UNT DALLAS
School of Behavioral Health & Human Services

Emerging Practices of Community-Based Health Service Providers During the COVID-19 Pandemic:

A University of North Texas at Dallas Community Care Active Engagement Project

December 2023

Texas Health Resources®

UNT DALLAS
UNIVERSITY OF NORTH TEXAS AT DALLAS

Emerging Practices of Community-Based Health Service Providers During the COVID-19 Pandemic: A UNT Dallas Community Care Active Engagement Project

December 2023

University of North Texas at Dallas

UNT Dallas Community Care Active Engagement Project Research Team:
Dr. Constance Lacy, Principal Investigator
Dr. Samuel Bore, Co-Principal Investigator
Dr. Jennifer Baggerly, Program Evaluator
Dr. Corron Sanders, Data Collection Coordinator
Dr. Erica Ponce, Data Collection Coordinator
Ms. Keilah Jacques, Focus Group Leader
Ms. Angela Brown, Program Coordinator

Grant Funding:
Texas Health Resources (Texas Health)
Texas Health Community Impact Dallas & Rockwall Leadership Council

Suggested Citation:
Lacy, C., Bore, S., Baggerly, J., Sanders, C., Ponce, E., Brown, A., & Jacques, K. (2023). Emerging practices of community-based health service providers during the COVID-19 pandemic: A UNT Dallas community care active engagement project. Funded by Texas Health Resources.

For questions regarding the project, please email Dr. Constance Lacy, Principal Investigator, at constance.lacy@untdallas.edu.

TABLE OF CONTENTS

ACKNOWLEDGMENTS

This project was made possible with Texas Health Resources (Texas Health), the University of North Texas at Dallas and the collaboration of several community-based health service organizations in Dallas and Rockwall counties. The expertise and commentary of the leadership team members and staff contributed significantly to researching and analyzing the emerging practices described in this report. A total of 25 organizations (shown in Figure 1 of this report) provided experiential information invaluable to this work. We thank each of these organizations for their participation.

We express our gratitude to the grants management team at Texas Health for their steadfast support during this project. They helped compile a list of community-based health service organizations and worked closely with us to ensure that we understood the priorities and expectations of the Texas Health Community Impact (THCI) Dallas & Rockwall Leadership Council. Their support was crucial in advancing the strategic plan objectives of the leadership council. It has enabled THCI to make impactful changes in the social determinants of health in the region. From the information provided in this research project and similar projects, community investments can be better directed toward efforts that are more likely to positively address health inequities in the communities that Texas Health serves.

During the development of the report, Texas Health Community Impact (THCI) Program Manager Narsha Davis and Director Tauane Araujo Cruz collaborated with Dr. Constance Lacy and Dr. Samuel Bore, the co-principal investigators who led the research team from the University of North Texas at Dallas School of Behavioral Health and Human Services and Public Health programs. Ms. Davis and Ms. Araujo Cruz helped the project research team reach known and new contacts in the region, acted as liaisons with Texas Health for timely responses and feedback on distinct aspects of the project, and worked with Dr. Jennifer Baggerly, project evaluator and data analyst, to review materials and offer suggestions for the presentation of findings.

Lastly, in support of experiential learning objectives at the University of North Texas at Dallas (UNT Dallas), this project fostered the engagement and collaboration of students in the university's public health and counseling programs. Students were able to gain real-life practice experiences throughout this project. Their participation in observing the focus groups and assisting with the collection and analysis of data has equipped them with essential skills for future academic research and workplace readiness. We thank the students, professors, and additional UNT Dallas staff who assisted with this project.

EXECUTIVE SUMMARY

At the University of North Texas at Dallas, we believe that a necessary part of bridging the gap within under-resourced communities is providing health education and conducting formidable research that delivers results to help strengthen our communities. Our mission at UNT Dallas is to empower students, transform lives, and strengthen communities. We strive to build and maintain a strong partnership with the communities we serve and to advance their well-being.

UNT Dallas conducted research funded by Texas Health Resources on emerging health service delivery approaches utilized during the COVID-19 pandemic to improve health equity in underserved communities. The UNT Dallas School of Behavioral Health worked with the UNT Dallas Public Health Department on the UNT Dallas Community Care Active Engagement Project (CCAEP) research. From the Request for Proposals, the project goals were to:

1. Identify and engage community-based health service providers.
2. Document emerging practices during the COVID-19 pandemic among community-based health service providers that provide health services to select underserved areas in the Dallas and Rockwall, Texas regions.
3. Report/present the findings.

This commissioned report is one of several actions undertaken by the Texas Health Community Impact (THCI) to design, implement, and support community programs and innovative projects to address the needs of under-resourced communities.

Health services are understood to include preventive and primary care services (including medical and dental checkups, and condition management); disease prevention (vaccinations, anti-smoking programs, and obesity screenings); and patient education (nutritional counseling, injury prevention, and disease information (Texas Health, 2022). For this report, community-based health service providers include community-based clinics, health centers, and organizations providing health services to communities in the RFP-identified zip codes or to a sizable number of residents from specific zip codes. Additionally, the services must be provided at no cost, at reduced cost, or on a sliding scale. Emerging practices are interventions, often considered innovative in nature, which may address the critical needs of certain communities, populations, or groups.

The UNT Dallas CCAEP focused on providers offering free or low-cost services to the underserved. A mixed methods approach was applied to gather detailed information on the actions and practices of each organization during the COVID-19 pandemic. The interview and focus group approach sought to understand better the impact and relative effect of the actions exercised by each organization. In some cases, additional staff within the participating organizations were interviewed to better understand the reported actions and results.

The research team sought to understand whether the reported actions could be considered emerging practices that were practical and efficient. Information collected from the participants provided valuable insights into the impact of the identified changes and their potential benefits. Researchers analyzed the data collected from the survey and focus groups to determine which practices adopted by health services providers during the COVID-19 pandemic were deemed worthy for continuation beyond the public health crisis (based on effectiveness). Participants consisted of 25 distinct community-based health service providers offering diverse services to individuals from or in the targeted zip codes.

The research team grouped findings regarding emerging practices into four overarching themes – safety, accessibility, affordability, and availability. Safety involves considerations for physical and emotional safety. Accessibility includes access through technology, distribution of information, and physical access via transportation. Availability pertains to funding availability, fee adjustments, and leveraging resources. Lastly, availability encompasses the organizations' ability to meet the needs of their clients through extended office hours, staffing, and changes in processes and procedures to improve the access and quality of services.

Findings from this study are significant as they highlight practices considered emerging for health service providers who deliver health service to underserved communities in the Dallas and Rockwall County, Texas regions. Not only will these findings inform future grant investments on the part of the THCI Dallas & Rockwall Leadership Council, but they could also guide organizations delivering health services to underserved groups in day-to-day practice and response to public health emergencies in other communities. Key findings are described on the following page.

Key Findings: Emerging Practices of Community-Based Health Service Providers

1. Technology can be adapted to meet client needs when providing services virtually and complements face-to-face interaction.

From February 2020 to January 2021, over 68 percent of survey participants worked with clients primarily or solely online. Alternatively, from February 2022 to July 2023, face-to-face interactions with clients surged to 66.7 percent compared to only 26 percent from February 2020 to January 2021. During the height of the pandemic, technology usage assisted with client engagement through telehealth visits when face-to-face interactions were not feasible. Even after the Federal COVID-19 Public Health Emergency (PHE) Declaration ended, technology was found to complement face-to-face interactions by generating efficiencies in appointment scheduling and intake with online forms and helping to avoid bottlenecks and long wait times by implementing text messaging strategies. However, findings revealed that such practices as community canvassing and the use of artificial intelligence were among the activities that organizations reported not utilizing.

2. Practices intended to mitigate community members' concerns and fears help promote client participation in service offerings.

One of the most common ways to address client concerns, including fears of contracting COVID-19, lack of childcare, financial uncertainty, and misinformation or distrust, was using telehealth through popular platforms like Zoom and Doxy.me. Microsoft Teams and Zoom were referenced as important for internal coordination with staff. Telehealth and online/paperless forms were cited as somewhat effective in connecting with clients. However, some found more traditional methods like telephone contact and using personal protective equipment to be effective in reaching the target audience and promoting in-person engagement.

3. Partnerships and collaborations are essential to the effective delivery of health services.

Findings suggest that networking with area organizations that provide complementary services and referring clients to those organizations reduces interagency competition, thereby increasing collaboration. Of respondents, 50 percent cited partnerships and collaborations as effective, 18.2 percent cited them as somewhat effective, and none indicated ineffective as a response. It is possible that during the height of the COVID-19 pandemic, these collaborating organizations had access to resources that may be limited after the Federal COVID-19 Public Health Emergency Declaration ended, which could alter the interaction frequency, or the support collaborators can provide in the future. The lesson learned is that improved service delivery can be achieved through increased communications across organizations seeking to serve similar populations or areas.

UNT DALLAS COMMUNITY CARE ACTIVE ENGAGEMENT PROJECT

INTRODUCTION

Texas Health Resources (Texas Health) conducts a comprehensive Community Health Needs Assessment (CHNA) every three years. The data gathered from the assessment effort defines priority areas related to Texas Health's mission of improving the health of people in the communities it serves. The 2016 and 2019 CHNA findings pointed to behavioral health, chronic disease and awareness, and health literacy, and navigation as key community health priorities (Texas Health Resources, 2022, p. 7). While these indicators were still relevant for the 2022 CHNA, the COVID-19 pandemic created even greater concerns regarding disparities and access to healthcare for underserved communities. A deeper dive into the social determinants of health (SDOH) and the forces and systems shaping the conditions of people's daily lives (Office of Disease Prevention and Health Promotion, 2014) unveiled access to healthcare as an additional core priority area for the Dallas and Rockwall County region. The 2022 Texas Health CHNA emphasized the need to work closely with community organizations to address health disparities and the socioeconomic conditions that increase access to healthcare and improve community health.

The COVID-19 pandemic led to novel responses for outreach to local populations from providers even as COVID-19 and associated efforts to ameliorate the disease progression exacerbated health disparities in communities with high minority populations and low economic status (Maffly-Kipp et al., 2021; Moreno et al., 2020). Consequently, the need to determine the best practices used by community-based health service providers grew during the pandemic. In commissioning this report, Texas Health advanced its interest in hearing directly from the organizations delivering s to community members during the height of the COVID-19 pandemic. Identifying the processes, procedures, programs, and policies created and utilized and the level of effectiveness as reported by each organization may reveal potential ideas regarding services to sustain or duplicate.

Texas Health requested proposals for which the University of North Texas at Dallas School of Behavioral Health and Human Services applied through a competitive process and was selected to conduct this research focused on innovative strategies and practices addressing the health and health-related needs of priority populations. The purpose of the UNT Dallas Community Care Active Engagement Project (CCAEP) study was to document emerging practices of community-based health service providers during the COVID-19 pandemic to improve healthcare delivery to underserved communities in the Dallas and Rockwall regions. In line with the priorities of the UNT Dallas School of Behavioral Health and the UNT Dallas Department of Public Health, the research team sought to include its extensive network of behavioral health service providers along with clinics and other organizations offering health and health-related services to the communities.

Findings from this research may assist Texas Health in their efforts to reduce health disparities while improving health equity and the delivery of service to underserved communities.

REVIEW OF RELATED LITERATURE

Prior to engaging with local organizations, a comprehensive literature review was conducted to document practices identified by scholars as emerging and innovative. The literature review included peer-reviewed articles, reports from the Department of Health and Human Services, and community health needs assessments from local health systems to comprehensively understand the state of community-based healthcare provision in Dallas and Rockwall. Challenges faced by healthcare providers during the pandemic helped to inform practice response. Understanding what others considered positive in literature helped researchers structure the study materials using terminology recognized in the field.

The literature review revealed that community-based health service providers faced several challenges. These challenges included a shortage of personal protective equipment, staffing shortages due to illness and quarantine, and increased demand for service (Johnson-Agbakwu, Ali, Oxford, Wingo, Manin, & Coonrod, 2022). The impact of challenges, according to the literature, disproportionately affected underserved communities, including low-income communities, communities of color, and rural communities (Moreno, et al., 2020). Responses to the challenges of the pandemic shed light on practices deemed beneficial in tackling health inequities.

Despite these challenges, the literature review also unveiled several practices undertaken by health service providers during the pandemic. Practices included the use of virtual tools for telehealth, which allowed health service providers to deliver care remotely and drive-thru testing, which provided a safe and convenient way for individuals to be tested for COVID-19. Community outreach programs were also established during the pandemic, which helped to increase awareness about COVID-19 and provide resources and support to underserved communities (Ye, Kronish, Fleck, Fleischut, Homma, Masini, and Moise, 2021).

The Impact of COVID-19 on Health Services

Negative Effects

- Reduced well-being among the population during 2020 (Shen & Kejriwall, 2023).
- This resulted in delays in receiving primary and specialty healthcare, which led to increased severity of syndromes and diseases (Weinstein et al., 2020).
- Increased shortages in the healthcare workforce during COVID-19 (Office of the Assistant Secretary for Planning and Evaluation, 2022).
- Led to clinician burnout (Wood, 2021).

Positive Effects

- Increased use of technology for clients completing forms for upcoming visits and checking in early for appointments and for providers in the same medical systems coordinating
- services rendered across the system (Wood, 2021).
- Use of telemedicine was expanded during the pandemic and provided tremendous opportunities, boosting access to care among clients and revenue when few patients could physically attend appointments (Ye et al., 2021).
- Medical institutions increased provider consolidation to mitigate clinician burnout (Kakarala and Prigerson, 2022).
- Partnerships became more common as healthcare providers and hospitals collaborated with larger, more financially secure organizations to share data and findings (Moran et al., 2022).
- Coordinated multidisciplinary efforts increased to address anti-racism, implicit bias, and cultural competency training for reducing barriers to healthcare access (Johnson-Agbakwu et al., 2022).

Existing Health Issues in Dallas and Rockwall Counties

A key source of information on the state of health in the community is the Community Health Needs Assessment (CHNA), an assessment report developed by public and nonprofit hospitals and health systems every three years. For this study, the 2022 CHNA for Texas Health and Parkland Health and Hospital System 2019 and 2022 CHNAs were used as a resource for health data on the community. The primary objective of the CHNA is to gather comprehensive data on the community health dynamics of the Dallas and Rockwall region. The assessments were conducted at a granular level, specifically focusing on zip codes. Findings from the assessments have important implications for this research.

The data collected during the CHNA revealed that the onset of the COVID-19 pandemic in March 2020 highlighted significant health disparities and a lack of resources in certain regions of Dallas County, as well as some areas in Rockwall County. The 2022 Texas Health CHNA revealed a significant rise in the prevalence of chronic health conditions such as hypertension, diabetes, asthma, as well as behavioral health, psychiatric issues, and others across the entire region. These health conditions also led to a higher risk of complications from COVID-19 infections, further complicating the healthcare system in 2020 (Weinstein et al., 2020). Amid the COVID-19 pandemic, the Dallas and Rockwall regions experienced a significant burden on their healthcare systems. The communities in these regions have shown higher levels of unemployment, lower socioeconomic status, and disproportionate rates of disease.

Additionally, these communities have faced substantial resource deficits, exacerbating the challenges faced by healthcare systems in managing the pandemic effectively. More concerning, the regions' African American, Hispanic, and immigrant populations faced health disparities requiring significant and urgent interventions, including increasing access to health services interventions for domestic violence (Johnson-Agbakwu et al., 2022; Parkland, 2019; Texas Health Resources, 2022). Enhancing access to healthcare services requires addressing issues such as inadequate transportation facilities, limited insurance coverage, and financial constraints that restrict individuals from accessing primary care. Studies have emphasized the impact of misinformation, low health literacy, apprehension, and lack of trust as significant impediments to seeking medical attention, which highlights the need for more community engagement initiatives. (CHNA 2022). This information underscores the need for innovative services to address these issues.

During the 2022 Community Health Needs Assessment (CHNA), Texas Health gathered data that led to the extension of its System Implementation Plans for the period of 2020-2022. The plans included initiatives to integrate and strengthen delivery systems to reduce health disparities and improve health outcomes in targeted communities. The priorities of the plans are Chronic Disease Prevention and Management, Behavioral Health Intervention and Access to Services, Healthcare Access, Health Literacy and Navigation, and Sustainability and Resources for ongoing community engagement. Moran, Longo, and Gaston (2022) conducted a study that highlighted the benefits of working in multi-partner alliances. These partnerships can promote equitable resource allocation, leading to enhanced healthcare standards in each area. The researchers drew upon existing research to grasp the significance and urgency of their inquiry and subsequently obtained data to pinpoint novel and efficacious approaches to tackle persistent health challenges in the local communities served by Texas Health.

DESIGN AND METHODS

Procedures

The researchers used a mixed-method approach to achieve specific goals in their study. They gathered quantitative and qualitative data from a convenience sample of participants comprising employees from community-based health service providers, including administrators, nurses, case managers, program directors, and support staff with varying job responsibilities. The researchers met their goal of engaging health service providers that were operational during the height of the COVID-19 pandemic. To begin data collection, the researchers crafted survey questions, which the employees from health service providers reviewed. The employees provided guidance and feedback, eliminating some original questions, and modifying them to incorporate the recommendations. This process ensured the collection of the best possible information.

These representatives were then requested to participate in the study. The researchers emailed health professionals at the same organization, asking them to complete a 15-to-20-minute online survey about their perceptions of emerging practices in community-based healthcare during the COVID-19 pandemic. After reviewing the survey responses, selected responders were invited to participate in an approximately one-hour follow-up focus group. A subject-matter expert with personalized training and cultural competence practices reviewed the methods and tools used for data collection. This additional step ensured strict adherence to best practices.

The electronic survey was launched through the Qualtrics software, which enabled the collection of quantitative (numerical) and qualitative (open-ended responses) data. The research team contacted individuals from community-based health service providers who agreed to participate in the online survey and qualitative focus groups. Each participant then received an email with the informed consent document and instructions for completion of the survey. Once participants provided their consent, they were granted access to the survey.

The following questions comprised the online survey:

1. How did the organization pivot or make changes during the COVID-19 pandemic?
2. How did this pivot or "change" (process, intervention, practice, program/service offering, or policy) affect the organization?
3. What benefit did the change bring to clients and community members?
4. Does the provider consider the change a potentially emerging practice, meaning it has some evidence of short-term positive program effectiveness but is not researched?
5. Was the change effective or more efficient from the organization's perspective? Why? How?
6. What available de-identified data can support this claim?
7. What resources are necessary to continue the identified change?
8. If there is an opportunity to enhance or expand the impact of the identified change, how would the organization propose doing so?

Quantitative Data Collection – Online Survey

An initial recruitment group of 74 individuals from 37 community-based health service providers were invited. The researchers forwarded the survey link to other organization staff members. Through survey results, the researchers gathered demographic data on participants, organizational information, the format of work during the COVID-19 pandemic (i.e., face-to-face vs. online), client barriers to seeking services during the pandemic, the innovative approaches of the organizations to deliver services and client care during the pandemic, ideas for innovative approaches after the height of the pandemic and the willingness of participants to participate in a focus group. The researchers distributed the preliminary 17-item online survey via Qualtrics to 74 individuals representing 37 regional organizations. The Qualtrics application provided the quantitative items' response frequencies and means.

A total of 47 professionals from 25 organizations delivering community-based s during the COVID-19 pandemic returned completed surveys. The participant demographic breakdown included 74.5 percent female (n = 35). The survey participants reported as 36.2 percent (n = 17) White, 27.7 percent (n = 13) African American or Black, 19.2 percent (n = 9) Latinx or Hispanic, 2.1 percent (n = 1) Asian, 8.5 percent (n = 4) bi-racial, and 6.4 percent (n = 3) prefer not to answer. Fifty-five percent of the participants ranged between ages 25 and 44 (n = 26), while 34 percent (n = 16) were aged 45 to 64. Of those 47 individuals, 57.5 percent (n = 27) represented nonprofit community-based organizations, 25.5 percent (n = 12) represented behavioral healthcare organizations or practices, 6.4 percent (n = 3) represented behavioral health hospitals, 6.4 percent (n = 3) represented primary healthcare organizations or practices, and 4.3 percent (n = 2) represented hospitals.

Figure 1. Organizations Represented in the Data

Alzheimer's Association	Jubilee Park Community Center	Rockwall County CSCD Counseling
Brother Bill's Helping Hand	La Hacienda	Salvation Army
Copenhagen Counseling, PLLC	Los Barrios Unidos	TAMU–Commerce and NPCS
Dallas Children's Advocacy Center	Loving Yourself Well Counseling	Tarrant County College
Dallas Independent School District	Men of Nehemiah	Texas Recovery Center
Discovery Point Recovery	Metrocare Services	True 2 Life Counseling
Gateway Counseling	North Dallas Shared Ministries, Inc.	U&I Spread the Light
Jewish Family Service of Greater Dallas	Phoenix House	University Behavioral Health Hospital–Denton
Texas Workforce Commission–Vocational Rehabilitation Services		

Qualitative Data Collection – Focus Groups

For the convenience of the participants, students contacted them by phone and offered them the option to attend a one-hour focus group in person or virtually via ZOOM. Participants were representatives of community-based health service providers with daytime operations. To promote participation, the participants were provided with both in-person and virtual attendance options, along with two different time slots to choose from. A skilled facilitator led two separate focus groups. A total of eight participants contributed to the focus group data collection effort.

Thirty students from UNT Dallas' public health and counseling master's programs received training on employing the participatory appraisal research approach to gather and assess focus group information. Students engaged in the virtual listening sessions, serving as scribes documenting what they heard, observed, and felt during the focus group conversations. The researchers gathered the students' notes and the focus group recordings to transcribe, code, and aggregate using the ATLAS.ti software. No specific or identifiable client data were requested during either focus group, ensuring adherence to HIPAA (Health Insurance Portability and Accountability Act) and IRB (Institutional Review Board) standards.

The first focus group had five participants, two attending in person and three attending via Zoom. The second focus group had three participants attending via Zoom. The facilitator used the online survey results to shape the focus group questions and asked participants to confirm that the qualitative themes uncovered in the survey accurately reflected their views on their work and life experiences during the height of COVID-19 and after. Participants were encouraged to provide examples of how they implemented the emerging practices from the survey. Finally, the focus group facilitator asked participants to provide recommendations for implementing the newly identified, emerging practices described within each theme.

Participant responses were coded, and themes were identified. Final theme selections were reported in the findings. The researchers used the conventional content analysis approach and method for summarizing text data by identifying themes without being guided by a preconceived list of thematic codes. The survey's qualitative data analysis involved color-coding responses to identify themes and achieve consensus among team members regarding the final thematic outcomes. This approach allowed the researchers to draw insights from participant focus group responses.

RESULTS AND DISCUSSION

Responses from the online survey serve as the key data source. This report provides descriptive statistics, including administrative, demographic, and programmatic data. It also provides a descriptive analysis of the survey outcomes, listening sessions, and focus group responses. The findings will help Texas Health identify potential opportunities to expand the emerging practices of these community-based health service providers to improve health in underserved communities. UNT Dallas researched emerging methods in community-based health service delivery through quantitative and qualitative methods by studying the approaches used by participants. The researchers aim to supply data that give insight into innovative practices community-based providers used during the COVID-19 pandemic to reduce health disparities, and identify those processes, policies, products, and programs created during the COVID-19 pandemic that either worked well or may need improvement for sustainability and duplication.

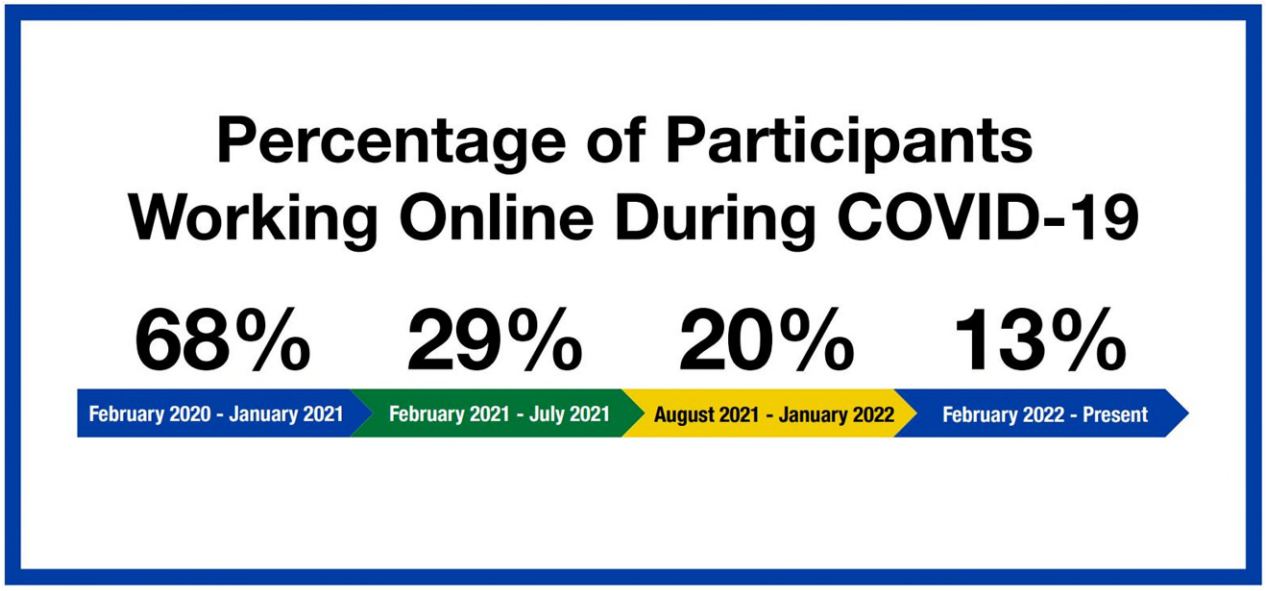
Survey Results

Approximately 64 percent of the represented organizations (n = 16) reported that 50 percent to 100 percent of their clients earned low incomes and were uninsured. Additionally, over 68 percent (n = 25) of the 47 survey participants worked with clients throughout the pandemic mostly or solely online from February 2020 to January 2021, and just 36 percent (n = 17) met with clients solely or mostly face-to-face. The percentage of online client meetings decreased from February 2021

through July 2021, when only a 21 percent (*n* = 10) of the participants worked mostly or solely online. The percentage of online client meetings (19.8 percent, *n* = 7) continued to fall from August 2021 through January 2022 and fell further from February 2022 to the present (12.6 percent, *n* = 5). From February 2022 to the present, 66.7 percent (*n* = 39) of client meetings were conducted by participants solely or primarily face-to-face. Participants worked to accommodate their patients during the pandemic. The diagram reflects the participant's work schedule changes during the height of the COVID-19 pandemic and during the months following. Additionally, it highlights how the work format evolved and changed as the nation moved from the pandemic to the end of the federal COVID-19 PHE declaration (Figure 2).

With the pandemic, clients in the Dallas region faced barriers to seeking services listed by participants as fear of contracting COVID-19 (63.8percent, *n* = 30), limited finances (61.7percent, *n* = 29), having COVID-19 (51.1percent, *n* = 24), and government restrictions (48.9percent, *n* = 23). Other noteworthy findings were that 93.6 percent (*n* = 44) of respondents marked misinformation or lack of trust as a barrier for many or some clients, and 78.7 percent (*n* = 37) of respondents marked childcare as a barrier for many or some clients. These findings suggest that distrust and fear had a detrimental impact on client access to services. Alternatively, access to virtual resources was essential and relevant, particularly for clients with children in the home.

Figure 2. Participants Working Online During COVID-19



Effectiveness of Strategies

Participants answered questions from the online survey and ranked the identified strategies in their responses. Participants rated each strategy from most effective to least effective on a 3-point Likert scale, with 0= did not use, 1 = not effective, 2 = somewhat effective, and 3 = effective. Table 1, entitled Strategies by Effectiveness Rating, highlights the strategies patients and clients felt were more effective in helping them access healthcare resources and support and the ability to cope with the stresses of life during the height of the pandemic. The participants indicated that the most effective strategies clients found helpful or meaningful throughout the pandemic included the use of Zoom or Microsoft Teams (61.7 percent, n = 29), having telephone contact (59.6 percent, n = 28), wearing personal protective equipment (55.3 percent, n = 26), and engaging in partnerships and collaboration efforts in their community (50 percent, n = 23).

The participants reported that telehealth through Zoom and Microsoft Teams was at least somewhat effective (91.5 percent, n=43). Additionally, 84.8 percent (n = 39) of the respondents had difficulty using online and paperless forms, although they selected online forms as effective and somewhat effective. Table 1 provides the strategies described as effective in descending response percentage order. Results highlight the need for organizations to train employees in the use of such telehealth technologies, which may have a free online therapy platform that allows practitioners to visit with their clients or patients. An example is the telemedicine platform Doxy.me, which is HIPAA compliant and allows a healthcare provider to interact with their client for a minimum of 40 minutes for free (Website: https://doxy.me/en/). The data may also emphasize the need for community residents to acquire the necessary technology and skills to engage in telehealth sessions.

Conversely, the research findings revealed that certain strategies were identified as ineffective, primarily because participants did not use them. Community canvassing and the use of artificial intelligence were among the activities that organizations reported not utilizing, as per the study. It was found that a considerable number (80 percent) of organizations did not leverage artificial intelligence. The lack of community canvassing (73 percent), which is a crucial aspect of data collection, was attributed to the pandemic's impact, hindering organizations' ability to leverage AI effectively.

Table 1. Strategies by Effectiveness Rating

	Response percent			
Strategy	Effective	Somewhat effective	Not effective	Did not use
Virtual meetings for staff (Zoom or Microsoft Teams)	62.2	22.2	8.9	6.7
Telephone contact	57.8	33.3	4.4	4.4
Personal protective equipment (i.e., masks, gloves, gowns)	57.8	26.7	6.7	8.9
Partnerships & Collaboration	50.0	18.2	0.0	31.8
Telehealth or tele-counseling (Zoom, Doxy.me, etc.)	48.9	42.2	4.4	4.4
Texts to clients	43.2	31.9	2.3	22.7
Online/paperless forms	38.6	45.5	4.6	11.4
Drive-thru or in-car services	35.6	17.8	2.2	44.4
Online education/information for clients	31.8	43.2	2.3	22.7
Plexiglass or plastic dividers	26.7	22.2	8.9	42.2
Communication software (CareSignal, CareMessage, etc.)	22.7	18.2	0.0	59.1
Deliver supplies or medications to clients	22.2	15.6	4.4	57.8
Pop-up clinics or distribution centers	20.0	17.8	2.2	60.0
Reduced duplicate efforts by staff or restructured	16.3	23.3	4.7	55.8
Reduced frequency of services	15.9	18.2	20.5	45.5
Community canvassing/door-to-door	13.3	8.9	4.4	73.3
Reduced fees	11.4	20.5	4.6	63.6
Hired temporary or "floating staff."	11.4	11.4	6.8	70.5
Artificial intelligence or talk-to-text for medical records	8.9	4.4	6.7	80.0

Client Barriers to Seeking Services

Table 2 displays the barriers to seeking services as reported by the participants. The tabulated data entitled "Barriers to Seeking Services Among Clients" (Table 2) provides a comprehensive overview of the significant hurdles and barriers clients faced throughout the pandemic. Participants rated each barrier on a 3-point Likert scale, with 1 = zero clients, 2 = some clients, and 3 = many clients. This data provides a snapshot of the various challenges experienced by clients while trying to access services during the height of the pandemic. It is imperative to analyze this information to understand client difficulties and to produce appropriate measures to overcome them. In those columns where over 50 percent are indicated, participants report that their clients experienced those specific barriers more often. Individuals engaging with community-based health service organizations were less likely to receive services because of the following barriers:

- Fear of contracting COVID-19 (95.7 percent)
- Limited finances (95.7 percent)
- Having COVID-19 (93.7 percent)
- Government quarantine restrictions (87.2 percent)

Researchers also inquired about COVID-19 vaccination. Most respondents (93.6percent) indicated that misinformation was the main reason for their reluctance to receive the COVID-19 vaccine, and 78.7 percent of the survey respondents marked childcare as a barrier for many clients. These results are consistent with the results of research 2021 UNT Dallas faculty conducted for Texas Health on vaccine hesitancy.

Table 2. Percentage Representation of Barriers to Seeking Services Among Clients

Barrier	Response percent		
	Many clients	Some clients	Zero clients
Fear of contracting COVID-19	63.8	31.9	4.3
Limited finances (more of a problem than before the COVID- 19 pandemic)	61.7	34.0	4.3
Having COVID-19	51.1	42.6	6.4
Government restrictions/lockdowns	48.9	38.3	12.8
Misinformation or concerns about vaccinations or lack of trust	44.7	48.9	6.4
Lack of childcare	44.7	34.0	21.3
Job loss	40.4	46.8	12.8
Limited number of staff due to COVID-19	34.0	44.7	21.3
Long waiting lists (more of a problem than before the COVID-19 pandemic)	32.6	37.0	30.4
Lack of transportation (more of a problem than before the COVID-19 pandemic)	29.8	44.7	25.5
Limited availability or access to medicines, supplies, or vaccines	29.8	51.1	19.2
No internet access	23.4	48.9	27.7
Language barriers	19.2	46.8	34.0

THEMATIC FINDINGS

The thematic findings collated from the survey's open-ended items and the two focus groups yielded four major thematic categories: (a) Safety, (b) Accessibility, (c) Affordability, and (d) Availability. Examples of each theme are provided in the subthemes listed in Figure 3. The themes were coded and operationally defined using terms provided to the researchers by the participants. When asked to give examples of how these themes are relevant to their clients and their personal lives, the participants provided the following explanations:

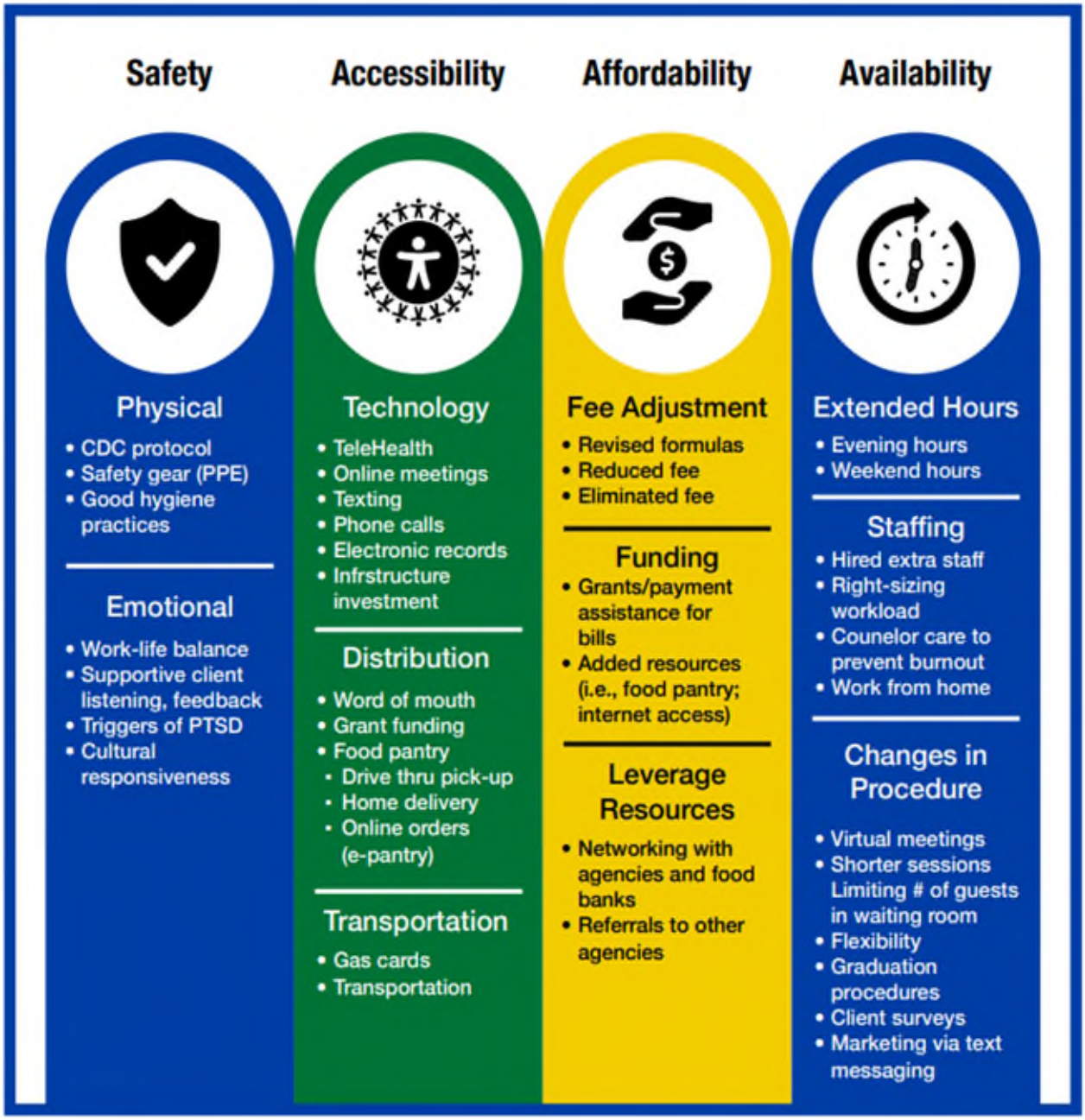
SAFETY is operationally defined as those activities, items, or processes that help the client feel that engaging with health service providers will not put them at further risk of harm. Clients want to feel that health service providers can ensure that the clinic environment does not present additional risk factors. The researchers identified two categories of safety that are important for clients and for health service providers alike – ensuring physical safety and awareness of emotional safety.

ACCESSIBILITY is the ability to contact help and benefit from obtaining assistance or access to resources, particularly technology. Participants reported that clients with access to such resources and who could obtain support through technology like emails, phone calls, and emails tended to keep their appointments. Likewise, the participants felt better able to provide quality care whenever they could access and could use electronic data, records, and telehealth.

AFFORDABILITY is operationally defined as services and resources available at reduced, eliminated, and sliding scale fees. Examples of affordable services include helping to enroll in insurance, grants, gifts, or additional resources that reduce the need for money (e.g., food pantry, free internet access, etc.).

AVAILABILITY is operationally defined as a systemic process that ensures that community-based health service is offered and can be accessed when the client needs it. Examples provided by respondents include a clinic that has extended hours and has hired more staff to serve at the clinic before and after normal work hours or on the weekends, virtual doctor's appointments, and flexible work weeks for employees.

Figure 3. Overarching Thematic Findings



RECOMMENDATIONS

Recommendations for Health Service Providers

In the event of a future pandemic, it is imperative for each community-based provider to consider the unique needs of its clientele. Based on the findings, there are certain recommendations that should be considered. Organizations should take a proactive approach to address the specific needs of their clients during a pandemic. This may include providing necessary resources, such as medical supplies and educational materials, and ensuring that clients have access to current information regarding the pandemic.

Additionally, community-based health service providers should strive to maintain open lines of communication with their clients and be prepared to adapt their services to meet changing needs as the situation evolves. By taking these steps, community-based health service providers can help mitigate the impact of health disparities on their clients and ensure that they can access the support they require during challenging times. These organizations should prepare for their staff to work primarily online or solely online and revise staffing needs by implementing contingency plans, such as hiring temporary or "floating" staff during peak demand (Wood, 2021).

The following recommendations align with the findings of this research study.

1. Organizations should address client fears about contracting the disease, limited finances, misinformation or lack of trust, and childcare needs. Telehealth and telemedicine provide advantages to patients and clients that could reduce their fears. For example, virtual appointments reduce worries about childcare and transportation, which can be seen as barriers to healthcare access (Ye et al., 2021).
2. Innovative strategies deemed effective during COVID-19 should be re-implemented and include ensuring that health service providers prioritize safety in all aspects of their services. Ensuring physical safety involves providing personal protective equipment, safety gear, and plastic dividers and maintaining thorough cleaning procedures. Emotional safety is prioritized by regularly checking in with clients, gathering feedback, and being culturally responsive.
3. Accessibility is critical and can be facilitated with technology by offering telehealth services, online meetings, emails, texting, phone calls, electronic records, electronic education, and electronic data gathering. It may also mean providing computers to those who need them. Additionally, accessibility can be achieved through distribution, for example, by offering pop-up events, drive-thru activities, home delivery, pickups by appointment, online orders, and transportation options, including giving gasoline gift cards.

4. Affordability is crucial to accessible care. Adjusting fees by reducing or eliminating them and help clients find funding through insurance enrollment, grants, and by adding food pantry resources and internet access can help with affordability.
5. Networking with other organizations and referring clients to those organizations is an important way to leverage resources and expose clients to available services within their reach. Hiring extra staff and extending hours to evenings and weekends is another way to ensure availability.

It is strongly recommended that the proposed measures be implemented as they will significantly contribute to promoting the safety and well-being of clients. The measures will also help address social barriers preventing people from accessing viable health services. By adopting these measures, health service providers will adhere to the industry's highest standards, ensuring clients receive the best possible care. The measures cover a comprehensive range of established protocols, including innovative ways of creatively addressing the community's healthcare needs and enhanced strategies for strengthening existing interventions. This will ensure that all individuals receive the necessary care without fear of infection or harm.

Additional considerations as reported by community-based health service providers include:

- Adopting and integrating training related to screening measures, safety, and the use of technology may improve programmatic efforts and the overall client experience.
- Developing comprehensive plans which outline the measures taken to meet client needs is important for transparency and for identifying areas of opportunity for future improvements. Plans should be flexible and adaptable to changing circumstances. The assessment process ensures that effective communication channels are in place, keeping clients informed and current on the measures taken to support them.
- Creating a centralized system of standard assessments may enhance comprehensive care and sharing relevant data with and between organizations.

Sustainability is commonly debated among community-based organizations and funders interested in supporting the continuation of effective programs. According to the feedback provided by 11 administrators, sustaining these efforts requires a combination of investments in staff and personnel, training, and support with programmatic costs. The need for financial support was consistently observed across the Dallas and Rockwall region community-based health service providers. Adding staff or increasing the wages of current staff to account for extended hours including evenings and weekends is the most significant expense. Some personnel needs cited by respondents included additional outreach personnel, raising wages above minimum wage, medical employees, bilingual employees, and behavioral technicians. Six of the 11 administrators reported the need for new annual funding to hire additional staff ranging from $10,000 to $150,000.

Surprisingly, only three administrators listed training as an area requiring financial support. Of those reporting training as a need, the training needs indicated by respondents included trauma counseling, cultural competency, and general staff training, which ranged from an anticipated cost of $7,500 for five general staff at one organization to $50,000 for all professional counseling staff. Additionally, five administrators listed the following technology-related needs: Text messaging and marketing service application ($5,000-$19,200; *n* = 3); "Softphones" ($10,000; *n* = 1); Software to analyze client feedback ($5,000; *n* = 1); Accessible technology ($2,500, *n* = 1); and Technology updates for virtual appointments (no estimated amount provided; *n* = 1).

The need for additional funding and support to position community-based health service providers in the Dallas and Rockwall region to effectively deliver health and health-related services is evidenced by these responses. Needs related to building their workforce capacity, whether by quantity or through training and development means, while equipping them with the appropriate resources are critical. The hope of these administrators is that access to these needed resources will lead to improved health outcomes.

Recommendations for Funders and Philanthropy

The COVID-19 pandemic created challenges for providers to address health disparities across community groups in Dallas and Rockwall counties. During the research initiative, the study team identified future opportunities for community investments to enhance the delivery of health and health-related services at the community level.

- Include community-based health service providers in health assessments, capturing as much detail as possible from these providers on the specific needs of community members.
- Support efforts to improve health evaluation and communication to strengthen health delivery systems. Fund or offer training sessions to guide community-based health service providers on utilizing comprehensive trauma-informed behavioral health evaluation and communication tools to identify and assess clients' health and health-related needs.
- Build the capacity of organizations to use text messaging technology effectively, collect data on the emerging needs of their clients, and benefit from having relevant information on available resources.
- For organizations involved in planning events, provide additional resources to realize pop-us or drive-thru implementation.
- Create access to technologies to enhance these organizations' reach and capability.

SUMMARY

The UNT Dallas Community Care Active Engagement Project (CCAEP) study was initiated to document the innovative practices of community-based health service providers in the Dallas and Rockwall regions during the COVID-19 pandemic. The study was designed to identify the emerging practices that these health service organizations adapted to improve the delivery of health and health-related services to underserved communities. The researchers employed a mixed methods approach and gathered qualitative and quantitative data from a convenience sample of participants. An initial recruitment group of 74 individuals from 37 community-based health service providers were invited. A total of 47 professionals working at these organizations during the COVID-19 pandemic returned completed surveys. Research results align with scholarly literature as some participant responses in the current study were similar to those innovative practices found in the literature.

REFERENCES

Johnson-Agbakwu, C. E., Ali, N. S., Oxford, C. M., Wingo, S., Manin, E., & Coonrod, D. V. (2022). Racism, COVID-19, and health inequity in the USA: A call to action. *Journal of Racial and Ethnic Health Disparities*, *9*(1), 52–58. https://doi.org/10.1007/s40615-020-00928-y

Kakarala, S.E. & Prigerson, H.G. (2022). Covid-19 and increased risk of physician suicide: A call to detoxify the U.S. medical system. *Frontiers in Psychiatry,* 13 (791752), 1-6. https://doi: 10.3389/fpsyt.2022.791752

Maffly-Kipp, J., Eisenbeck, N., Carreno, D. F., & Hicks, J. (2021). Mental health inequalities increase as a function of COVID-19 pandemic severity levels. *Social Science & Medicine*, 285, Article 114275. https://doi.org/10.1016/j.socscimed.2021.114275

Moran, B., Longo, J., & Gaston, J. E. (2022, August 15). *Digitally transformed community health*. Healthcare Information and Management Systems Society. https://www.himss.org/resources/digitally-transformed-community-health

Moreno, C., Wykes, T., Galderisi, S., Nordentoft, M., Crossley, N., Jones, N., Cannon, M., Correll, C. U., Byrne, L., Carr, S., Chen, E., Gorwood, P., Johnson, S., Kärkkäinen, H., Krystal, J. H., Lee, J., Lieberman, J., López-Jaramillo, C., Männikkö, M., Phillips, M. R., . . . Arango, C. (2020). How mental health care should change as a consequence of the COVID-19 pandemic. *The Lancet Psychiatry*, *7*(9), 813–824. https://doi.org/10.1016/S2215-0366(20)30307-2

Office of the Assistant Secretary for Planning and Evaluation. (2022, May). *Impact of the COVID-19 pandemic on the hospital and outpatient clinician workforce: Challenges and policy responses* (Issue Brief No. HP-2022-13). U.S. Department of Health and Human Services.

Office of Disease Prevention and Health Promotion. (2014). *Healthy People 2020: Social Determinants of Health.* Retrieved from Healthy People 2020. https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-ofhealth

Parkland Health & Hospital System, & Dallas County Health and Human Services. (2019). *Dallas County Community Health Needs Assessment 2019*. https://www.parklandhealth.org/pdf-files/2019-dallas-county-community-health-needs-assessme-3

Parkland Health & Hospital System, & Dallas County Health and Human Services. (2022). *Dallas County community health needs assessment 2022*.1

Shen, K., & Kejriwal, M. (2023). Quantifying COVID-19 policy impacts on subjective well-being during the early phase of the pandemic: A cross-sectional analysis of United States survey data from March to August 2020. *PLoS One, 18*(9), Article e0291494. https://doi.org/10.1371/journal.pone.0291494

Texas Health Resources (2022). *Texas Health Resources community health needs assessment 2020-2022.* https://www.texashealth.org/-/media/Project/THR/shared/Documents/PDFs/Community-Health/Community-Health-Needs-Assessments-2022/Texas-Health-Presbyterian-Hospital-Dallas-CHNA-2022.pdf

Texas Health Resources (2022). *Texas Health Resources implementation strategy report 20222022.* https://www.texashealth.org/locations/-/media/64C364BB165C4DA2897790812E2BA2C9.ashx

Texas Health Resources (2019). Texas Health Resources community health needs assessment 2019. https://www.texashealth.org/media/Project/THR/shared/Documents/PDFs/Community-Health/Community-Health-Needs-Assessments-2019/Appendix-Texas-Health-Resources-CHNA-2019.pdf

Weinstein, E., Ragazzoni, L., Burkle, F., Allen, M., Hogan, D., & Della Corte, F. (2020). Delayed primary and specialty care: The coronavirus disease-2019 pandemic second wave. *Disaster Medicine and Public Health* Preparedness, *14*(3), e19-e21. https://doi.org/10.1017/dmp.2020.148

Wood, D. (2021, June 25). *Healthcare best practices beyond COVID-19*. AMN Healthcare. htps://www.amnhealthcare.com/amn-insights/covid/blog/healthcare-best-prac~ces-beyond-covid-19/

Ye, S., Kronish, I., Fleck, E., Fleischut, P., Homma, S., Masini, D., & Moise, N. (2021) Telemedicine expansion during the COVID-19 pandemic and the potential for technology-driven disparities. *Journal of General Internal Medicine*, *36*(1), 256-258. https://doi.org/10.1007/s11606-020-06322-y