Effect of COVID-19 on Patient Access to Health Services in Latin America: A Key Informant Survey

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Research Article

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Abstract

Background

COVID-19 has been felt acutely in Latin America with several countries having among the highest numbers of COVID-19 cases and deaths. The purpose of this study was to assess the effects of COVID-19 on access to health services in Latin America, as reported by patient advocacy organizations representing autoimmune, chronic, and noncommunicable diseases.

Methods

In August 2020, we conducted an online key informant survey in Spanish and Portuguese among patient advocacy organizations in 18 countries in Latin America. Univariate and bivariate analysis was conducted across two main subject areas: perceived patient effects from COVID-19 and patient access to health services. The main outcomes of analysis considered patient access to care during COVID-19 based on type of chronic illness and geographical region in Latin America.

Results

A total of 81 survey responses were analyzed. A majority (83%) of patient advocacy organizations reported their patients experienced delays receiving their treatment and care services; 52% experienced delays of 30 days or more. Telemedicine was considered available, but not accessible to patients (37%) and a majority (76%) of patients faced challenges with electronic prescriptions. Patients were not likely to receive a multi-month prescription from their doctor (38%) or successfully fill it at the pharmacy (26%).

Conclusions

People living with noncommunicable diseases in Latin America have been seriously impacted by the COVID-19 pandemic. As countries re-evaluate their health systems, it is critical that chronic diseases are considered so that all can fully realize the right to health.

Background

On March 11, 2020, the World Health Organization (WHO) Director-General, Dr. Tedros Adhanom Ghebreyesus, officially characterized the 2019 novel coronavirus disease (COVID-19) as a pandemic [1]. One year later, COVID-19 had been reported in 219 countries and territories, accounting for over 117.8 million cases and 2.6 million deaths, with both cases and deaths continuing to rise [2]. The burden of COVID-19 is acutely felt in Latin America with Brazil, Mexico, Colombia, and Argentina representing countries with some of the highest numbers of confirmed COVID-19 cases and related deaths [2].

The enormous impact of the COVID-19 pandemic has disrupted the day to day life of populations, economies, and health systems. Countries are faced with the challenge of balancing the priorities of infection prevention, control, and treatment, while also ensuring that essential public health services
continue to be safe and accessible. In Latin America, where public health systems are often overburdened, fragmented, and unequal [3], the COVID-19 pandemic has highlighted the failures of underfunding and exacerbated racial, gender, economic, and health disparities [4, 5].

Social determinants of health directly relate to health inequalities [6]. Indigenous people (10%) and people of African descent (21%) represent nearly a third of the population in Latin America and are more likely to live in poorer socioeconomic conditions with limited or no access to healthcare [7], contributing to negative health outcomes, especially during the COVID-19 pandemic. Females account for the majority (72.8%) of workers in healthcare settings in Latin America and have also taken on greater responsibilities at home to care for children during school closures due to COVID-19 [7], which may increase the risk of disease spread in the home and community. Informal and low wage workers have also felt the brunt of countries’ lockdown measures that have negatively impacted economies; these workers often have limited savings and little to no access to government subsidies [7]. In Latin America, the unemployment rate is anticipated to increase from 8.1% in 2019 to 13.5% in 2020, with the poverty rate increasing to 37.2% and extreme poverty to 15.5% [7].

Contributing to these inequities and structural barriers is the risk of severe disease or death from COVID-19 due to underlying health conditions, including noncommunicable diseases (NCDs) like cancers, cardiovascular disease (CVD), and diabetes [8]. In the Americas, NCDs are the leading cause of death, representing 81%, or 5.8 million, deaths in the Region [9]. Traditionally, NCDs and their risk factors have been described as consequences of aging populations, increased wealth, and urbanization that can be prevented through behavior change; in reality, NCDs carry a higher burden of morbidity and mortality among populations living in poverty without access to equitable health systems and do not discriminate by race, gender, or age [10]. The Lancet NCDI (noncommunicable disease and injury) Poverty Commission [10] refers to NCDIs as “under-recognized and poorly-understood” factors in the morbidity and mortality of low income and impoverished populations. NCDIs represent more than a third of the burden of disease among the poorest populations, accounting for approximately 800,000 annual deaths of those 40 years of age and younger [10].

Acknowledging the impact of NCDs on population health, in 2011 the United Nations High Level Meeting on NCDs and its Political Declaration [11] spearheaded discussion and commitments of NCD response that led to the development of Global [12] and Regional [13] Action Plans for the Prevention and Control of NCDs and the inclusion of NCDs in the 2030 Agenda for Sustainable Development [14]. While progress has been made, the plans do not adequately address challenges faced by the poorest of populations impacted by NCDIs and renewed commitments and strategies are needed to prioritize this population. The Lancet Commission [10] advocates for the expansion of goals to reflect the specific epidemiology and unique complexities of NCDIs, as well as increased funding, and the use of multisectoral support and integrated care to better address disparities and social determinants of health necessary to continue progress toward global and regional commitments of universal health coverage. In September 2020, the InterAmerican Task Force on NCDs [15] pledged to strengthen policies and interventions to promote the
prevention and control of NCDs and their risk factors among all ages and populations, particularly in the wake of COVID-19 and recovery efforts.

The double burden of NCDs and COVID-19 and the urgent need to address these dueling public health emergencies has begun to gain momentum [16, 17]. In May 2020, the Pan American Health Organization (PAHO) conducted a rapid assessment of NCD service delivery in the Region of the Americas during COVID-19 [18] and reported that many NCD services have been disrupted by varying levels. Member States in the Region reported the types of NCD services disrupted during COVID-19 [18]. Diabetes and hypertension management were most commonly reported as services partially disrupted, while rehabilitation, palliative care, and urgent dental care services were more likely to be reported as completely disrupted [18]. In addition to service disruption, 43% (12/28) reported public health screening programs for NCDs were also postponed [18]. These service interruptions and the delay of critical activities used for the prevention and detection of NCDs can lead to increases in morbidity and mortality during the COVID-19 pandemic and in the future [17].

The negative effects of COVID-19 have been disproportionately experienced within Latin America [4, 5, 7], yet little is known about precisely how COVID-19 has affected access to health care services for those living with NCDs within the Region. Patient advocacy organizations are a critical point of contact for patients and caregivers, as many provide services, information, support, advocacy, and offer unique insight to the patient experience. The objective of this research was to assess the effects of COVID-19 on patient access to health services in Latin America as reported by patient advocacy organizations who act in the interests of individuals living with autoimmune, chronic, and noncommunicable diseases.

**Methods**

An original survey instrument was developed to measure perceived patient effects from COVID-19 and reported patient access to health services. The survey included 22 quantitative and qualitative questions and was organized into the following sections: general impact of COVID-19, patient services, and patient access to care. The survey was written in English, then translated by native speakers into Spanish and Portuguese. The survey instrument was then programmed into the Survey Monkey online platform.

The target population was patient advocacy organizations in Latin America serving individuals living with NCDs. Eligible participants included those associated with a patient advocacy organization with familiarity of the strategic priorities of the organization, patient services provided, and reported experiences from patients served, specifically during the COVID-19 pandemic.

From August 5–31, 2020, we conducted an online key informant survey of patient advocacy organizations. Registered patient advocacy organizations that represent autoimmune, chronic, and noncommunicable diseases were purposively sampled based on geographical location in Latin America from the database of United Patients Online Academy, a free digital training platform for leaders of non-profit health organizations. Each organization was sent an email invitation, which included a brief
explanation of the purpose of the research and a URL link to the online survey. The survey link was also shared on United Patients Online Academy's social media networks.

By following the survey link, individuals were provided a statement of research on the title page of the survey and were asked if they were interested in participating. If the individual selected “no,” the survey concluded. If the individual selected “yes,” the following page of the survey described the survey format and eligibility requirements, provided contact information for the Principal Investigators, and included all elements of informed consent prior to the commencement of the survey. If consent was not provided, the survey concluded.

Data cleaning was conducted for data quality assurance to prevent duplication and ensure unique user and complete responses. Univariate and bivariate analysis was conducted across two main subject areas: perceived patient effects from COVID-19 and reported patient access to health services. The main outcomes of analysis considered patient access to care during COVID-19 based on type of chronic illness or disease and geographical region in Latin America. The findings represent the aggregated, unweighted results of the patient access to care portion of the survey.

The study was reviewed by the Emory University Institutional Review Board and found to be exempt from review since it was classified as public health practice.

**Results**

A total of 134 surveys were submitted. Responses were reviewed based on confirmation of informed consent and completeness (defined as responding to at least one of the 6 key access to care questions); 53 responses were excluded from analysis due to the respondent not meeting the aforementioned requirements. A remaining sample of 81 patient advocacy organizations (N = 81) were included in analysis.

The participating patient advocacy organizations represented 18 countries in Latin America, including the Andean Region (27%), Central America and Cuba (23%), and Mexico (22%) (Table 1). Nine disease areas were represented by the organizations with the majority categorized as cancer (37%), Multiple Sclerosis (21%), and other chronic and noncommunicable diseases (16%). Most (53%) participants held executive leadership roles within their organizations.
| Country          | N | %  | Region                     | N  | %  |
|-----------------|---|-----|----------------------------|----|-----|
| Argentina       | 6 | 7.41| Andean Region              | 22 | 27.16 |
| Brazil          | 11| 13.58| Brazil                     | 11 | 13.58 |
| Chile           | 2 | 2.47| Central America and Cuba   | 19 | 23.46 |
| Colombia        | 11| 13.58| Mexico                     | 18 | 22.22 |
| Costa Rica      | 3 | 3.70| Southern Cone              | 11 | 13.58 |
| Cuba            | 2 | 2.47|                            |     |      |
| Dominican Republic | 3 | 3.70|                            |     |      |
| Ecuador         | 1 | 1.23|                            |     |      |
| El Salvador     | 5 | 6.17|                            |     |      |
| Guatemala       | 1 | 1.23|                            |     |      |
| Honduras        | 3 | 3.70|                            |     |      |
| Mexico          | 18| 22.22|                            |     |      |
| Nicaragua       | 1 | 1.23|                            |     |      |
| Panama          | 1 | 1.23|                            |     |      |
| Paraguay        | 1 | 1.23|                            |     |      |
| Peru            | 7 | 8.64|                            |     |      |
| Uruguay         | 2 | 2.47|                            |     |      |
| Venezuela       | 3 | 3.70|                            |     |      |
| **Disease**     |   |     | **Disease Category**       |     |      |
| Cancer          | 30| 37.04| Autoimmune                 | 12 | 14.81 |
| Cardiovascular Disease | 2 | 2.47| Cancer                     | 30 | 37.04 |
| Diabetes        | 5 | 6.17| Multiple Sclerosis         | 17 | 20.99 |
| Lupus           | 3 | 3.70| Rare Disease               | 9  | 11.11 |
| Multiple Sclerosis | 17| 20.99| Other chronic and NCDs     | 13 | 16.05 |
| Patient Support (General) | 3 | 3.70|                            |     |      |
Effects of COVID-19

A strong majority (83%) of patient advocacy organizations stated their patients reported delays in receiving their treatment and care services, defined as all forms of medical treatment, such as screening services, regular check-ups, in-hospital treatment protocols, surgery, clinical trials, among others (Table 2). Of those who reported delays, 63%, or 42 of 67, organizations had a majority of patients who experienced a delay of more than 30 days.
**Table 2**
Effects of COVID-19 on Patients According to Patient Advocacy Organizations in Latin America, 2020, N = 81

| In general, have the majority of your patients reported experiencing delays in receiving treatment/care? | Yes n (%) | No n (%) | Do not Know n (%) | Missing n |
|---|---|---|---|---|
| **Patient Reported Delays** | | | | |
| Treatment and care delays | 67 (82.72) | 13 (16.05) | NA | 1 |
| Treatment and care delays > 30 Days | 42 (51.85) | 38 (46.91) | NA | 1 |
| Treatment and care delays ≤ 30 Days | 25 (30.86) | 55 (67.90) | NA | 1 |

**What are some of the biggest impacts the COVID-19 pandemic has had on your patients? Select “yes” if the issue has been impacted, “no” if the issue has not been impacted, or “I do not know.”**

| Overall Impact | NA (90.95) | NA (4.12) | NA (3.29) | NA |
|---|---|---|---|---|
| **Personal Factors** | | | | |
| Patient fear of going to the hospital for treatment | 75 (92.59) | 4 (4.94) | 2 (2.47) | 0 |
| Increased feelings of isolation and depression | 74 (91.36) | 4 (4.94) | 1 (1.23) | 2 |
| Financial uncertainty | 72 (88.89) | 2 (2.47) | 5 (6.17) | 2 |

| Overall Impact | NA (63.95) | NA (19.01) | NA (15.56) | NA |
|---|---|---|---|---|
| **Structural Factors** | | | | |
| Consultations and/or surgeries postponed | 74 (91.36) | 4 (4.94) | 2 (2.47) | 1 |
| Delayed screening and late diagnosis | 65 (80.25) | 10 (12.35) | 5 (6.17) | 1 |
| Limited or no access to telemedicine | 47 (58.02) | 20 (24.69) | 13 (16.05) | 1 |
| Treatment not available due to limited staffing | 38 (46.91) | 29 (35.80) | 12 (14.81) | 2 |
The perceived effects of the COVID-19 pandemic on patients were categorized through analysis as personal, structural, and clinical factors. Participating patient advocacy organizations reported a near consensus (91%) that personal factors, such as mental health and finances, had the greatest effects on their patients (Table 2). This was followed by structural (64%) factors or issues related to the health system, and clinical (60%) factors that directly related to the patient and their individual health. Patient fear of going to the hospital (93%), patient mental health (91%), health system or clinician postponement of consultations and/or surgeries (91%), patient financial uncertainty (89%), and health system delayed screenings and late diagnoses (80%) were considered the factors with the greatest effects on patients according to the patient advocacy organizations.

At the start of the pandemic, 26% of patient advocacy organizations were contacted by patients and caregivers about access to treatment and care that had been interrupted by COVID-19 (Table 3). By August 2020, the main reason for contact had shifted from COVID-19 disruptions and focused on general information about access to treatment and care not related to COVID-19 (28%). Slight increases in contact were also reported for psychosocial support (6–10%), information related to patients’ rights (5–8%), and financial support (2–6%).
Table 3
Patient/Caregiver Reasons for Contact during COVID-19 among Patient Advocacy Organizations in Latin America, 2020

| Main Reasons for Contact                                           | Start of COVID-19 n/N (%) | Today (Aug. 2020) n/N (%) |
|-------------------------------------------------------------------|----------------------------|---------------------------|
| Access to treatment and care that has been interrupted by COVID-19 | 21/81 (25.93)              | 19/78 (24.36)             |
| General information about access to treatment and care (not related to COVID-19) | 20/81 (24.69)              | 22/78 (28.21)             |
| General information about treatment and care protocols (not related to COVID-19) | 16/81 (19.75)              | 11/78 (14.10)             |
| Information about COVID-19                                       | 8/81 (9.88)                | 4/78 (5.13)               |
| Psychosocial support                                              | 5/81 (6.17)                | 8/78 (10.26)              |
| Patients’ rights                                                  | 4/81 (4.94)                | 6/78 (7.69)               |
| Financial support                                                 | 2/81 (2.47)                | 5/78 (6.41)               |
| Other                                                             | 5/81 (6.17)                | 3/78 (3.85)               |

Patient Access to Health Services

Evidence-based mitigation strategies that were recommended to ensure continuity of care and limit potential exposure to COVID-19 infection include telemedicine, electronic prescriptions, and multi-month scripting and dispensing [19]. The use of digital platforms, such as telemedicine, which allows for virtual provider consultations, and the integration of electronic prescriptions that can be virtually prescribed and processed by the pharmacy, are key approaches for comprehensive essential health service delivery [19]. Likewise, multi-month scripting and dispensing (MMSD) that supports differentiated care and patient-centered service delivery, enables patients to receive longer prescriptions of 90 days or more so they do not need to return to clinic for a new prescription or return to the pharmacy for monthly refills [19, 20]. The availability and how patients accessed these recommended health services during the COVID-19 pandemic varied by disease and geographical region (Table 4).

Half (51%) of patient advocacy organizations reported that telemedicine was not accessible (37%) or available (14%) for the majority of their patients. Patient advocacy organizations that represented patients living with autoimmune diseases (42%) and cancers (33%) reported that telemedicine was available in their countries, but not accessible. Likewise, Mexico (50%) and the Andean Region (45%) were
most likely to not have access to telemedicine. Central America and Cuba (37%) reported a telemedicine was not available at all.

A majority (76%) of patient advocacy organizations reported challenges related to receiving (54%) and processing (22%) electronic prescriptions. One third (33%) of autoimmune organizations reported electronic prescriptions were not available for their patients, while 43% of cancer organizations described their patients had not received an electronic prescription from their doctor. Half (50%) of patient advocacy organizations in Mexico reported electronic prescriptions were not available. Brazilian patients did not receive an electronic prescription from their doctors, according to a majority (91%) of the patient advocacy organizations from that country.

Many (64%) patient advocacy organizations reported MMSD was not prescribed (38%) or was prescribed, but not successfully filled by the pharmacy (26%). Cancer (50%) and rare disease (50%) patients were most likely to not be prescribed a multi-month prescription. This was also seen in the Southern Cone (64%), Brazil (45%), and Mexico (44%), with patient advocacy organizations reporting a majority of their patients were not prescribed longer prescriptions. In the Andean Region, nearly half (45%) of organizations reported their patients were prescribed, but the pharmacy was unable to fill the multi-month allotment.

A majority (58%) of patient advocacy organizations reported their eligible patients had access to pain management medication or palliative care. However, a majority of cancer (52%) and rare disease (50%) organizations reported palliative care was not available for their patients. Likewise, in Mexico, a majority (64%) of patient advocacy organizations reported their eligible patients were not able to access palliative care.

Discussion

The COVID-19 pandemic has presented immense challenges for economies and health systems throughout the world. This is the first study that considers the perspective and expertise of the patient advocacy organizations representing autoimmune, chronic, and noncommunicable diseases to provide a snapshot of how patients are accessing essential health services in Latin America during the COVID-19 pandemic. Our results describe the patient experience and demonstrate health access inequities based on disease areas and geographical regions.

All participating patient advocacy organizations recognized the impact of disrupted or delayed health services, such as postponed consultations or surgeries and delayed diagnostic screenings, which may lead to an increased burden on health systems in the future when patients return to care with urgent needs or present at an advanced stage of disease [17]. Many patients reported to the patient advocacy organizations that their own treatment or care was delayed by more than 30 days. These delays related to management of NCDs during COVID-19 and their potential health impacts have been similarly highlighted in the literature [21–25]. Kiss et al [21] described substantial decreases in rates of admission for acute CVD, suggesting that individuals are not seeking or delaying care, which may have implications for
increased disease severity or mortality, and may lead to other complications, such as heart failure [22]. Likewise, the number of cancer diagnoses have decreased because screening and early detection services have been disrupted, just as treatment and care have been delayed, and enrollment in clinical trials has become difficult, all of which pose a major risk to cancer care throughout the globe [22–24]. Barone et al [25] also described individuals living with diabetes in South and Central America experienced difficulty accessing health services and a lack of medicines or supplies during the COVID-19 pandemic, which may lead to uncontrolled diabetes and exacerbate chronic complications among those already immunocompromised [22].

Many governments have recognized the importance of essential public health services in their COVID-19 strategies [26]. In May 2020, the World Health Organization (WHO) conducted a survey of Member States about the impact of COVID-19 on NCD resources and services in their countries [26]. Two thirds (66%) of countries reported continuity of NCD services were included as essential services in their national COVID-19 response plans (19/28, 68% of Member States in the Region of the Americas reported doing the same); however, only 17% of countries reported including additional funding to support these NCD services in their COVID-19 response budgets [18, 26]. While it is important to recognize the COVID-19 pandemic as an unexpected, though not fully unanticipated, health emergency that has taxed health systems’ capacity, resources, and finances, it is equally notable that many countries have not specifically allocated funding for NCD response and people living with NCDs have felt the effects.

In addition to delays or disruptions to services, patient advocacy organizations also reported patient challenges in accessing services that are uniquely posed to support safety and wellness during public health emergencies, including telemedicine, electronic prescriptions, and multi-month scripting and dispensing [19, 20]. While telemedicine was largely available in the countries represented, patients were unable to access services demonstrating a disconnect between policy and implementation, which may be the result of a digital divide or other systematic challenges. Likewise, the ability for doctors to prescribe electronic prescriptions to patients that are then received and filled by pharmacies or clinics is critical; however, many patient advocacy organizations reported their patients were unable to successfully benefit from this system, though available, due to challenges with doctors not prescribing electronically and with the electronic prescriptions not being filled by the pharmacy. These obstacles may be due to prescriber hesitancy or an inability for pharmacies to receive and process the technology. Multi-month scripting and dispensing supports patient-centered service delivery [20] but was not widely implemented. Patient advocacy organizations reported challenges with patients being offered longer prescriptions and/or successfully filling the prescription at the pharmacy or clinic, suggesting public and/or private pharmacy systems are not complying or do not have the supply to fill extended prescriptions.

These strategies are not unique to COVID-19; they can and should be adopted in any public health emergency in the future to facilitate access to and continuity of essential health services, as well as mitigate potential exposures for populations at higher risk of adverse or severe health outcomes. Additional studies are recommended with individuals living with autoimmune, chronic, and noncommunicable diseases to further assess how they are seeking health services during the COVID-19
pandemic and the barriers they face, as well as with the public and private health systems, including pharmacies, to better understand the systemic and logistical aspects of health service delivery for populations living with comorbidities during public health emergencies.

This study includes limitations, which should be considered in the interpretation of the findings. The key informant responses were provided through self-assessment and were to reflect the experiences of the majority of patients who contacted the participating patient advocacy organizations, though this method may be prone to bias and cannot be formally validated. The study was conducted in August 2020, months after the first cases of COVID-19 were confirmed in Latin American countries, and as such, the responses reflected a cross-sectional snapshot of the effects of COVID-19 that may have changed from earlier stages in the pandemic and may change again as the pandemic continues. The sample sizes for some disease areas and countries represented by the patient advocacy organizations were small and results should be interpreted accordingly. Also, an accurate response rate cannot be determined, as the survey link was shared through various networks and publicly available.

Conclusions

The COVID-19 pandemic has exposed the systemic inequities of the world where the poorest and populations at highest risk are the most severely impacted [4, 5, 16]. It is the responsibility of governments to strategize ways to strengthen their health systems to mitigate inequities and ensure accessibility of health services for their populations. All 18 of the Latin American countries represented in this study have signed or ratified the International Covenant on Economic, Social and Cultural Rights (ICESCR), which establishes “the right of everyone to the enjoyment of the highest attainable standard of physical and mental health” [27]. General Comment 14 of the ICESCR [28] specifies the State must ensure health systems and services are available and accessible to the entire population with ethical and cultural acceptability and the provision of medically appropriate, quality services. The State must also respect, protect, and fulfill the right to health for its population through its core obligations and progressive realization in the “prevention, treatment and control of diseases” [28]. Based on our findings, the countries represented by the participating patient advocacy organizations are not meeting their obligations to guarantee a right to health for their populations.

People living with autoimmune, chronic, and noncommunicable diseases face health challenges that are exacerbated by racial, gender, and other social determinants of health [5], all of which are only compounded in public health emergencies, like the COVID-19 pandemic. Our findings showed that patients are experiencing lengthy delays of 30 days or more to access their treatment and care and health services, such as telemedicine, electronic prescriptions, and multi-month scripting and dispensing, are available within countries but are not accessible by all. As governments re-evaluate their COVID-19 strategies and health systems, it is important to recognize the unique burdens of populations at higher risk and consider population health as a priority for human security [5]. It is critical that governments proactively address inequalities and make investments today in order to build back stronger health systems for tomorrow.
Abbreviations

COVID-19 2019 Novel Coronavirus Disease caused by SARS-CoV-2
CVD Cardiovascular Disease
ICESCR International Covenant on Economic, Social and Cultural Rights
MMSD Multi-month Scripting and Dispensing
NCDs Noncommunicable Diseases
NCDIs Noncommunicable Diseases and Injuries
PAHO Pan American Health Organization
WHO World Health Organization

Declarations

Ethics approval and consent to participate

The study was reviewed by the Emory University Institutional Review Board and found to be exempt from review due to its nature as public health practice. Nevertheless, the following consent standards were utilized. By following the survey link, individuals were provided a statement of research on the title page of the survey and were asked if they were interested in participating. If the individual selected “no,” the survey concluded. If the individual selected “yes,” the following page of the survey described the survey format and eligibility requirements, provided contact information for the Principal Investigators, and included all elements of informed consent prior to the commencement of the survey. If consent was not provided, the survey concluded.

Consent for publication

Not Applicable.

Availability of data and materials

The dataset used and analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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This work was unfunded.

**Authors' contributions**

MK was responsible for the development of the study instrument, collection of data, analysis, and interpretation of data, drafting of the manuscript, and critical revisions. AD was responsible for the development of the study instrument, interpretation of data, and critical manuscript revisions. DPE was responsible for the analysis and interpretation of data, drafting of the manuscript, and critical revisions. All authors read and approved the final manuscript.

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**Tables**

Due to technical limitations, table 4 is only available as a download in the Supplemental Files section.

**Supplementary Files**

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

- Table4PatientAccessstoHealthServices.xlsx