

The Association of COVID-19 on Organizational Attitudes in Primary Care Among Interprofessional Practice Clinics

Matthew Fifolt, PhD;

Connie White-Williams, PhD, RN, NE-BC, FAAN;

Maria R. Shirey, PhD, MBA, RN, NEA-BC, ANEF, FACHE, FNAP, FAAN;

Wei Su, PhD;

Michele Talley, PhD, ACNP-BC, FAANP, FNAP

Abstract: This article describes the association of COVID-19 on organizational attributes in primary care among 2 academic-practice partnership interprofessional collaborative practice (IPCP) clinics. Our team used a concurrent, triangulation repeated-measures study design to examine responses to the Survey of Organizational Attitudes of Primary Care (SOAP-C) instrument between January and December 2020. Analysis revealed statistically nonsignificant change over 12 months across all 4 subscales. Study results suggest that IPCP teams can function effectively through adversity. The IPCP model seemed to bolster resilience making it a viable model for ambulatory practices caring for vulnerable populations. **Key words:** *behavioral health integration, COVID-19, interprofessional collaborative practice, organizational attributes, SOAP-C, vulnerable populations*

Author Affiliations: *Department of Health Care Organization and Policy, School of Public Health, University of Alabama at Birmingham, Birmingham (Drs Fifolt and Su); Center for Nursing Excellence, University of Alabama at Birmingham University Hospital, University of Alabama at Birmingham, Birmingham (Dr White-Williams); and School of Nursing, University of Alabama at Birmingham, Birmingham (Drs Shirey and Talley).*

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THE CORONAVIRUS DISEASE-2019 (COVID-19) pandemic demanded extraordinary changes to health care in a short span of time. In early 2020, ambulatory care across the United States adapted an in-person to virtual care model seemingly overnight (Al-Tawfiq et al., 2020; Oseran et al., 2021; Reza et al., 2020). In Alabama, this transition

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Correspondence: *Matthew Fifolt, PhD, University of Alabama at Birmingham, 1665 University Blvd, Birmingham, AL 35209 (mfifolt@uab.edu).*

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happened in February of 2020 when our health system announced the first COVID-19-positive case (Alabama Public Health, 2021). By March 2020, many of our outpatient care delivery models drastically changed, transitioning to mostly telehealth (video or phone) ambulatory visits. Within our health system, there are 2 academic-practice partnership interprofessional collaborative practice (IPCP) clinics. These clinics house multiple disciplines that work together to care for vulnerable patient populations: the Providing Access to Health Care (PATH) Clinic and Heart FailuRe Transitional Care Services for Adults (HRTSA) Clinic, which care for underserved patients with diabetes and heart failure, respectively. Caring for underserved patients creates unique challenges for teams during a crisis. Thus, the purpose of this study was to describe the association of COVID-19 on interprofessional teams in primary care clinics caring for vulnerable populations.

Beginning in March 2020, the PATH Clinic transitioned from its 2 days a week in-person care to phone visits. During this time, the clinic delivered essential medications, supplies (including masks), and food to patient homes and eventually established a drive-through service for patients to obtain their blood work along with medications, supplies, and food. The HRTSA Clinic continued its 5 days a week in-person visits adjusting appointment times and socially distancing patients and staff within the clinic. The HRTSA Clinic also delivered essential medications and food to patient homes and provided masks to patients (White-Williams et al., 2020). The behavioral health integration (BHI) team that works in both clinics also transitioned to virtual visits. Throughout the pandemic, teams continued to provide care for their vulnerable patients.

Both clinics and the BHI team prepared staff for the change in care via Zoom meetings and email communication. Even with preparation, this change in care delivery was stressful. Health care mandates were changing daily, schools were moving to virtual learning, and daycare facilities were closing,

causing staffing difficulties and concerns for employee safety (Hillson, 2020; Ness et al., 2021). The change in the model of care provisions required a change in operational procedures. There was a learning curve for devices used in virtual visits, and education was needed on the proper use of personal protective equipment for in-person visits. While there has been a flurry of health care workers leaving their professions in the United States (Shahrour & Dardas, 2020; Søvold et al., 2021), both clinic teams remained stable throughout the pandemic with low turnover.

As of December 2020, vaccinations were made available to health care workers, and by April 2021, both IPCP clinics were once again providing in-person visits. However, with the numbers of COVID-19 cases beginning to rise, concern is heightened, yet again, if there will be upcoming changes on how care is delivered. Throughout the past 22 months, both clinics continued to function as a team. Yet, little is known about the impact of the COVID-19 pandemic on interprofessional teams.

METHODS

Study design

Our team used a concurrent, triangulation repeated-measures study design to better understand the phenomenon of interest (McBride et al., 2019). Quantitative data were collected using a valid and reliable survey instrument, and qualitative data were collected through key informant interviews. We collected quantitative and qualitative data separately but simultaneously to corroborate findings. The question that guided this investigation was: What is the association of COVID-19 on organizational attributes in primary care among IPCP clinics caring for vulnerable populations?

Ethical considerations

Initial and ongoing approval from the Institutional Review Board at UAB was received (IRB-130729005).

Sample

The sample for this study included all inter-professional health care providers and staff from all disciplines in the PATH and HRTSA Clinics and included an interprofessional BHI team that provides care in both clinics. Employees from PATH and HRTSA Clinics as well as BHI providers were invited to participate in this study. Due to the small sample size, demographic data are not presented to protect participant confidentiality.

Setting

In 2011, the University of Alabama at Birmingham School of Nursing launched a nurse-led clinic to care for uninsured adults with uncontrolled diabetes that provided care 1 day a week. Through Health Resources and Services Administration (HRSA) Nurse Education, Practice, Quality, and Retention (NEPQR) IPCP grant funding in 2012, the PATH Clinic was expanded to include an interprofessional collaborative team and the hours of operation were expanded. In 2014, the HRTSA Clinic opened using HRSA NEPQR IPCP funds to provide heart failure care for underserved, uninsured, or underinsured patients with heart failure (Shirey et al., 2021). Currently, the PATH Clinic operates 2 days a week while the HRTSA Clinic provides care 5 days a week. Both clinics have been sustained beyond the initial grant period with UAB Hospital funding (Shirey et al., 2020). Both the PATH and HRTSA Clinics provide care to underserved, uninsured, or underinsured patients with diabetes and/or heart failure who do not have another source of ongoing health care. The clinics provide transitional care for their patients with an overall goal of preventing unnecessary emergency department and inpatient visits through care coordination.

Both clinics employ an IPCP model using the STAND-UP model (Shirey et al., 2021), a nurse-led, team-based approach, that involves an interprofessional team of providers working together to care for high-need, high-cost patients. Care is patient-centered but allows *deference to expertise* based on the patient's needs at the time of visit, whereby the

discipline who is the expert for the patient's need assumes the lead role.

The PATH Clinic's team includes social work, nutrition, optometry, medicine, public health, patient care technician, physical therapy, informatics, nursing administration in addition to nurse care coordinators, and board-certified nurse practitioners (NPs). At the HRTSA Clinic, the team includes NPs, a clinical nurse leader, medicine, social work, pharmacy, public health, health professions, certified medical assistant, and health services administration. The team of providers represents faculty or staff from the school of nursing, hospital, or other health-related schools on the UAB campus. Collaboratively, the interprofessional team of providers cares for patients and their families and facilitates experiential learning opportunities at the clinics for students, interns, and residents who will eventually enter the health care workforce and care for underserved populations.

In 2016, another HRSA NEPQR IPCP grant was received to integrate behavioral health, as patients seen at both clinics are medically complex and suffer from a variety of social determinants as well as mental and behavioral health conditions, which negatively impact their health. The integration of behavioral health (BHI) services works to improve mental health access and care by expanding the IPCP model while incorporating students into the IPCP to transform the workforce. To aid integration of behavioral health into these clinics, a behavioral health care coordinator, licensed independent clinical social worker, psychiatric-mental health NP, and a psychiatrist were added. These behavioral health experts have incorporated screening tools to identify behavioral and mental health disorders.

Further, the team has developed algorithms for the treatment of depression, anxiety, suicidality, and substance use. The first 4 years of integrated behavioral health focused on the screening, identification, and initiation of treatment for depression, anxiety, suicidality, and substance use by the primary care provider followed by handoff management by

the behavioral health experts. In 2020, the focus shifted toward a consultative method for behavioral health whereby the behavioral health experts aided in the treatment and management of the patient through consultative means. Behavioral health experts only provided direct care to patients who were resistant to treatment or who had serious mental health disorders. This consultative approach continues to be the prevailing BHI model of care used today.

DATA COLLECTION AND ANALYSIS

Quantitative data

SOAP-C

Our team collected quantitative data using a validated survey instrument: the Survey of Organizational Attitudes of Primary Care ([SOAP-C]; Ohman-Strickland et al., 2007). The SOAP-C is a 21-item tool used to assess health care professionals' perceptions of organizational attributes required in primary care settings. The tool has 4 subscales—communication, decision-making, stress/chaos, and history of change—and uses a 5-point Likert scale. The SOAP-C showed excellent reliability and validity test results. Cronbach's α ranged from 0.904 to 0.917 for the subscales, and all item-subscale correlations were significant at $P < .001$ level.

The SOAP-C was administered via Qualtrics, an online survey development platform. Web links to the surveys were distributed to providers and staff members on a monthly basis. Subscale scores were calculated by averaging scores across individual items that comprise each subscale. Nine items of the SOAP-C were negatively phrased and reverse coded before analysis. Subscale scores were then aggregated separately as well as combined across clinic sites. Monthly scores were gathered across the 4 subscales of the SOAP-C for calendar year 2020 across all providers and staff at PATH and HRTSA Clinics as well as the BHI team (mean = 13, SD = 5.07), with a monthly sample size ranging from 5 to 22.

Considering this was a repeated-measures study, a generalized estimating equation (GEE) model with random effects was used

to examine outcome changes over time. The time lag between each follow-up assessment and the baseline assessment was set as the between-subject predictor, and a natural log transformation was applied to this predictor. The random effects specified in the model accounted for the randomness of the time since the baseline assessment. All statistics and graphs were generated in Tableau version 2020.1 and SPSS version 28.

Qualitative data

We collected qualitative data from key informant interviews with providers and clinic staff. Key informant interviews were conducted one-on-one via Zoom by 2 trained evaluation staff members using a standardized interview protocol developed by the research team (see the Supplemental Digital Content, available at: <http://links.lww.com/JACM/A107>). Interviews lasted between 20 and 45 minutes, and staff members took notes by hand. Notes were stored on a shared drive, and evaluation staff members discussed completed interviews to ensure accuracy and completeness of note taking. Zoom recordings were also available for replay to capture participant quotes verbatim. Evaluation staff members used the interview protocol to explore provider roles, interactions, understanding of IPCP, and lessons learned. Interviews were conducted in both September 2020 (n = 13) and May 2021 (n = 19).

Evaluation staff members used NVivo 12 to code, arrange, sort, and manage sections of text (QSR International Pty. Ltd, Version 12). Coding followed procedures outlined by Ivankova (2014) and allowed the research team to extrapolate recurring words and ideas from providers. The major themes of the study were derived from the 4 SOAP-C subscales: communication, decision-making, stress/chaos, and history of change. All codes were reviewed by the coauthors, and disagreements were discussed until consensus was reached. Consistent with best practices in qualitative design, we used multiple methods of verification to ensure qualitative rigor including peer debriefing, internal memoing,

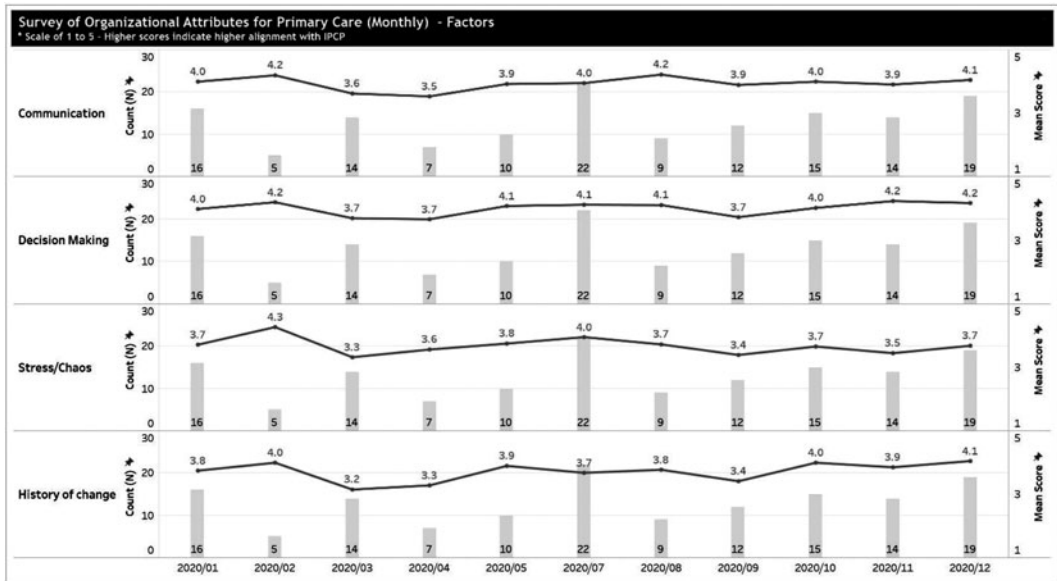


Figure 1. Monthly results of SOAP-C for providers and staff at PATH and HRTSA Clinics and BHI team (January 2020 to December 2020). BHI indicates behavioral health integration; HRTSA, Heart FailuRe Transitional Care Services for Adults; PATH, Providing Access to Health Care; SOAP-C, Survey of Organizational Attitudes of Primary Care.

and the use of an audit trail (Morse et al., 2002).

RESULTS

Quantitative results

Across the 4 organizational subscales on the SOAP-C, scores were relatively high and consistent over time (see Figure 1). As noted in instrument guidance, higher scores indicated greater alignment with iPCP. GEE analysis revealed statistically nonsignificant change over the 12 months across all 4 subscales: communication, $\chi^2(1) = 0.75, P = .388$; decision-making, $\chi^2(1) = 1.85, P = .174$; stress/chaos, $\chi^2(1) = 0.01, P = .909$; history of change, $\chi^2(1) = 1.70, P = .192$. Notably, participant scores across all 4 subscales were lowest in March and April 2020, which is consistent with the transition to telehealth at the PATH Clinic due to COVID-19. The 2 lowest scores, stress/chaos (3.3) and history of change (3.2) occurred in March 2020.

Evaluators for the NEPQR-BHI program have collected SOAP-C data from PATH and HRTSA providers and staff members since

2017. Longitudinal, composite scores for the 4 SOAP-C subscales are presented in Figure 2.

Qualitative results

Using key informant interviews, our team used deductive coding to further explore the 4 SOAP-C subscales: communication, decision-making, stress/chaos, and history of change. For each theme, we provide context and representative quotes. Qualitative responses are intended to expand quantitative findings.

Communication

Prior to the pandemic, discussions of patient care occurred through team huddles in a shared clinic space. However, due to COVID-19, meeting in person was limited between March and September 2020 in the PATH Clinic. Nevertheless, 3 interviewees noted that team huddles still occurred throughout the pandemic via Zoom to discuss patients, develop treatment plans, and divide work among team members.

In addition to huddles in Zoom, providers also mentioned their increased use of the electronic medical record (EMR) system for

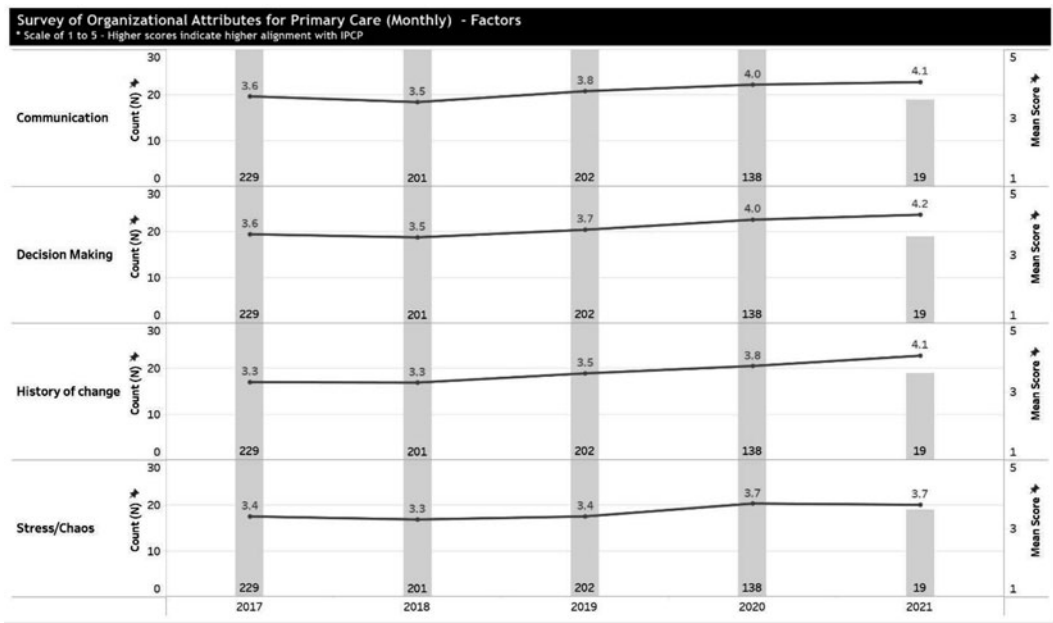


Figure 2. Longitudinal, composite SOAP-C for providers and staff at PATH and HRTSA Clinics (2017-2021). HRTSA indicates Heart FailuRe Transitional Care Services for Adults; PATH, Providing Access to Health Care; SOAP-C, Survey of Organizational Attitudes of Primary Care.

communicating and collaborating with other team members. Messages shared in the EMR conveyed important patient information with other clinic providers and proved to be a “life-saver” in the rapid transition to telehealth. Interviewees agreed that team members were “very available to each other via phone and telehealth.”

One individual stated, “Clinic staff communicated more (during the pandemic), though communication may have been less efficient (via Zoom).” Despite potential inefficiencies of remote interactions, there was consensus among team members that communication was critical to serving this patient population, and the pandemic only increased the need for intentional communication among providers and staff members.

Decision-making

According to team members, the PATH and HRTSA Clinics use a shared decision-making model based on the tenets of IPCP. Respondents suggested that this collective approach to patient care allows them to address medical, social, and emotional issues

simultaneously, which is important due to the overlapping nature of physical and mental health. Several team members noted that the clinical team rotates leadership responsibilities based on patient needs. One respondent stated:

IPCP allows all of the providers to work together to serve the patient and what their most important need is that day, so we kind of let who’s most important take the role for that day, and we all kind of work together to collaborate and include the patient in their plan of care.

Team members suggested that the *patient-centeredness* of IPCP allows providers to be responsive to a patient’s most pressing needs, which further underscores the connections between behavioral and physical health. Furthermore, interviewees observed that this shared decision-making approach to patient care disrupts the hierarchical structure that is frequently present in health care settings.

Stress/chaos

As previously noted, the PATH Clinic transitioned to telehealth appointments in March

2020 due to COVID-19. The HRTSA Clinic remained open for in-person visits throughout the pandemic but implemented significant changes in protocols including the use of masks and face shields; strict hand hygiene; staggered patient appointments; socially distanced chairs in the waiting room; floor signage, and temperature checks upon patient arrival.

In addition to procedural changes, team members observed that their patient population was at an increased risk of severe complications from COVID-19 and faced increased financial insecurity due to the pandemic. Many patients lost their jobs and had difficulty affording food, housing, medication, and necessary medical supplies. One provider stated:

Sometimes we have to prioritize what medications they (patients) should buy because they only have so much money to purchase medications . . . Some people have run out of strips or pen needles, and they couldn't afford more.

In response to patient needs, team members implemented a system for ensuring medical adherence. One team member stated:

We've done a lot of adapting . . . Our patients used to come to clinic to get their insulin and our team has done home delivery, neighborhood delivery, and now, patients are coming to the parking lot to get their insulin and they can do some labs at the same time. Just making sure that patients are getting what they need.

More than half of interviewees specifically stated that they were proud of how providers and staff worked together during the pandemic to meet the needs of the patient population. One interviewee noted that team members "made the main thing the main thing" by prioritizing the aspects of patient care that were most important during this extremely chaotic time.

History of change

History of change refers to how members of an organization manage patient care and operations. Team members cited BHI as

an innovative and collaborative approach to improving patient care. Providers and staff agreed that BHI helps patients build coping skills that lead to significant behavioral health improvement, such as medication adherence.

Despite general agreement among team members that BHI plays an important role in improving patient care, several interviewees suggested that more could be done to integrate physical and mental health services to "use [the BHI team] to [its] fullest potential." Collaboration with BHI providers proved to be challenging at times during the pandemic. One provider stated:

I think sometimes, with telehealth, there's this thought that [patients will] talk to the medical provider, then the social worker will pick up and call, and the BHI specialist will call, and then the dietician will call, but I don't think this works seamlessly. Either one person (provider) can't get them (patients) on the phone or you're sort of tripping over each other on the phone.

Nevertheless, team members expressed the belief that BHI allowed providers and staff to offer the most comprehensive care possible during the pandemic when the focus on mental health was especially acute. Additionally, several providers expressed appreciation for the ability to refer patients for behavioral health treatment within the same clinic suggesting, "[it] makes a big difference to the patients that the various members of their health team work together and trust each other." One staff member described the evaluation of patients for mental health as an "ingrained" clinic process, which leads to more comprehensive, holistic care for patients.

DISCUSSION

The COVID-19 pandemic compelled clinics to manage health care for vulnerable patients differently and intensified plans to ensure a healthy workforce while doing so (Al-Tawfiq et al., 2020). The intense need to meet these demands affected the provision of care at both the PATH and HRTSA Clinics. Strategies similar to those described by Al-Tawfiq and

colleagues (2020) were initiated slightly before the state's Safer at Home order issued on April 30, 2020 (Alabama Public Health, 2021). Nevertheless, between January 2020 and December 2020, team members at the PATH and HRTSA Clinics consistently rated the 4 organizational attributes within the SOAP-C subscales high *even in the midst of a global pandemic*. Moreover, scores showed little variation over the 12-month period and aligned with composite SOAP-C subscale scores since 2017.

According to leadership team members, and consistent with findings by Ness et al. (2021), the lowest SOAP-C scores likely reflected challenges associated with the anxiety in providing care to chronically ill patients at the beginning of a global pandemic and rapidly changed health care practices associated with shifting models of care delivery (in-person to telehealth). For the HRTSA Clinic, it was a time of daily changes to clinic workflow, which included social distancing, wearing proper personal protective equipment, and screening patients for COVID-19 symptoms.

Team members suggested that the team-based, interprofessional nature of patient care was one of the primary reasons the clinics continued to function at a high level during the pandemic. Within IPCP, providers across multiple disciplines share responsibility for patient care, and the team leader varies depending on the greatest needs of the patient. This collaborative model necessitates clear and consistent communication as well as shared decision-making to ensure warm handoffs between team members. Moreover, it spreads responsibility for patient care across a health care team, rather than a single provider. Despite the urgency of transitioning to telehealth visits with patients, team members noted that longstanding and trusted relationships between administrative staff members, providers, and patients led to greater continuity of care.

Team members observed that the means of service delivery, telehealth versus in-person visits, was not as efficient as they would have preferred. Nevertheless, team

members, especially providers, used the tools at their disposal for communicating with one another, such as phone calls and patient notes in the EMR. Furthermore, the patient-centered design of care teams, irrespective of delivery model, changed the way team members thought about patient care, which translated into consistently high scores for communication, decision-making, and history of change.

Similarly, the integration of behavioral health into the overall model of care, instituted before the pandemic, provided a much-needed resource to providers and patients throughout the crisis. Challenges associated with COVID-19 for patients, including financial instability, medical uncertainty, and fear of the unknown, increased the need for mental and emotional support (Ness et al., 2021). Consultative and direct care by trained BHI providers, as well as tools and training to address behavioral health needs, provided all team members the confidence to provide the highest quality of care to their patients. The inclusion of BHI speaks directly to how team members prioritized patient needs, especially in time of high stress and chaos.

Team members concluded that the PATH and HRTSA Clinics were willing and able to adapt to the pandemic due to their commitments to one another and their patients. Unlike traditional health care models, the shared decision-making model of IPCP values expertise over job titles, which allows team members to work collaboratively and interdependently to address the greatest needs of patients. Recognizing that access to and affordability of medications would pose significant challenges to their patient population, providers, and staff members organized home and site-based deliveries to ensure continuity of care. Once again, this patient-centered focus shifted attention away from the physical clinics to meeting patients "where they are," both literally and figuratively.

Limitations

The total number of SOAP-C scores varied month-to-month based on participant

responses. The steep drop in participation in February 2020 was most likely due to the pandemic since all scores were collected the month following the posted date (ie, February scores were collected in March). Managing the complex issues related to COVID-19 and clinic operations may also be responsible for lower participation rates in April and May 2020. Finally, surveys were not administered in February, August, and September 2020 at the HRTSA Clinic because HRTSA leadership wanted to reduce staff burden while dealing with COVID-19 cases. The absence of participant scores during these months may have artificially inflated scores. Additionally, the total number of interviewees varied from September 2020 to May 2021. These may all be considered limitations of the study; therefore, caution should be used in interpreting results.

Findings were based on self-reported scores on the SOAP-C and explanatory data from a small yet purposeful set of providers and staff at these 2 IPCP clinics; therefore, results cannot be generalized beyond program participants. Furthermore, data were collected during a period of great upheaval due to the COVID-19 pandemic. Finally, there may have been factors other than IPCP and BHI that influenced the stability of SOAP-C scores over time.

Lessons learned

Key points that we learned from the pandemic and would apply to any crisis:

1. During a crisis, effective communication is crucial to team functioning.

2. Allowing the team to be part of the rapid change decisions aids to decrease stress and chaos.
3. Offering support and flexibility during a crisis fosters resilience.
4. Effective teams have little variation even in the face of adversity and change.

CONCLUSION

The purpose of this article was to describe the association of COVID-19 on organizational attributes in primary care among 2 academic-practice partnership IPCP clinics. Based on study findings, we suggest that IPCP teams can function through adversity and uphold the standards of the IPCP model throughout a stressful pandemic. COVID-19 evoked anxiety and necessitated rapidly evolving provisions of care to ensure patient and health care safety and well-being. However, little knowledge exists related to quantitative evaluation methods during a pandemic.

Undeniably, the IPCP model was successful during the COVID-19 pandemic. Our study further supports that IPCP is a viable model for ambulatory practice caring for underserved and vulnerable populations. Despite the anxiety and rapidly changing situation, our teams rose to the occasion and improved in deference to expertise, communication, and a true investment in health care well-being. Implications for future research include a more in-depth examination of the IPCP model itself. Further research is needed to explore whether any of the individual components of the IPCP model better facilitate team functioning during a crisis.

REFERENCES

- Alabama Public Health. (2021, June 29). *Coronavirus disease 2019 (COVID-19)*. Retrieved from <https://www.alabamapublichealth.gov/covid19/index.html>
- Al-Tawfiq, J. A., Al-Yami, S. S., & Rigamonti, D. (2020). Changes in healthcare managing COVID and non-COVID-19 patients during the pandemic: Striking the balance. *Diagnostic Microbiology and Infectious Disease*, 98(4), 115147. doi:10.1016/j.diagmicrobio.2020.115147
- Hillson, R. (2020). COVID-19: Psychological issues for people with diabetes and health care staff. *Practical Diabetes*, 37(3), 101-104. doi:10.1002/pdi.2278
- Ivankova, N. (2014). *Mixed methods applications in action research: From methods to community action* (1st ed.). London, England: Sage.

- McBride, K. A., MacMillan, F., George, E. S., & Steiner, G. Z. (2019). The use of mixed methods in research. In P. Liamputtong (Ed.), *Handbook of research methods in health social sciences*. Singapore: Springer. doi:10.1007/978-981-10-5251-4_97
- Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods*, 1(2), 13-22.
- Ness, M. M., Saylor, J., Di Fusco, L. A., & Evans, K. (2021). Healthcare providers' challenges during the coronavirus disease (COVID-19) pandemic: A qualitative approach. *Nursing & Health Sciences*, 23(2), 389-397. doi:10.1111/nhs.12820
- Ohman-Strickland, P. A., Orzano, A. J., Nutting, P. A., Dickinson, W. P., Scott-Cawiezell, K. H., Gibel, M., & Crabtree, B. (2007). Measuring organizational attributes of primary care practices: Development of a new instrument. *Health Services Research*, 42(3, Pt. 1), 1257-1273.
- Oseran, A. S., Afari, M. E., Barrett, C. D., Lewis, G. D., & Thomas, S. S. (2021). Beyond the stethoscope: Managing ambulatory heart failure during the COVID-19 pandemic. *ESC Heart Failure*, 8(2), 999-1006. doi:10.1002/ehf2.13201
- Reza, N., DeFilippis, E. M., & Jessup, M. (2020). Secondary impact of the COVID-19 pandemic on patients with heart failure. *Circulation Heart Failure*, 13(5), 3007219.
- Schroder, C., Medves, J., Paterson, M., Byrnes, V., Chapman, C., O'Riordan, A., ... Kelly, C. (2011). Development and pilot testing of the collaborative practice assessment tool. *Journal of Interprofessional Care*, 25(3), 189-195.
- Shahrouh, G., & Dardas, L. A. (2020). Acute stress disorder, coping self-efficacy and subsequent psychological distress among nurses amid COVID-19. *Journal of Nursing Management*, 28(7), 1686-1695. doi:10.1111/jonm.13124
- Shirey, M. R., Selleck, C. S., White-Williams, C., Talley, M., & Harper, D. C. (2020). Sustainability of an interprofessional collaborative practice model for population health. *Nursing Administration Quarterly*, 44(3), 221-234.
- Shirey, M. R., Selleck, C. S., White-Williams, C., Talley, M., & Harper, D. C. (2021). Interprofessional Collaborative Practice model to advance population health. *Population Health Management*, 24(1), 69-77.
- Søvdal, L. E., Naslund, J. A., Kousoulis, A. A., Saxena, S., Qoronfleh, M. W., Grobler, C., & Münter, L. (2021). Prioritizing the mental health and well-being of healthcare workers: An urgent global public health priority. *Frontiers in Public Health*, 9, 679397.
- White-Williams, C., Clarkson, E., Shirey, M. R., & Bittner, V. (2020). Caring for underserved patients with heart failure during the COVID-19 pandemic. *Journal of Health Care for the Poor and Underserved*, 31(3), 1061-1066.