procedures, while still providing inpatient and emergency care; these restrictions were relaxed slightly in May and June. While we conducted the initial interviews in July and August 2020, Houston infection rates decreased from 2,000 new cases on July 1st to 119 new cases on August 23rd. We conducted 10 additional interviews in September 2020, when new daily cases rose again, ranging from 58 to 443.[8] No effective outpatient treatments were available for COVID infections during these periods other than supportive care, and no vaccines were yet available.

# Survey Instrument:

We designed a semi-structured telephone interview script with a mix of 56 closed and open-ended questions in a patient-oriented sequence. The majority of the questions were adopted with appropriate modification from the VA Survey of Health Experiences of Patients (SHEP), which uses many items from the Hospital Consumer Assessment of Health Providers and Systems (HCAHPS), a healthcare industry

standard.[9] SHEP is used to assess patients' perception of their healthcare experience and includes topics such as ease of access to care and communication with providers. Testing of the script indicated a completion time of less than 45 minutes including opportunities for patients to elaborate on their experiences and concerns. The survey included questions on: access (9 items), fragmentation (3 items), coordination (10 items), continuity (4 items), satisfaction/patient experience (13 items) and sociodemographic (2 items). Interviewers wrote down quotes from the open-ended questions, which were later used to identify themes.

# Data Collection:

Patients were consented and included in our study on a rolling basis in July and August 2020 until we reached our initial saturation and recruitment goal of 30. After presenting preliminary findings to a community engagement committee composed of veterans, we altered our initial survey by adding questions specific to veterans' perceptions of VHA vs. non-VHA care and removing questions found to be less relevant. We then completed an additional 10 interviews using the altered survey in September 2020. A total of 40 interviews were conducted for this study. Three of these were partial interviews due to the veterans' desire to end the interview due to other commitments. We obtained patient demographic data (e.g., age, sex, race/ethnicity, percentage of service-connected disability) from the VHA's electronic medical record to supplement the survey data.

# Data Analysis:

We evaluated quantitative data using descriptive statistics, e.g., mean, standard deviation (SD), range, percentage. Responses to the open-ended questions and other narrative responses recorded during the interviews were extracted from the response database and compiled into a qualitative response database. Open-ended responses and veteran quotes were first assessed for over-arching themes by authors BT and AT after which authors BT, AT, and DH employed a matrix analysis to further categorize the recorded quotes into over-arching themes.[10] Disagreement was resolved by consensus. Qualitative findings were further examined and triangulated with quantitative results with a focus on access, satisfaction, and comparisons of perceptions of VHA and non-VHA care changed during the pandemic. Psychosocial factors related to the pandemic emerged as important context.

# Results

Table 1

| Patient Characteristics | | N (%) | Mean (SD, range) |
|---|---|---|---|
| Age (years) | | | 62.3 (SD 14.8, 30-93) |
| Sex | Male | 27 (67.5) | |
| | Female | 13 (32.5) | |
| Race | White | 21 (52.5) | |
| | Black or African-American | 19 (47.5) | |
| Ethnicity | Not hispanic or latinx | 33 (82.5) | |
| | Hispanic or latinx | 6 (15) | |
| | Unknown | 1 (2.5) | |
| Health Rating | Excellent | 1 (2.5) | |
| | Very Good | 2 (5) | |
| | Good | 18 (45) | |
| | Fair | 13 (32.5) | |
| | Poor | 6 (15) | |
| Marital Status | Married | 14 (35) | |
| | Never married | 7 (17.5) | |
| | Divorced | 13 (32.5) | |
| | Separated | 3 (7.5) | |
| | Widowed | 3 (7.5) | |
| Service Connection % | None | 13 (32.5) | |
| | 0 - 40 | 5 (12.5) | |
| | 50 - 90 | 15 (37.5) | |
| | 100 | 7 (17.5) | |
| Disability | Yes | 11 (27.5) | |
| | No | 29 (72.5) | |
| Non-VHA Healthcare Insurance | Medicare | 8 (20) | |
| | TRICARE | 21 (52.5) | |
| | Private | 5 (12.5) | |

| Patient Characteristics | N (%) | Mean (SD, range) |
|---|---|---|
| None | 6 (15) | |

Demographics: The study sample was largely non-Hispanic men, almost equally split between White and African American racial categories. Approximately half (47.5%) of the study sample had greater than 70% Service Connection, indicating the presence of a chronic condition acquired or exacerbated by military service for which VHA care is provided at no cost to the Veteran. Nearly half (47.5%) of participants rated their health as fair or poor. In addition, 22 (55%) of the study sample were members of Priority Group 1, the VHA eligibility group which requires either a disability rating greater than 50% or unemployability. Only 3 (7.5%) veterans interviewed belonged to Priority Group 8, which meant they had household incomes above the VHA income eligibility threshold. Many of the veterans had other insurance coverage, including TRICARE (21, 52.5%), Medicare (8, 20%), and private insurance (5, 12.5%).

Table 2

| Domain | Survey Question | Answer Choices | N (%) | Mean (SD, median, IQR) |
|---|---|---|---|---|
| Access | 3. When was the last time you were able to speak to any doctor about your care? | Yesterday | 7 (17.5) | |
| | | 2-13 days | 11 (27.5) | |
| | | 14+ days | 21 (52.5) | |
| | | No response | 1 (2.5) | |
| | 3a. VA or non-VA? | VA | 38 (95) | |
| | | non-VA | 1 (2.5) | |
| | | No response | 1 (2.5) | |
| | 3b. Type of encounter | In-person | 15 (37.5) | |
| | | Telephone | 22 (55) | |
| | | Video | 2 (5) | |
| | | No response | 1 (2.5) | |
| | 3c. Type of practitioner | Primary care | 21 (52.5) | |
| | | Specialist | 15 (37.5) | |
| | | Emergency | 1 (2.5) | |
| | | No response | 3 (7.5) | |
| | 4. Do you have a personal doctor you usually see if you need a check up, want advice about a health problem, or get sick or hurt? | Yes, VA | 37 (92.5) | |
| | | Yes, non-VA | 1 (2.5) | |

| Domain | Survey Question | Answer Choices | N (%) | Mean (SD, median, IQR) |
|---|---|---|---|---|
| | | Yes, both | 1 (2.5) | |
| | | No | 1 (2.5) | |
| | | No response | 0 | |
| | 5a. Did you contact this doctor's office for an illness, injury, or condition that needed care right away? | Yes | 23 (57.5) | |
| | | No | 16 (40) | |
| | | No response | 1 (2.5) | |
| | 6a. How many days have you had to wait for an appointment when you needed care right away? | N/A (didn't try to get an appointment) | 11 (27.5) | |
| | | same day | 5 (12.5) | |
| | | 1 day | 4 (10) | |
| | | 2-3 days | 6 (15) | |
| | | 4-7 days | 0 | |
| | | More than 7 days | 6 (15) | |
| | | No response | 8 (20) | |
| | 7a. How many appointments did you have scheduled? (w/ PCP) | 0 | 6 (15) | 2.25 (2.2) |
| | | 1 | 12 (30) | |
| | | 2 | 9 (22.5) | |
| | | 3 | 6 (15) | |
| | | 4 | 2 (5) | |
| | | 5 | 3 (7.5) | |
| | | 9 | 1 (2.5) | |

| Domain | Survey Question | Answer Choices | N (%) | Mean (SD, median, IQR) |
|---|---|---|---|---|
| | | 10 | 1 (2.5) | |
| | | No response | 0 | |
| | 9a. How many of those encounters did you actually complete? | 0 | 1 (2.5) | 2.6 (2.2) |
| | | 1 | 10 (25) | |
| | | 2 | 8 (20) | |
| | | 3 | 6 (15) | |
| | | 4 | 1 (2.5) | |
| | | 5 | 2 (5) | |
| | | 9 | 1 (2.5) | |
| | | 10 | 1 (2.5) | |
| | | No response | 10 (25) | |
| | 9b. Type of encounter | In-person | | 1.9 (1.6) |
| | | Telephone | | 2.1 (1.7) |
| | | Video | | 1.5 (0.6) |
| | 15. Compared to before the COVID-19 pandemic, have you had to miss more appointments than since the start of the pandemic and up to now ? | Yes | 17 (42.5) | |
| | | No | 19 (47.5) | |
| | | No response | 4 (10) | |
| | 17a. I had trouble scheduling my primary care appointments | Yes (VA-related) | 9 (22.5) | |
| | | Yes (non-VA related) | 0 | |

| Domain | Survey Question | Answer Choices | N (%) | Mean (SD, median, IQR) |
|---|---|---|---|---|
| | | No | 27 (67.5) | |
| | | No response | 4 (10) | |
| | 17e. I waited too long to see the provider | Yes (VA-related) | 15 (37.5) | |
| | | Yes (non-VA related) | 0 | |
| | | No | 22 (55) | |
| | | No response | 3 (7.5) | |
| Satisfaction | 31. Using any number from 0 to 10, where 0 is the worst doctor possible and 10 is the best doctor possible, what number would you use to rate this doctor? (VHA) | 0 | 1 (2.5) | 8.6 (2.1, 9, 8-10) |
| | | 1 | 0 | |
| | | 2 | 0 | |
| | | 3 | 0 | |
| | | 4 | 0 | |
| | | 5 | 1 (2.5) | |
| | | 6 | 1 (2.5) | |
| | | 7 | 4 (10) | |
| | | 8 | 6 (15) | |
| | | 9 | 5 (12.5) | |
| | | 10 | 16 (40) | |
| | | No response | 6 (15) | |
| | 36. Using any number from 0 to 10, where 0 is the worst doctor possible and 10 is the best doctor possible, what number would you use to rate this doctor? (non-VHA) | 0 | 0 | 9.5 (1.2, 10, 9.25-10) |
| | | 1 | 0 | |

| Domain | Survey Question | Answer Choices | N (%) | Mean (SD, median, IQR) |
|---|---|---|---|---|
| | | 2 | 0 | |
| | | 3 | 0 | |
| | | 4 | 0 | |
| | | 5 | 0 | |
| | | 6 | 0 | |
| | | 7 | 1 (2.5) | |
| | | 8 | 0 | |
| | | 9 | 0 | |
| | | 10 | 5 (12.5) | |
| | | No response | 34 (85) | |
| | 39. Overall, how satisfied are you with the health care you have received at your VA primary care facility since March 1st (start of COVID-19 pandemic)? | Very dissatisfied | 1 (2.5) | |
| | | Dissatisfied | 2 (5) | |
| | | Somewhat dissatisfied | 1 (2.5) | |
| | | Somewhat satisfied | 2 (5) | |
| | | Satisfied | 9 (22.5) | |
| | | Very satisfied | 22 (55) | |
| | | No response | 3 (7.5) | |
| | 40. Overall, how satisfied are you with the health care you have received at your non-VA provider/s? | Very satisfied | 5 (83.3) | |
| | | Satisfied | 0 | |
| | | Somewhat satisfied | 1 (16.7) | |
| | | Dissatisfied | 0 | |

| Domain | Survey Question | Answer Choices | N (%) | Mean (SD, median, IQR) |
|---|---|---|---|---|
| | | Very dissatisfied | 0 | |
| | | No response | 34 | |
| | 41. How does your satisfaction with the health care you have received compare with the time before March 1st (start of COVID-19 pandemic)? | More satisfied | 1 (2.5) | |
| | | The same | 27 (67.5) | |
| | | Less satisfied | 9 (22.5) | |
| | | No response | 3 (7.5) | |
| VA vs. non-VA | 29. Since March 1st (start of COVID-19 pandemic), has Dr. [VA provider associated with patient] spent enough time with you? | Yes | 23 (57.5) | |
| | | No | 9 (22.5) | |
| | | Not sure | 2 (5) | |
| | | Prefer not to answer | 0 | |
| | | No response | 6 (15) | |
| | 30. Has anyone in this doctor's office talked with you about specific goals for your health? (VA provider) | Yes | 21 (52.5) | |
| | | No | 12 (30) | |
| | | No response | 7 (17.5) | |
| | 34. Since March 1st (start of COVID-19 pandemic), has Dr. [non-VA provider associated with patient] spent enough time with you? | Yes | 6 (15) | |
| | | No | 0 | |
| | | Not sure | 0 | |
| | | Prefer not to answer | 0 | |
| | | No response | 34 (85) | |
| | 35. Has anyone in this doctor's office talked with you about specific goals for your health? | Yes | 5 (12.5) | |

| Domain | Survey Question | Answer Choices | N (%) | Mean (SD, median, IQR) |
|---|---|---|---|---|
| | (non-VA provider) | | | |
| | | No | 1 (2.5) | |
| | | No response | 34 (85) | |
| Psychosocial | 17d. I felt anxiety over being exposed to or exposing others to COVID-19 | Yes (VA-related) | 12 (30) | |
| | | Yes (non-VA related) | 0 | |
| | | No | 26 (65) | |
| | | No response | 2 (5) | |
| | 24. Have you received information about what to do if you need COVID-19 related care from your doctor? | Yes (VA provider) | 15 (37.5) | |
| | | Yes (non-VA provider) | 0 | |
| | | No | 23 (57.5) | |
| | | No response | 2 (5) | |
| | 27. Have you needed COVID-related care? | Yes | 1 (2.5) | |
| | | No | 37 (92.5) | |
| | | No response | 2 (5) | |
| | 28. Have you received COVID-related care? | Yes | 0 | |
| | | No | 24 (60) | |
| | | No response | 16 (40) | |

Table 3

| | | |
|---|---|---|
| **Access** | | |
| Decreased Access | Personal barriers | “At the start, I did have to miss appointments because of my job being affected by the pandemic. I had to choose between missing work and missing appointments.” - Veteran 47 |
| | Administrative barriers | “I’d call the operator, I’d tell them my doctor’s name, they couldn’t find him, they would transfer me to the clinic, then be on hold at the clinic. Finally, the phone would hang up.” - Veteran 25 |
| | | It is a problem to have to drive over there and go through the hassle of waiting outside, being screened, and all of that. Sometimes when I think about having to go in, I just want to cancel.” - Veteran 70 |
| | Lack of physician availability | “They are not reaching out like they used to. I used to love my doctors, but they are not on top of their job anymore. They give me less appointments, they forget about me.” - Veteran 23 |
| | Waiting longer than normal to be seen | “They had to reschedule a colonoscopy 4-5 times. They had seen a few polyps last time so I really wanted to get it done but had to wait.” - Veteran 66 |
| | Unable to get care | “I was supposed to get a mammogram but haven’t heard from anyone.” - Veteran 10 |
| | | “I haven’t gotten needles in 3 months, I’m having to borrow my husband’s.” - Veteran 23 |
| No change in access | | “It’s no different than it was before.” - Veteran 31 |
| | | “The only difference is I have to talk to her on the phone instead of going in person.” - Veteran 45 |
| **Satisfaction** | | |
| Less satisfied | | “Since the pandemic, when I am on the phone with [my PCP] I can tell she seems overwhelmed and overworked. I just feel rushed whenever I am in the hospital.” - Veteran 47 |
| | | “From the time I called to when I spoke to a nurse, it was an hour and a half...They seem to be very behind and not very well staffed.” - Veteran 5 |
| | | “If I got sick I wouldn’t know what to do or where to go.” - Veteran 53 |
| | Telehealth inadequate to meet care needs | “I don’t do videos.” - Veteran 26 |
| | | “The biggest difficulty has to be with my mental health. I am going to group therapy and it is over the phone now. It’s hard to connect and get all that I usually do out of the program. I would participate more if it were in person.” - Veteran 47 |

| | | |
|---|---|---|
| **Access** | | |
| | | “I want a face to face with a doctor who will address my issues.” - Veteran 5 |
| | | “Sometimes when someone calls to say it’ll be over the phone, I say “the hell with it.”” - Veteran 55 |
| | | “A lot of people aren’t getting the care they need. They need a more hands-on approach. You cannot take care of a person online.” - Veteran 89 |
| | Expressed understanding about the changes | “It’s literally night and day, not for lack of caring on the part of the doctors and nurses.” - Veteran 5 |
| | | “This is all over the world. This isn’t just Houston. I understand why I can’t see [my PCP] right now.” - Veteran 10 |
| | | “I understand why things at the VA are worse but I’m still unhappy about it.” - Veteran 25 |
| No change | | “[My satisfaction] has not really changed...I know [my PCP] is busy, so I lay back until she calls me because I want those who are sick to get the treatment they need.” - Veteran 33 |
| | | “I am the type of person that I don’t really complain too much. I figure other people need help right now.” - Veteran 77 |
| | | “I’m 100% disabled. I don’t have to be anywhere, do anything. I’ve just been staying at home. Things haven’t really changed.” - Veteran 21 |
| **VHA vs. non-VHA Care** | | |
| | | “The accessibility is the reason I changed. Compared to the VA doctor, I believe he pays me more attention. I feel like the VA doctors have been stretched too thin for years. The primary care doctor on the outside seems to care for me as an individual...I have been very satisfied with all of the VA doctors, it’s just the accessibility that has been difficult…” - Veteran 65 |
| | | “I have not had any problem with my primary care doctor or any doctor at the VA before the COVID pandemic. It is just hard to get in there...I feel like I have to see the non-VA doctor more because the VA people keep cancelling...I see doctors out of the VA more because it’s so hard to see VA doctors” - Veteran 88 |
| **Psychosocial Effects of the Pandemic** | | |
| | Mental health | “I am extremely stressed out...Not sleeping right. Not eating right...This has been very hard...My mental health has taken a toll.” Veteran 5 |
| | | “I have a history of PTSD and anxiety. It has my anxiety at a 10 everyday when I wake up, especially the uncertainty.” - Veteran 47 |

| Access | | |
|---|---|---|
| | | “Initially I was really depressed. I’ve been scared to be around other people...I have a lot of mental anguish.” - Veteran 10 |
| | | “It’s a lot of stress being in the house cooped up...I would like to go to the park but I can’t walk with my condition. My PTSD is giving me crazy nightmares at night and that is added stress. I lost my...brother...and I couldn’t even go to his funeral.” - Veteran 88 |
| | | “I have been depressed a lot lately, just want to be kinda to myself. I can cry at the drop of a dime. Once I get my daughter stabilized, I want to talk to my therapist.” - Veteran 83 |
| | Anxiety over being exposed to or exposing others to COVID-19 | “I suffer from anxiety attacks. It has increased since corona...I can’t be around anyone because I’m too sick.” - Veteran 23 |
| | Social Isolation | “I feel like it has restricted me from seeing most of the people I am used to seeing...I stay inside and away from people.” - Veteran 43 |
| | | “The only thing that has been tough is the socialization. I feel like I am almost isolated at this point. I have a care group with vets for PTSD and I was attending that and it was helpful...We used to meet once a week. That has dried up and that is sorely missed.” - Veteran 49 |
| | | “I haven’t been able to counsel men at the Christian drug rehab. I have been home a lot.” - Veteran 17 |
| | Physical inactivity | “It has affected my activities. I used to go out to eat and I used to walk around the grocery store for exercise. I can’t do either of those now.” - Veteran 65 |
| | Occupational/Financial Changes | “At the start, I did have to miss appointments because of my job being affected by the pandemic. I had to choose between missing work and missing appointments.” - Veteran 47 |
| | | “I did get furloughed when it happened. My mom also stopped working. Besides our jobs, I think this has been a good thing. We have had time to focus on what is important and to become closer as a family.” - Veteran 24 |

# Access:

Considering 37 full and 3 partial (about 50% completed) interviews, the number of self-reported primary care encounters per veteran was high during the reference period [mean 2.6 (SD 2.2)]; veterans reported a greater number of primary care encounters completed than scheduled [mean 2.3 (SD 2.2)], suggesting some same-day or urgent visits. Veterans utilized different modes for their total ambulatory encounters: in-person [mean 1.9 (SD 1.6)], telephone [mean 2.1 (SD 1.8)], and video [mean 1.5 (SD 0.6)]. The majority

of veterans (92.5%) reported having a VHA physician who serves as the primary care provider (PCP) from whom they usually seek care, while 2 veterans (5%) stated their usual PCPs were outside the VHA system. When asked about their most recent encounter with their PCP, 15 (37.5%) veterans spoke to their PCP in person, 22 (55%) by phone, and 2 (5%) by video. Thirteen veterans (33%) reported no change in their ability to see their PCP since the start of the pandemic. A sizable minority (9, 22.5%) indicated more difficulty scheduling appointments, and 17 veterans (42.5%) reported a greater number of missed appointments since March 2020. Veterans were asked how long they had to wait for an appointment for care they needed right away: 9 (22.5%) reported waiting 1 day or less, and 12 (30%) noted waiting 2 or more days. The remainder 19 (47.5%) did not seek care needed right away. When asked if their physician had spent enough time with them since the start of the pandemic, 9 veterans (22.5%) said their physician had not.

Twenty-seven (67%) of the veterans reported decreased access to care through their comments. Matrix analysis of quotes from these 27 veterans showed 15 (56%) noted administrative barriers as a source of frustration. These administrative barriers included frequent appointment changes, cancellations and difficulty with phone communication (including long wait times, dropped, unanswered, and unreturned phone calls). The next most cited barrier category was lack of physician availability (9, 33%). Notably, 7 (26%) of the 27 veterans who reported challenges in access indicated that telehealth encounters were inadequate to meet their needs.

# Satisfaction:

31 (84%) of respondents were either very satisfied or satisfied with the health care received at their VA primary care facility since March 1st. When asked to compare their satisfaction with their health care experience during the study period to before the pandemic 27 veterans (73%) felt it was the same, 1 (3%) was more satisfied, and 9 (24%) were less satisfied with their experience. When veterans were asked to rate their VA primary care physician on a scale of 1-10, the majority (21, 52.5%) rated their physician 9 or 10 out of 10.

Matrix analysis of direct quotes from the veterans revealed that 25 (62.5%) did not have a change in their satisfaction with their health care since the pandemic. Two veterans (5%) reported they were dissatisfied with their care before the pandemic began, and 8 (20%) veterans reported decreased satisfaction during the reference period. However, 7 (17.5%) veterans expressed understanding the reasons for the changes seen in accessing their health care due to the pandemic. Direct quotes presented in Table 3 illustrate these findings.

# VHA vs. non-VHA:

Out of 40 veterans surveyed, one veteran utilized a non-VHA PCP and 1 veteran had both VHA and non-VHA PCPs; 6 veterans saw non-VHA physicians of any kind. When asked if their VHA PCP spent enough time with them, 68% of respondents responded ‘yes’, in comparison to both veterans (100%) who saw a non-VHA PCP. When asked if their VHA PCP talked to them about specific goals for their health, 64% of respondents said ‘yes,’ whereas 83% of veterans who saw a non-VHA physician of any kind reported they

talked to them about specific goals for their health. Participants were also asked to rate their VHA PCP on a scale of 1-10 (where 0 is the worst provider possible and 10 is the best provider possible). The mean rating of VHA PCPs was 8.6 out of 10 (SD 2.0, range = 0-10). We asked veterans to rate their non-VHA physicians of any kind (due to the small number of veterans who saw a non-VHA PCP), and they rated them on average 9.5 out of 10 (SD 1.2, range = 7-10). When asked about their overall satisfaction with their VHA physicians, 60% of respondents were very satisfied with their care, whereas 83% of veterans who had non-VHA physicians of any kind were very satisfied with their non-VHA care. When asked if they had received information about what to do if they needed COVID-related care, 37.5% of veterans reported that their VHA physician gave them this information, compared to 0% of veterans who saw non-VHA physicians. 57.5% of participants reported not receiving information about what to do if they needed COVID-related care from any doctor.

From the responses to the open-ended questions, indications of relative dissatisfaction with VHA care compared to non-VHA care were mostly linked to perceived differences in access. Direct quotes located in Table 3 provide examples.

# Psychosocial effects of the COVID-19 pandemic:

None of the veterans reported directly experiencing COVID-19 at the time of interview and only 1 (2.5%) veteran reported needing COVID-19 testing. Many of our veteran participants, however, spoke at length about changes to their everyday lives and mental health. In response to open-ended questioning, 6 (15%) veterans reported worsening of existing mental health conditions or the development of new mental health concerns. Twelve (30%) veterans felt anxiety about being exposed to or exposing others to the virus. In addition, 8 (20%) veterans reported feeling more socially isolated and 3 (7.5%) reported being less physically active. Direct quotes located in Table 3 illustrate these findings.

# Discussion

A combined analysis of the quantitative data and direct quotes from veteran participants provides a window into the effects of the early COVID-19 pandemic on the health care experience of veterans engaged in primary care at a large VA Medical Center. Our participants perceived new difficulty with accessing primary care despite frequent encounters, and a substantial minority expressed decreased satisfaction with their care at the beginning of the COVID-19 pandemic. In addition, veterans frequently reported psychosocial stressors related to the COVID pandemic and their consequences, including worsening of mental health conditions and feelings of isolation.

We focused our analysis on access and satisfaction, as well as perceived differences between VHA and non-VHA care. Though the quantitative data did not suggest a decrease in access, but a shift to virtual means, the narrative comments indicated veterans perceived more difficulty in accessing care during the first four months of the COVID-19 pandemic than prior to the pandemic. Explanations deduced from the interviews included inadequate time with their provider, difficulty scheduling provider visits due to administrative barriers, and the inadequacy of telehealth services. Due to stringent screening procedures

and access protocols, only patients with scheduled appointments were allowed into the facility. No patient attendants were allowed with few exceptions (Personal communication with Himabindu Kadiyala, Director, PrimeCare). This may have contributed to patients' perceptions of lack of access. Satisfaction ratings implied that many of these barriers existed prior to, but were exacerbated by, the pandemic. The majority of veterans had no change in satisfaction in their overall care experience; however, a sizable minority were less satisfied. Of note, VHA physicians were rated favorably overall.

While many of our veterans had access to non-VHA ambulatory care covered by TRICARE and Medicare, few reported utilizing these options, which is consistent with available literature.[11] Even with the COVID pandemic-related changes, only six veterans chose to receive care outside of the VHA system during the reference period. Direct quotes from veterans who sought non-VHA care suggested they did so because of perceived ease of access to non-VHA care and inadequate resources for care at the VHA. The frequency of non-VHA use in this sample appears lower than the general population of VHA users and may reflect a sicker, more service-connected group of VHA users. For example, previous research showed that more than 60% of Medicare eligible older veterans with diabetes received at least some care from non-VHA physicians.[12] This sample had a relatively large portion of African Americans (48%) as compared to both the overall veteran population who utilize VHA care (about 15%)[13] and the general Houston population.[14] Given the disparities in access to private sector health care faced by people of color, this could have impacted their ability or choice to utilize VHA vs. non-VHA care.[15]

On a scale from 0-10, six respondents rated their non-VHA physicians 9.5 (median: 10, IQR: 9.25-10 compared to the 34 respondents who only used VHA PCPs and rated them an average of 8.6 (median: 9, IQR: 8-10). Also, a higher percentage of veterans who sought non-VHA care were 'very satisfied' with their experience. This could be due in part to the reported perception of more time spent with their non-VHA physicians and their non-VHA physicians more frequently addressing patient goals for their health. Our understanding of the relationship between VHA and non-VHA care was limited by the small number of veterans in our sample (6 of 40) who did seek care from non-VHA physicians, but our findings suggest that veterans perceived non-VHA care to be more accessible during the early response to the COVID pandemic. This is an important finding as there are few direct comparisons between VHA and non-VHA care and the VHA may wish to adjust its response to pandemics and other disasters to ensure a perception of continued access to care, in line with the private sector.[16] However, this should be balanced by the fact that the COVID-19 pandemic, especially during the period referenced in this study, was associated with much uncertainty and healthcare facilities responded with the best information and approaches available to them at the time. Restricting access to ambulatory care was a widespread response to overwhelmed healthcare and important beneficial impact on other, more urgent demands, such as inpatient care of acutely and critically ill patients.

While none of our participants had experienced COVID-19 at the time of the interviews, a substantial proportion of the veterans reported the exacerbation and/or development of mental health conditions such as anxiety and PTSD even without direct questioning. Participants attributed this to multiple

psychosocial stressors related to the pandemic, including less opportunities for social engagement ("I stay inside and away from people." – Veteran 45) and physical activity, increased occupational stress and financial uncertainty ("I did get furloughed when [the pandemic] happened." – Veteran 24), and general anxiety concerning the virus ("I suffer from anxiety attacks. It has increased since corona..." – Veteran 23). Notably, a substantial proportion (17.5%) of the veterans did not feel that telehealth was meeting their healthcare needs, with some specifically mentioning their mental health care. In addition, the majority of veterans reported not receiving guidance from a physician on how to seek COVID-19-related care, perhaps contributing to their feelings of uncertainty. Of note, however, more veterans reported receiving this information from VHA providers than non-VHA providers.

During this time, the local VA medical center was communicating daily COVID-related updates, guidance to access care, and resources through its website, social media accounts, and occasional text messages to registered VHA users (Personal communication with Maureen Dyman, Public Affairs Officer). Given the high prevalence of mental health conditions among veterans who use VHA primary care, exploring ways to enhance communication about accessing care, including virtual mental health, represents an important opportunity to improve the veteran care experience.

VHA PCPs, nurses and support staff were pulled from primary care responsibilities to augment several other critical COVID-related care responses, including staffing the inpatient COVID service and public health screening activities at the campus (Personal communication with Himabindu Kadiyala, Director, PrimeCare). These activities created real shortages among primary care personnel which were felt by our respondents. Some respondents recognized the cause of the decreased access to primary care, but not all. Once again, VHA communicated extensively about availability of services and how to receive urgent and emergent care and encouraged telephone and video modalities for more routine encounters to overcome the loss of primary care capacity and restricted physical access, but perhaps the messages and channels used could be re-evaluated and their effectiveness more closely appraised during situations like the early pandemic response.

Our findings suggest several opportunities to improve the veteran care experience. While most veterans were able to access care from the VHA during the pandemic, as evidenced by the report of completed encounters, there was a general sense of difficulty in accessing that care. Perhaps, the greatest challenge to the VHA system is to enhance veterans' perception of access.

This study suggests that the VHA system can benefit veterans through more streamlined, timely, and consistent communication with veterans. In addition to the online and social media presence, more robust telephone triage and response might address concerns we heard about dropped, unanswered, and unreturned phone calls, for example. Given the age, multiple chronic illnesses, and mental health issues of the population, the telephone call center response may be the most important means of reassuring and assisting veterans.

Our study highlights the importance of the psychosocial impact of COVID-related factors that impact veterans' lives and may color their healthcare experience. Some of these factors are outside the scope of

the VHA system but given the high prevalence of mental health conditions among veterans who use the VHA, the VHA system could help veterans by further expanding the visibility and reach of their virtual mental health care services, which were in fact bolstered during the pandemic. Lessons from this pandemic could be used to better advertise, communicate, and engage veterans on various virtual platforms to more fully meet their care needs.[17,18]

Finally, while efforts were made by the VHA system to communicate with veterans about the pandemic – apparent from the results given the higher percentage of VHA providers communicating about COVID compared to non-VHA physicians – many veterans still perceived a lack of communication. Future work could explore how the content, framing, and timing of these communications impact perceptions of access and satisfaction.

Strengths of our study include our study sample composed of 'real world' participants, which approximates the local VHA user population. Our findings are enhanced by the combination of quantitative and qualitative results. Further, incorporating the feedback provided by the veteran community engagement community into the research activities enhanced the rigor and relevance of the work. Limitations include this being a cross-sectional study with self-reported information, which makes our results susceptible to recall bias. Our results may not be generalizable to the larger veteran population due to the small number of participants, who all sought care at a single site.

# Conclusion

The findings of this study serve to illustrate the importance of perceived access and communication among the veteran population, especially during times of increased social stress. Though the quantitative data suggests continued adequate access and satisfaction, the frequent comments regarding barriers to care illustrate a disconnect between veterans' perceived experience and the quantitative findings. Findings pertaining to virtual appointments, health information messaging, and mental health engagement during the early phases of the COVID-19 pandemic can be used to improve the overall care experience for VHA users and other patients, particularly during public health emergencies.

# Abbreviations

| | |
|---|---|
| COVID-19 | Coronavirus Disease 2019 |
| VHA | Veterans' Health Administration |
| IRB | Institutional Review Board |
| VA | Veterans Affairs |
| PCP | Primary Care Physician |
| BT | Brice Thomas |
| AT | Aanchal Thadani |
| DH | Drew Helmer |
| PC | Patricia Chen |
| LMK | Lisa M Kern |
| SHEP | Survey of Health Experiences of Patients |
| HCAHPS | Hospital Consumer Assessment of Health Providers and Systems |
| CPRS | Computerized Patient Record System |
| PTSD | Post-traumatic Stress Disorder |
| SD | Standard Deviation |

# Declarations

### Ethics and Consent to Participate

We received institutional review board approval (IRB) from Baylor College of Medicine and VA Research and Development Committee approval. The research team mailed a total of 155 letters and received 0 opt-out responses. Trained team members called the patients approximately 10 days after the letters were mailed and requested verbal consent to conduct the semi-structured interview. The institutional review board(IRB) from Baylor College of Medicine and VA Research and Development Committeeapproved the use of verbal consent to participate in the study.

### Consent for Publication

Not applicable.

### Availability of Data and Materials

The datasets analyzed during the current study are available from the corresponding author on request.

### Competing Interests

LMK is a consultant to Mathematica, Inc. and to the Brigham & Women's Hospital. The remaining authors declare that they have no competing interests in this section.


### Funding

The research reported here was supported in part by the U.S. Department of Veterans Affairs, Veterans Health Administration, Health Services Research and Development Services at the Center for Innovations in Quality, Effectiveness and Safety (CIN 13-413), Michael E. DeBakey VA Medical Center, Houston, TX.


### Authors' Contributions

BT and AT designed the questionnaire and conducted the interviews with advising from DH. BT, AT, DH, and PC analyzed and interpreted the quantitative and qualitative data. BT, AT, and DH were major contributors in writing the manuscript. HK advised us on patient recruitment. All authors read and approved the final manuscript.


### Acknowledgements

The research reported here was supported in part by the U.S. Department of Veterans Affairs, Veterans Health Administration, Health Services Research and Development Services at the Center for Innovations in Quality, Effectiveness and Safety (CIN 13-413), Michael E. DeBakey VA Medical Center, Houston, TX.


### Disclaimer

The views expressed in this article do not represent the views of the U.S. Department of Veterans Affairs or the United States government.

## References


1. Johns Hopkins University & Medicine Coronavirus Resource Center. *COVID-19 Dashboard.* [Online] 2021. https://coronavirus.jhu.edu/map.html.
2. *COVID-19 transforms health care through telemedicine: Evidence from the field.* Mann, D. M., Chen, J., Chunara, R., Testa, P. A., & Nov, O. 2020, Journal of the American Medical Informatics Association, pp. 1132–1135.
3. Dulce Gonzalez, Michael Karpman, Genevieve M. Kenney, and Stephen Zuckerman. *Delayed and Forgone Health Care for Nonelderly Adults during the COVID-19 Pandemic.* Washington, D.C. : Urban Institute, 2021.
4. *Excess Deaths From COVID-19 and Other Causes in the US, March 1, 2020, to January 2, 2021.* Woolf, Steven, et al. 2021, JAMA, pp. 1786–1789.
5. *Virtual care expansion in the Veterans Health Administration during the COVID-19 pandemic: clinical services and patient characteristics associated with utilization.* Ferguson, Jacqueline, et al. 2021, Journal of the American Medical Informatics Association, pp. 453–462.

6. Millman, Michael. *Access to Health Care in America.* Washington, D.C. : National Academies Press, 1993.
7. *The cost of satisfaction: a national study of patient satisfaction, health care utilization, expenditures, and mortality.* Fenton, Joshua, et al. 2012, JAMA Internal Medicine, pp. 405-411.
8. Harris County / City of Houston COVID-19 Data Hub. *Total Case Counts.* [Online] 2020. https://covid-harriscounty.hub.arcgis.com/pages/cumulative-data.
9. U.S. Department of Veterans Affairs. *Quality of Care.* [Online] August 11, 2021. https://www.va.gov/qualityofcare/apps/shep/barchart.asp.
10. *Matrix analysis as a complementary analytic strategy in qualitative inquiry.* Averill, Bates. 2002, Qualitative Health Research, pp. 855-866.
11. *Veterans' Reliance on VA Care by Type of Service and Distance to VA for Nonelderly VA-Medicaid Dual Enrollees.* Jean, Yoon, et al. 2019, Med Care, pp. 225-229.
12. *Variations in VA and Medicare Use Among Veterans With Diabetes: Impacts on Ambulatory Care Sensitive Conditions Hospitalizations for 2008, 2009, and 2010.* Rose, Danielle, et al. 2019, Medical Care, pp. 425-436.
13. *U.S. Veterans Who Do and Do Not Utilize VA Healthcare Services: Demographic, Military, Medical, and Psychosocial Characteristics.* Meffert, Brienna, et al. 2019, The primary care companion for CNS disorders.
14. Quick Facts. *United States Census Bureau.* [Online] 2019. https://www.census.gov/quickfacts/fact/table/harriscountytexas,houstoncitytexas/PST045219.
15. Artiga, Samantha, Damico, Anthony and Garfield, Rachel. *The Impact of the Coverage Gap for Adults in States not Expanding Medicaid by Race and Ethnicity.* s.l. : Kaiser Family Foundation, 2015.
16. *Comparing Quality of Care in Veterans Affairs and Non-Veterans Affairs Settings.* Price, Rebecca, et al. 2018, Journal of General Internal Medicine, pp. 1631–1638.
17. *The Importance of Video Visits in the Time of COVID-19.* Lindsay, Jan, et al. 2020, The Journal of Rural Health, pp. 242-245.
18. *Seeing the Value of Video: A Qualitative Study on Patient Preference for Using Video in a Veteran Affairs Telemental Health Program Evaluation.* Chen, Patricia, et al. 2021, Telemedicine Reports.

# Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- SupplementalTable.docx