

# UCSF

## UC San Francisco Previously Published Works

### Title

Mental Health Service Provision at School-Based Health Centers During the COVID-19 Pandemic: Qualitative Findings From a National Listening Session

### Permalink

<https://escholarship.org/uc/item/0f6300mm>

### Journal

Journal of Pediatric Health Care, 36(4)

### ISSN

0891-5245

### Authors

Sullivan, Erin  
Geierstanger, Sara  
Soleimanpour, Samira

### Publication Date

2022-07-01

### DOI

10.1016/j.pedhc.2021.11.003

Peer reviewed



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



# Mental Health Service Provision at School-Based Health Centers During the COVID-19 Pandemic: Qualitative Findings From a National Listening Session

Erin Sullivan, MSPH, Sara Geierstanger, MPH, & Samira Soleimanpour, PhD, MPH

**Introduction:** School-based health centers (SBHCs) provide health services to more than six million youth annually. When schools throughout the United States closed in spring 2020, many SBHCs were also forced to close physical operations.

**Method:** This study uses qualitative data collected from SBHC representatives nationwide to examine supports and challenges affecting mental health services provision during the COVID-19 pandemic, changes in the provision of these services, and priorities for assessing and supporting student mental health needs in the 2021–2022 school year.

**Results:** Partnerships, community and stakeholder buy-in, and student access were key supports to continuous care throughout the pandemic, whereas lack of available staff and lack of in-person access to students were key challenges. Patients demonstrated increased acuity of presenting mental health problems, more immediate and complex mental health challenges, and greater co-morbidities.

**Discussion:** SBHCs pivoted, even with limited resources, to meet students' increasing needs for mental health care. *J Pediatr Health Care.* (2022) 36, 358–367

## KEY WORDS

COVID-19, mental health, school-based health center, school health

Erin Sullivan, Senior Program Manager of Research and Evaluation, School-Based Health Alliance, Washington, DC.

Sara Geierstanger, Research and Evaluation Director, Philip R. Lee Institute for Health Policy Studies, University of California San Francisco, San Francisco, CA.

Samira Soleimanpour, Senior Researcher, Philip R. Lee Institute for Health Policy Studies, University of California San Francisco, San Francisco, CA.

Conflicts of interest: None to report.

Correspondence: Erin Sullivan, MSPH, School-Based Health Alliance, 1010 Vermont Ave. NW #816, Washington, DC 20005; e-mail: [esullie@gmail.com](mailto:esullie@gmail.com).

*J Pediatr Health Care.* (2022) 36, 358–367

0891-5245/\$36.00

Copyright © 2022 Published by Elsevier Inc. on behalf of National Association of Pediatric Nurse Practitioners.

Published online November 18, 2021.

<https://doi.org/10.1016/j.pedhc.2021.11.003>

## INTRODUCTION

There are myriad inequalities by race and socioeconomic status in the United States, including unequal access to quality health care (Bloom, Cohen, & Freeman, 2012; Centers for Disease Control and Prevention, 2011; Kann et al., 2014; U. S. Department of Health and Human Services, 2013) more than one in four youth face barriers to health care access, such as lack of transportation, low health literacy, and provider shortages (Redlener et al., 2016). Mental health issues are the leading cause of disability among youth (Center for School, Health and Education, 2018), and rates of mental health disorders are highest among the youth of color (Pumariega, Rogers, & Rothe, 2005), youth residing in low-income communities (Irwin, Adams, Park, & Newacheck, 2009) and youth involved in the juvenile justice (Rogers, Pumariega, Atkins, & Cuffe, 2006) or child welfare

system (Garland et al., 2001). An estimated one in four youth experience a mental health issue (Center for School, Health and Education, 2018), and one-in-five experience a mental health disorder that causes severe mental impairment (Merikangas et al., 2010) but fewer than half of those diagnosed receive treatment (McKay, Lynn, & Bannon, 2005; Merikangas et al., 2011). Youth is a critical period for mental health intervention as half of all mental health conditions appear by the age of 14 years (World Health Organization, 2021), and three-quarters appear by the age of 24 years (National Alliance on Mental Illness, 2021). Untreated, mental health issues result in poor physical health outcomes (Naicker, Galambos, Zeng, Senthilselvan, & Coleman, 2013), poor social mobility, reduced social capital (Alegria, Vallas, & Pumariega, 2010), increased welfare dependence, and unemployment (Fergusson, Boden, & Horwood, 2007).

The COVID-19 and related restrictions exacerbate mental health risks and conditions (Lee, 2020; Patrick et al., 2020) and decrease access to and use of health services (Centers for Medicare & Medicaid Services, 2020; Leeb et al., 2020; Leff, Setzer, Cicero, & Auerbach, 2021). Youth nationwide face new and intensified stressors like illness, death, social isolation, economic stress, food insecurity, family hardship, and increased domestic violence risk (Abramson, 2020; Patrick et al., 2020; United Nations Sustainable Development Group, 2020). These stressors are associated with outcomes like depression, behavioral problems (Mollica, Poole, Son, Murray, & Tor, 1997) anxiety disorders, and worsened existing mental health conditions (Garfield & Chidambaram, 2020; Golberstein, Gonzales, & Meara, 2019; Leff et al., 2021). The pandemic and restrictions affect the emotional and social development of youth more significantly than adults (Singh et al., 2020). Preliminary research points to increased depression, anxiety, and other mental health challenges because of the pandemic (Garfield & Chidambaram, 2020; Hamoda et al., 2021; Jiao et al., 2020), manifested through symptoms like disturbed sleep, nightmares, poor appetite, agitation, and separation anxiety (Jiao et al., 2020). Although these findings suggest a clear increased need for health care, there has been a precipitous decline in services delivered. Compared with the same period in 2019, between March and May of 2020, there were an estimated 44% fewer outpatient mental health services, 44% fewer cognitive development screenings (Centers for Medicare & Medicaid Services, 2020) and substantial declines in reported numbers of children's mental health-related emergency department visits (Leeb et al., 2020; Leff et al., 2021). The World Health Organization estimated the pandemic disrupted up to 72% of mental health services delivered to youth (World Health Organization, 2020). Experts called for targeted school-based mental health interventions to respond to this crisis and minimize the burden on the health care system (Hamoda et al., 2021).

School-based health centers (SBHCs) are a cost-effective health care delivery model that increases mental and behavioral health access and use (Knopf et al., 2016) among more

than six million youth annually throughout the United States (Love, Schlitt, Soleimanpour, Panchal, & Behr, 2019). Many SBHC patients live in underserved communities and are at a greater risk for mental health issues (Garland et al., 2001; Irwin et al., 2009; Pumariega et al., 2005; Rogers et al., 2006). More than three quarters of schools with access to an SBHC are eligible for Title I funding, designated to schools with high percentages of children from low-income families. Compared with schools without access to an SBHC, those with access have higher proportions of the youth of color or receive free or reduced-price lunch (Love et al., 2019). Furthermore, one study found that youth of color accessed services at SBHCs more frequently than other community health delivery sites, suggesting they can effectively overcome access barriers for these populations (Juszczak, Melinkovich, & Kaplan, 2003).

SBHCs improve equity by operating on or near school campuses and overcoming access barriers like stigma, provider shortages, and lack of transportation. (Center for School, Health and Education, 2018) The number of SBHCs nationwide has grown exponentially in recent years (Love et al., 2019) as advocates recognize the model for expanding access to disadvantaged youth who lack access to affordable health care (Knopf et al., 2016; Love et al., 2018; Love et al., 2019). For instance, the Affordable Care Act included a \$200 million appropriation to expand SBHC services (Paschall & Bersamin, 2018).

By integrating within a school, SBHCs normalize mental health services, build trust with students and their families, and contribute to increased use of mental health services (Knopf et al., 2016), increased grade point average, lower suspension rates (Keeton, Soleimanpour, & Brindis, 2012; Knopf et al., 2016), improved school life experiences, and feelings of connectedness (Strolin-Goltzman, Sisselman, Melekis, & Auerbach, 2014). More than half of youth who access mental health services each year do so at school (Ali et al., 2019; Center for School, Health and Education, 2018), and youth are considerably more likely to complete mental health treatment that is provided in a school setting (Duong et al., 2021; Green et al., 2013; McKay et al., 2005; Merikangas et al., 2011).

When schools across the United States closed in spring 2020 because of the COVID-19 pandemic, many SBHCs were forced to close physical operations, leaving those who rely on these services with limited access to care (Sullivan, Brey, & Soleimanpour, 2021a). Throughout the aftermath of initial school closures, SBHCs found innovative ways to continue to deliver services to students and their communities (Goddard, Sullivan, Fields, & Mackey, 2021; Sullivan et al., 2021a), although they faced numerous challenges. This study uses qualitative data collected from SBHC and sponsor organization representatives in March 2021 to examine: (1) supports and challenges that affected the provision of mental health services in SBHCs during the COVID-19 pandemic, (2) the provision of mental health services at SBHCs 1 year into the pandemic compared with before

the pandemic, and (3) SBHCs' priorities for assessing and supporting student mental health needs in the 2021–22 school year.

## METHODS

As part of a series of 10 capacity-building webinars hosted through the platform *Zoom* (Zoom, 2021) throughout spring and summer 2021, the School-Based Health Alliance (SBHA) organized a 60-min virtual listening session focused on mental health services at SBHCs in late March 2021 for SBHC staff and stakeholders. Participants did not need to attend other webinars in the series to participate in the listening session on mental health services. SBHA used *Mentimeter* (Mentimeter, 2021) as an interactive web-based survey and polling platform to collect qualitative data. SBHA posed open-ended questions on *Mentimeter* and asked the participants to respond individually using their devices (smartphones, tablets, or computers). The *Zoom* screen displayed these answers anonymously through data visualizations to all webinar participants to further encourage discussion. The listening session focused solely on participant sharing and discussion and did not include a formal presentation on mental health or COVID-19.

### Study Design

Prior SBHA-led research informed the research questions, study design, and study tools. Shortly after schools closed in spring 2020, SBHA conducted a series of national qualitative listening sessions with SBHC clinicians, administrators, and sponsors to understand implications on SBHC patients and services (Goddard et al., 2021; Sullivan, Goddard, Fields, & Mackey, 2021b). Participants shared challenges related to remote learning, accessing students, and presenting mental health concerns. Several months later, in late spring/early summer 2020, SBHA administered a brief quantitative survey to further explore the pandemic's implications on SBHC operations (Sullivan et al., 2021a). Several SBHA researchers and content experts used the results of these analyses to frame the current study and develop and refine a semistructured interview guide. Study procedures mirrored the series of listening sessions in spring 2020, which received very positive feedback from participants and stakeholders (Goddard et al., 2021; Sullivan et al., 2021b). This research focused on organizational practices and did not require institutional review board review.

### Recruitment

SBHA maintains a database with contact information of the more than 2,500 identified SBHCs nationwide, described in detail elsewhere (Love et al., 2019). Before the session, SBHA e-mailed event and registration information to all database contacts, advertising the event as an opportunity for SBHC staff and stakeholders to discuss mental health service provision during the pandemic.

## Participants

Two hundred seven people from 121 SBHCs and sponsor organizations registered to participate. Of these registrants, 143 logged into the session to attend, and 117 attended for at least 15 min. Of the 82 participants who chose to share their home state, a majority resided in the United States. South ( $n = 31$ ) and West ( $n = 22$ ; Census Bureau, 2010) especially in Texas ( $n = 17$ ), California ( $n = 8$ ), and Washington state ( $n = 6$ ). The remaining resided in the Northeast ( $n = 11$ ) and Midwest ( $n = 18$ ). SBHA did not collect information on participant titles or organization names. Of the participants who joined the session for at least 15 min, the average participation time was 54 min. An average of 57 participants responded to each question posed through *Mentimeter*.

## Procedure

The listening session lasted 60 min, but participants could choose to leave at any time. At the beginning of the session, the SBHA moderator disclosed the plan to record and transcribe the session and disseminate deidentified data. The moderator followed a semistructured interview guide, and participants responded to open-ended questions, first in writing through *Mentimeter* and then orally. The moderator first posed a structured open-ended question through *Mentimeter*, displayed on the webinar screen. Participants responded individually using their devices through a *Mentimeter* portal. Participants' anonymous responses were displayed on the webinar screen through a real-time data visualization to guide the further oral discussion. Three SBHA content experts monitored the *Mentimeter* responses and the *Zoom* written chatbox comments and privately flagged themes and innovations to the moderator. The moderator read these select responses aloud and invited the writers to elaborate orally. Participants could also use the *Zoom* chat box to answer the *Mentimeter* questions or volunteer to share orally. An SBHA administrator un-muted the participants' microphones before they spoke on their request; all participant microphones were otherwise set to mute. After each oral discussion, the moderator moved on to the next *Mentimeter* question.

## Analysis

SBHA staff extracted and downloaded the *Zoom*-generated audio transcripts, chatbox text, and *Mentimeter* responses. To maintain anonymity, SBHA staff deidentified participants before data analysis. The primary author began the analysis by reading the transcript of the discussion, chatbox text, and *Mentimeter* data repeatedly to achieve familiarization. The primary author then conducted an informal conceptual content analysis using Microsoft Excel, beginning with the *Mentimeter* data and concluding with the *Zoom* transcript and chatbox text. The primary author first grouped data by research question and then developed and applied open coding for the existence of concepts, adding and modifying categories throughout the coding process. After completing the analysis, a co-author analyzed a detailed audit trail of the primary author's methods, notes, and coding to confirm the reliability of the findings and limit researcher bias.



## RESULTS

Several themes emerged from the discussion: (1) SBHCs reported changes in mental health needs and screenings for needs; (2) SBHCs reported challenges affecting service provision to meet increased needs; (3) SBHCs adapted mental health services; (4) many factors facilitated service provision; and (5) SBHCs set priorities to meet demands in the 2021–22 school year.

### Changes in SBHC Patients' Mental Health Needs and Screening for Mental Health and Social Needs

Throughout the pandemic, SBHC patients increasingly presented with anxiety, depression, grief, and withdrawal (Table). SBHC providers also observed a lack of motivation, numbness, and lack of engagement with others. A participant from New York shared that there has been a loss of factors that typically promote resilience, such as after-school activities, sports, and social connection, which normally mitigate anxiety, depression, and substance abuse. In Ohio SBHCs, participants shared that parents/guardians were more likely post- than prepandemic to report concerns for their children's mental health because of noticeable changes in their mood and temperament. Participants also noted an increase in parents/guardians requesting mental health supports on behalf of their children.

Participants also discussed increased acuity of presenting problems, more immediate and complex mental health challenges, and greater comorbidities, perhaps intensified by the tendency for patients to delay accessing services during the pandemic. A participant from Colorado shared that students' increased concerns about meeting basic needs created and exacerbated anxiety, whereas state wildfires in Oregon that displaced communities contributed to complex grief with multiple losses. Some respondents also mentioned increased domestic violence and posttraumatic stress disorder among their patients. One respondent shared that patients seemed more willing to share their thoughts and feelings postpandemic than prepandemic months.

Some SBHCs increased screening to identify mental health needs. An SBHC in Ohio conducted previsit interviews with families before well-child visits, asking standard questions for all ages to determine mental health concerns. This respondent estimated that 80% to 85% of parents had been concerned about anxiety, depression, or changes in their child's behavior. Another SBHC created a risk stratification tool for medical providers to identify mental health risk levels. The tool guided the provider through the next steps on the basis of this risk, such as whether the patient needs resources, a referral, follow-up by a therapist, or follow-up by a medical provider. In Texas, mental health providers partnered with nurse practitioners to launch a survey to assess families' needs during the pandemic. This survey included questions about timing for well visits and vaccinations, health problems, needed medications, and safety in the home. On the basis of responses, the SBHC made referrals to different types of providers.

### Challenges Affecting SBHC Mental Health Service Provision

SBHC representatives reported that the primary challenges affecting mental health service provision during the pandemic related to lack of available staff and lack of access to patients. SBHCs faced difficulties accessing students because of remote or hybrid (mixed in-person and remote) learning schedules, lack of student interest or engagement, transportation barriers, and general lack of in-person contact with students. One participant shared that even when students signed up for telehealth sessions, they often did not log in to join the session, possibly because of video fatigue resulting from remote learning. Another participant discussed delayed diagnosis and receiving support services, particularly among students with attention deficit hyperactivity disorder, learning disabilities, or autism, because remote learning limited teachers' ability to recognize nonverbal cues and behaviors. One participant explained that "referrals are down and not because there is a lack of need but there has been a struggle to coordinate and stay connected with education staff for referrals without in person connection."

Other respondents noted parental consent and buy-in, stigma, language barriers, cultural beliefs, increased demand for mental health services exacerbated by a lack of available staff, and increased acuity of mental health issues as additional concerns resulting from the pandemic and restrictions.

### Adaptations to SBHC Mental Health Service Provision

Telehealth was a crucial strategy to continue to provide services to students throughout the pandemic, mentioned in over half of responses, but also presented privacy and access concerns. To mitigate these concerns, before scheduling an appointment, one SBHC discussed with the student where they would be for the session, who else would be home at that time, and what the student would need to feel comfortable. The participant referred to this technique as "front loading before an appointment." In Oregon, a school district issued portable computers to all students, lowered the firewall to facilitate telehealth access, and used local and state funds to increase student Internet connectivity and access to telehealth services. However, many SBHC representatives mentioned students' lack of Internet access as a key challenge in mental health service provision throughout the pandemic.

To overcome the challenge of accessing students, participants discussed increasing outreach. Therapists and counselors at one SBHC presented to classes at the beginning of the school year when in-person instruction relaunched, advertising service offerings. This SBHC also mailed hard copies of resource books with school and local mental health offerings to families. Another SBHC held virtual office hours, originally meant for students, but frequented by parents, particularly those of younger children. Many of these parents used the office hours to ask questions about handling their children's increased anxiety and depression or

**TABLE. Prominent themes shared through Mentimeter by school-based health center representatives in a virtual listening session on mental health service provision during the COVID-19 pandemic**

| Themes   | % of responses shared | Examples of experiences   |
|--|-----------------------|---|
| SBHC patients' presenting mental health problems and/or diagnoses compared with prepandemic ( <i>n</i> = 60) |                       |   |
| Anxiety, depression  | 37                    | "Increased anxiety related to COVID and returning to face-to-face instruction." "Increased anxiety, impacts of isolation on mood, increase in substance use."   |
| Acuity   | 13                    | "More acute needs for those who have put off care for a while." "Seems to be more immediate and crisis centered."   |
| Grief, withdrawal  | 7                     | "Grief, numbness, withdrawn, less interest in activities." "Refusing to go back to school - Loss of motivation and social skills."  |
| Care seeking   | 6                     | "I also notice more students and families open to seeking help." "Willingness to share their thoughts and feelings more."   |
| Violence and posttraumatic stress disorder   | 4                     | "More PTSD; more family violence; more child abuse/emotional abandonment." "Increase bouts of physical abuse."  |
| Change in demand for mental health services compared with prepandemic ( <i>n</i> = 62)                       |                       |   |
| Increased  | 81                    | "Increased need across all ages and diagnosis." "Increased tremendously." "More anxiety, depression and isolation." "More suicidal ideation."   |
| Decreased  | 19                    | "Decrease in access to students who are learning virtually." "Referrals are down and not because there is a lack of need but there has been a struggle to coordinate and stay connected with education staff for referrals without in person connection."   |
| Challenges that affect mental health service provision ( <i>n</i> = 65)                                      |                       |   |
| Access   | 31                    | "Students who are not amenable to virtual visits." "Access to students who've completely disengaged from school."   |
| Staff and time   | 27                    | "There is more need than available support." "Lack of mental health care providers."  |
| Resources  | 12                    | "Funding." "Insurance reimbursement."   |
| Communication, referrals, continuity of care   | 7                     | "Schools will be re-opening but they will not allow third party staff on campus, thus all [behavioral health] services will still need to be telehealth and struggle with the connections for referrals." "Collaborating to provide education for students and parents."  |
| Parents  | 6                     | "Getting parental consent." "Parental buy in."  |
| Privacy  | 6                     | "Privacy for telehealth." "Confidential billing."   |
| Culture and/or language  | 4                     | "Language barriers." "Cultural beliefs."  |
| Technology   | 4                     | "Some families did not have internet access for Zoom or Google meets." "Working multiple systems."  |
| Mental health issues   | 3                     | "High levels of trauma." "Worse anxiety."   |
| Strategies SBHC is employing to administer mental health services ( <i>n</i> = 46)                           |                       |   |
| Telehealth   | 51                    | "Many in our state have had to use telephonic telehealth b/c internet/computer access and confidentiality aren't available to all." "We have telehealth and in person primary care and therapist options." "Telehealth, phone and video, virtual office hours for parents."   |
| Partnerships, referrals  | 22                    | "Teaching staff about the toll of trauma and living with uncertainty/trying to prevent burnout." "The school as partnered with local services to offer free Spanish-language services to the underserved Spanish speaking population." "Weekly meetings with school counselors, school social workers, school nurse, and SBHC team to coordinate about student needs and assist with getting students to the SBHC for the best fit and referring as needed." "Referrals from schools and our staff to mental health professionals." |
| Operations   | 12                    | "Same day appointments when possible." "Nurse practitioner screening for depression and other [behavioral health] issues and referring to social worker. Meet and greet social worker on the same day."   |
| Services   | 12                    | "Art therapy & music therapy." "Classroom support by counselors and psychologists."   |
| Seeking grants and funding   | 3                     | "Working with our school district which received a grant - looking at our role at our SBHCs and Community Health Center."   |

*(continued on next page)*

TABLE. (Continued)

| Themes  | % of responses shared | Examples of experiences   |
|---|-----------------------|---|
| Supportive factors that affect mental health service provision ( <i>n</i> = 54)   |                       |   |
| Collaboration, teamwork, support  | 59                    | “Strong school partners.” “Teacher support.” “District support.”  |
| Resources   | 21                    | “Grants.” “Funding.” “Screening tools.” “Telehealth connection.”  |
| Demand, acceptance  | 14                    | “Captive audience.” “Students that want help.” “Trust with students.”   |
| Access  | 4                     | “School access.” “Care on their campus.”  |
| Service integration   | 3                     | “Integrated care.” “Integrated [behavioral health] services.”   |
| Mental health priorities at SBHC in the 2021–22 school year ( <i>n</i> = 42)  |                       |   |
| Addressing student mental health conditions   | 43                    | “Addressing social isolation concerns. Reorienting students to developing positive relationships.” “Identify the students most at risk and get them connected to services.”   |
| Staff   | 17                    | “Adding a [behavioral health worker] on staff part time.” “Collaboration with our schools and their staff to provide immediate responses to behavioral health concerns and serve additional students. Currently in the planning phase.” “Training all school staff on trauma informed practices and what resources are beyond the classroom to help those tier 3 kids.” |
| Services  | 14                    | “Better streamlined referral and closed loop for follow up.” “Continuing with effective strategies implemented during pandemic —telehealth option.” “Developing peer groups to discuss suicidology.”  |
| Outreach and access   | 14                    | “Engagement, outreach especially with Latinx students.” “Contacting & assessing students.”  |
| Safety  | 12                    | “Keeping the kids safe.” “Assuring students and staff that we are safe.”  |
| Note. SBHC, school-based health centers.  |                       |   |
| <sup>a</sup> SBHC respondents could choose not to answer Mentimeter question(s). Percentages and <i>n</i> size represent respondents to each open-ended question. |                       |   |
| <sup>b</sup> Participants could share multiple responses to each question.  |                       |   |



setting up a healthy home learning environment that encouraged children to focus and stay engaged. SBHCs also offered new innovative services to increase access and engagement during the pandemic, including art and music therapy, same-day appointments, and local resource databases. To overcome a lack of human resources and increase student engagement, one SBHC offered various group curriculums for different age groups, mailing activity kits to participants beforehand.

### **Factors That Support Mental Health Service Provision**

Staying true to the SBHC model's original intent as a partnership between a community, school, and health center, SBHCs increased their reliance on supportive collaborations as a mechanism for sustainability. Participants discussed increasing coordination with host schools and school districts, including proactively reaching out to teachers about referring students, teaching teachers how to lead mindfulness sessions at the beginning of classes, educating school staff about screening students for anxiety and depression, and teaching school staff how to refer through the telehealth format. SBHC primary care providers in one region were not confident in assessing for anxiety and depression and prescribing medications. This led to developing a consultative and collaborative project model in which primary care providers collaborated with consulting psychiatrists to manage patients and facilitate referrals. The SBHC clinicians could call a psychiatrist when facing a complex issue, and the psychiatrist would provide an opinion on what to prescribe. To overcome cultural and language barriers, another SBHC partnered with a local organization to offer free services using the Spanish language to the underserved Spanish-speaking population in the community.

Similarly, student acceptance and trust, student access, and family and community involvement positively impacted mental health service provision at SBHCs during the pandemic. Additional key supports mentioned included financial supports, strong referral systems, and the technical and human resources necessary to establish and sustain telehealth service offerings.

### **SBHC Mental Health Priorities in the 2021–22 School Year**

In the 2021–22 school year, SBHCs will prioritize identifying and addressing students' increased mental health needs and ensuring staff can meet this increased need. Participants discussed strategies like increasing screenings and integration workflows, reorientating students to developing and sustaining positive relationships, and addressing the social isolation and trauma from the past year. To build staff capacity, some SBHCs will hire more social workers and mental health staff or train all staff on trauma-informed practices. Participants also discussed developing peer groups to discuss topics like depression and suicidality and improving the SBHC referral system.

## **DISCUSSION**

Youth is a critical period for mental health intervention (National Alliance on Mental Illness, 2021; Center for School, Health and Education, 2018), and SBHCs have unique access to the underserved, at-risk populations most likely to develop mental health disorders and least likely to access health services (Garland et al., 2001; Irwin et al., 2009; Pumariega et al., 2005; Rogers et al., 2006). Similar to other research, this study found that many youths face increased depression, anxiety, and withdrawal because of the pandemic. (Abramson, 2020; Garfield & Chidambaram, 2020; World Health Organization, 2020; Jiao et al., 2020; Kataoka, Zhang, & Wells, 2002; Singh et al., 2020) Many SBHC staff throughout the country shared increases in presenting mental health concerns and acuity. A confluence of stressors in 2020—the pandemic, economic recession, social unrest, and isolation—were intensified by a dearth of typical resiliency factors like a social network and extracurricular activities. The populations that SBHCs serve are already at higher risk of clinical mental health disorders because of confinement and related stressors, aggravated by pandemic-related stressors (Jiao et al., 2020; Singh et al., 2020; Torres-Pagán & Terepka, 2020). Future quantitative studies should assess the qualitative findings from this study on a national, representative scale.

Study findings highlight increased demand for mental health services and a lack of resources to meet this demand. Recent quantitative data triangulate these qualitative findings: SBHCs were overwhelmed by a loss of human resources and financial capital (Sullivan et al., 2021a) and faced difficulties sustaining services. A recent unpublished report analyzing national mental health service provision at SBHCs found financial support to be the strongest predictor of an SBHC having a mental health provider on staff (Sullivan, 2021, unpublished data). SBHCs located in states with designated state funds for school-based health care are significantly more likely to offer mental health services to their patients (Sullivan, 2021, unpublished data). Future research could explore the nuances of school-based mental health funding, including predictors of funding and sustainability factors.

Consistent with prior research (Goddard et al., 2021; Sullivan et al., 2021b; Sullivan et al., 2021a), respondents reported telehealth as a crucial strategy to sustain service provision throughout the pandemic. Although telehealth can offer many opportunities for sustained and convenient care, it also introduces concerns like privacy and the digital divide (Anderson & Perrin, 2018). SBHCs and their partner school districts found ways to assuage these concerns, including communicating with youth before appointments to troubleshoot privacy concerns and increasing access to portable computers and Internet connectivity. However, lack of Internet access and its impacts on mental health care access, which disproportionately affect the underserved communities that SBHCs serve (Sullivan et al., 2021b), was an ongoing concern. To improve health care access for youth, resources to ensure universal telehealth technology access

are needed, and further research to identify successful strategies to address disparities in access.

Study findings also highlight how SBHCs pivoted, even with limited resources, to meet students' increasing needs for mental health care. In addition to providing care via telehealth, SBHCs offered new innovative services to increase patient access and engagement, including art and music therapy and virtual office hours. Future research should gather greater details about how SBHCs put innovations into practice and the effectiveness and sustainability of novel services and practices. Future evaluations should also explore how and whether these transitions are sustained as schools and SBHCs return to serving students in person and the impacts on student mental health care access and outcomes.

Similar to recent quantitative study results (Sullivan et al., 2021a), this study finds that buy-in and partnership with schools and school districts are key to SBHC sustainability throughout the pandemic. The school-based health care delivery model is built on a partnership between schools, health centers, and communities, so it is not surprising that it allowed many to sustain operations throughout this multifaceted crisis. Correspondingly, parental buy-in and support were mentioned as both a key challenge and key support to mental health service provision, suggesting that they are crucial component of sustained care. Future research could explore different types of SBHC partnerships and supports that are particularly beneficial to sustainability.

Finally, this study confirms that, although health providers nationwide worked to maintain continued care, gaps occur within a completely virtual model. A unique benefit of the school-based health care model is its ability to integrate within a school, build crucial trust with students and staff, and normalize community health and health-seeking behavior. When physical health providers, teachers, and school staff can refer students to mental health providers in the same location, this normalizes and routinizes referrals and mental health care. (Center for School, Health and Education, 2018) Study participants noted a particular strain on referral systems throughout the pandemic and difficulties assessing the nonverbal cues that point to mental health issues and learning disabilities. Future research can determine how to best support SBHCs in conducting screenings and facilitating virtual referrals should a similar situation to the COVID-19 pandemic arise.

## LIMITATIONS

The authors note several study limitations. As mentioned, all session participants were muted and could not unmute themselves, and this could have limited oral participation and conversation. Similarly, SBHA advertised the event as a listening session, and some participants may have joined only to listen and not to share. The large group setting could have thwarted participation or encouraged only participants successfully delivering mental health services to share. Finally, participants may not have represented the experiences of SBHCs nationwide, though there was a broad representation of states and

organizations in the participant sample. Still, these study findings confirm similar research and offer many important avenues for future exploration.

The authors would like to acknowledge the School-Based Health Alliance for organizing and implementing the discussion forum referenced in this manuscript and the school-based health center staff and sponsor organization members who participated in the discussion forum and shared their innovations in care delivery.

## REFERENCES

- Abramson, A. (2020). How COVID-19 may increase domestic violence and child abuse. *American Psychological Association*. Retrieved from <https://www.apa.org/topics/covid-19/domestic-violence-child-abuse>
- Alegria, M., Vallas, M., & Pumariega, A. J. (2010). Racial and ethnic disparities in pediatric mental health. *Child and Adolescent Psychiatric Clinics of North America*, 19, 759–774.
- Ali, M. M., West, K., Teich, J. L., Lynch, S., Mutter, R., & Dubenitz, J. (2019). Utilization of mental health services in educational setting by adolescents in the United States. *Journal of School Health*, 89, 393–401.
- Anderson, M., & Perrin, A. (2018). Nearly one-in-five teens can't always finish their homework because of the digital divide. Retrieved from <https://www.pewresearch.org/fact-tank/2018/10/26/nearly-one-in-five-teens-cant-always-finish-their-home-work-because-of-the-digital-divide/>
- Bloom, B., Cohen, R. A., & Freeman, G. (2012). Summary health statistics for U.S. children; National health interview survey, 2011. Retrieved from <https://stacks.cdc.gov/view/cdc/13509>
- Census Bureau. (2010). 2010 census regions and divisions of the United States. Retrieved from <https://www.census.gov/geographies/reference-maps/2010/geo/2010-census-regions-and-divisions-of-the-united-states.html>
- Centers for Disease Control and Prevention. (2011). CDC health disparities and inequalities report—United States, 2011. Retrieved from <http://www.cdc.gov/mmwr/pdf/other/su6001.pdf>
- Centers for Medicare & Medicaid Services. (2020). CMS issues urgent call to action following drastic decline in care for children in Medicaid and Children's Health Insurance Program due to COVID-19 pandemic. Retrieved from <https://www.cms.gov/newsroom/press-releases/cms-issues-urgent-call-action-following-dramatic-decline-care-children-medicare-and-childrens-health>
- Center for School, Health and Education. (2018). *School-based health centers: Vital providers of mental health services for children and adolescents*. Retrieved from [http://www.schoolbasedhealthcare.org/-/media/files/pdf/sbhc/mental\\_health.ashx?la=en&hash=3955552187358B1772C61AB53D1BFD81CB446595](http://www.schoolbasedhealthcare.org/-/media/files/pdf/sbhc/mental_health.ashx?la=en&hash=3955552187358B1772C61AB53D1BFD81CB446595)
- Duong, M. T., Bruns, E. J., Lee, K., Cox, S., Coifman, J., Mayworm, A., & Lyon, A. R. (2021). Rates of mental health service utilization by children and adolescents in schools and other common service settings: A systematic review and meta-analysis. *Administration and Policy in Mental Health*, 48, 420–439.
- Fergusson, D. M., Boden, J. M., & Horwood, L. J. (2007). Recurrence of major depression in adolescence and early adulthood, and later mental health, educational and economic outcomes. *British Journal of Psychiatry*, 191, 335–342.
- Garfield, R., & Chidambaram, P. (2020). Children's health and well being during the coronavirus pandemic. Retrieved from <https://www.kff.org/coronavirus-covid-19/issue-brief/childrens-health-and-well-being-during-the-coronavirus-pandemic/>
- Garland, A. F., Hough, R. L., McCabe, K. M., Yeh, M., Wood, P. A., & Aarons, G. A. (2001). Prevalence of psychiatric disorders in

- youths across five sectors of care. *Journal of the American Academy of Child and Adolescent Psychiatry*, 40, 409–418.
- Goddard, A., Sullivan, E., Fields, P., & Mackey, S. (2021). The future of telehealth in school-based health centers: Lessons from COVID-19. *Journal of Pediatric Health Care*, 35, 304–309.
- Golberstein, E., Gonzales, G., & Meara, E. (2019). How do economic downturns affect the mental health of children? Evidence from the National Health Interview Survey. *Health Economics*, 28, 955–970.
- Green, J. G., McLaughlin, K. A., Alegria, M., Costello, E. J., Gruber, M. J., Hoagwood, K., . . . Kessler, R. C. (2013). School mental health resources and adolescent mental health service use. *Journal of the American Academy of Child and Adolescent Psychiatry*, 52, 501–510.
- Hamoda, H. M., Chimento, A., Alonge, O., Hamdani, S. U., Saeed, K., Wissow, L., & Rahman, A. (2021). Addressing the consequences of the COVID-19 lockdown for children's mental health: Investing in school mental health programs. *Psychiatric Services*, 72, 729–731.
- Irwin, C. E., Adams, S. H., Park, M. J., & Newacheck, P. W. (2009). Preventive care for adolescents: Few get visits and fewer get services. *Pediatrics*, 123, e565–e572.
- Jiao, W. Y., Wang, L. N., Liu, J., Fang, S. F., Jiao, F. Y., Pettoello-Mantovani, M., & Somekh, E. (2020). Behavioral and emotional disorders in children during the COVID-19 epidemic. *Journal of Pediatrics*, 221, 264–266.e1.
- Juszczak, L., Melinkovich, P., & Kaplan, D. (2003). Use of health and mental health services by adolescents across multiple delivery sites. *Journal of Adolescent Health*, 32(6 Suppl), 108–118.
- Kann, L., Kinchen, S., Shanklin, S. L., Flint, K. H., Kawkins, J., Harris, W. A., . . . Centers for Disease Control and Prevention (CDC). (2014). Youth risk behavior surveillance—United States, 2013. *MMWR Supplements*, 63, 1–168.
- Kataoka, S. H., Zhang, L., & Wells, K. B. (2002). Unmet need for mental health care among U.S. children: Variation by ethnicity and insurance status. *American Journal of Psychiatry*, 159, 1548–1555.
- Keeton, V., Soleimanpour, S., & Brindis, C. D. (2012). School-based health centers in an era of health care reform: Building on history. *Current Problems in Pediatric and Adolescent Health Care*, 42, 132–156 discussion 157–138.
- Knopf, J. A., Finnie, R. K., Peng, Y., Hahn, R. A., Truman, B. I., Vernon-Smiley, M., . . . Community Preventive Services Task Force. (2016). School-based health centers to advance health equity: A community guide systematic review. *American Journal of Preventive Medicine*, 51, 114–126.
- Lee, J. (2020). Mental health effects of school closures during COVID-19. *Lancet. Child and Adolescent Health*, 4, 421.
- Leeb, R. T., Bitsko, R. H., Radhakrishnan, L., Martinez, P., Njai, R., & Holland, K. M. (2020). Mental health-related emergency department visits among children aged <18 years during the COVID-19 pandemic - United States, January 1–October 17, 2020. *MMWR. Morbidity and Mortality Weekly Report*, 69, 1675–1680.
- Leff, R. A., Setzer, E., Cicero, M. X., & Auerbach, M. (2021). Changes in pediatric emergency department visits for mental health during the COVID-19 pandemic: A cross-sectional study. *Clinical Child Psychology and Psychiatry*, 26, 33–38.
- Love, H. E., Schlitt, J., Soleimanpour, S., Panchal, N., & Behr, C. (2019). Twenty years of school-based health care growth and expansion. *Health Affairs*, 38, 755–764.
- Love, H., Soleimanpour, S., Panchal, N., Schlitt, J., Behr, C., & Even, M. (2018). 2016–17 National School-Based Health Care Census Report. Retrieved from <https://www.sbh4all.org/wp-content/uploads/2019/05/2016-17-Census-Report-Final.pdf>
- McKay, M. M., Lynn, C. J., & Bannon, W. M. (2005). Understanding inner city child mental health need and trauma exposure: Implications for preparing urban service providers. *American Journal of Orthopsychiatry*, 75, 201–210.
- Mentimeter. (2021). Mentimeter. Retrieved from <https://www.menti.com/>
- Merikangas, K. R., He, J. P., Burstein, M., Swanson, S. A., Avenevoli, S., Cui, L., . . . Swendsen, J. (2010). Lifetime prevalence of mental disorders in U.S. adolescents: Results from the National Comorbidity Survey Replication—Adolescent Supplement (NCS-A). *Journal of the American Academy of Child and Adolescent Psychiatry*, 49, 980–989.
- Merikangas, K. R., He, J. P., Burstein, M., Swendsen, J., Avenevoli, S., Case, B., . . . Olfson, M. (2011). Service utilization for lifetime mental disorders in U.S. adolescents: Results of the National Comorbidity Survey-Adolescent Supplement (NCS-A). *Journal of the American Academy of Child and Adolescent Psychiatry*, 50, 32–45.
- Mollica, R. F., Poole, C., Son, L., Murray, C. C., & Tor, S. (1997). Effects of war trauma on Cambodian refugee adolescents' functional health and mental health status. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36, 1098–1106.
- Naicker, K., Galambos, N. L., Zeng, Y., Senthilselvan, A., & Colman, I. (2013). Social, demographic, and health outcomes in the 10 years following adolescent depression. *Journal of Adolescent Health*, 52, 533–538.
- National Alliance on Mental Illness. (2021). Mental health in schools. Retrieved from <https://www.nami.org/Advocacy/Policy-Priorities/Intervene-Early/Mental-Health-in-Schools>
- Paschall, M. J., & Bersamin, M. (2018). School-based health centers, depression, and suicide risk among adolescents. *American Journal of Preventive Medicine*, 54, 44–50.
- Patrick, S. W., Henkhaus, L. E., Zickafoose, J. S., Lovell, K., Halvorson, A., Loch, S., . . . Davis, M. M. (2020). Well-being of parents and children during the COVID-19 pandemic: A national survey. *Pediatrics*, 146, e2020016824.
- Pumariega, A. J., Rogers, K., & Rothe, E. (2005). Culturally competent systems of care for children's mental health: Advances and challenges. *Community Mental Health Journal*, 41, 539–555.
- Redlener, I., Gracy, D., Walto, D., Sobel, C., Fabian, A., & Roncaglione, V. (2016). More than 20 million children in U.S. still lack sufficient access to essential health care. Retrieved from [https://www.childrenshealthfund.org/wp-content/uploads/2016/11/Unfinished-Business-Final\\_.pdf](https://www.childrenshealthfund.org/wp-content/uploads/2016/11/Unfinished-Business-Final_.pdf)
- Rogers, K. M., Pumariega, A. J., Atkins, D. L., & Cuffe, S. P. (2006). Conditions associated with identification of mentally ill youths in juvenile detention. *Community Mental Health Journal*, 42, 25–40.
- Singh, S., Roy, D., Sinha, K., Parveen, S., Sharma, G., & Joshi, G. (2020). Impact of COVID-19 and lockdown on mental health of children and adolescents: A narrative review with recommendations. *Psychiatry Research*, 293, 113429.
- Strolin-Goltzman, J., Sisselman, A., Melekis, K., & Auerbach, C. (2014). Understanding the relationship between school-based health center use, school connection, and academic performance. *Health and Social Work*, 39, 83–91.
- Sullivan, E., Stinchfield, K., & Soleimanpour S. (2021). Mental health services in school-based health centers: a national cross sectional study. Unpublished manuscript.
- Sullivan, E., Brey, L., & Soleimanpour, S. (2021a). School-based health center operations during the COVID-19 pandemic: A preliminary study. *Health Promotion Practice*, 22, 616–621.
- Sullivan, E., Goddard, A., Fields, P., & Mackey, S. (2021b). Health technology in school-based health centers: Supporting continuous care during COVID-19. Retrieved from <https://ht.amegroups.com/article/view/6872>
- Torres-Pagán, L., & Terepka, A. (2020). School-based health centers during academic disruption: Challenges and opportunity in

urban mental health. *Psychological Trauma: Theory, Research, Practice and Policy*, 12, S276–S278.

United Nations Sustainable Development Group. (2020). Policy Brief: The Impact of COVID-19 on children. Retrieved from [https://unsdg.un.org/sites/default/files/2020-04/160420\\_Covid\\_Children\\_Policy\\_Brief.pdf](https://unsdg.un.org/sites/default/files/2020-04/160420_Covid_Children_Policy_Brief.pdf)

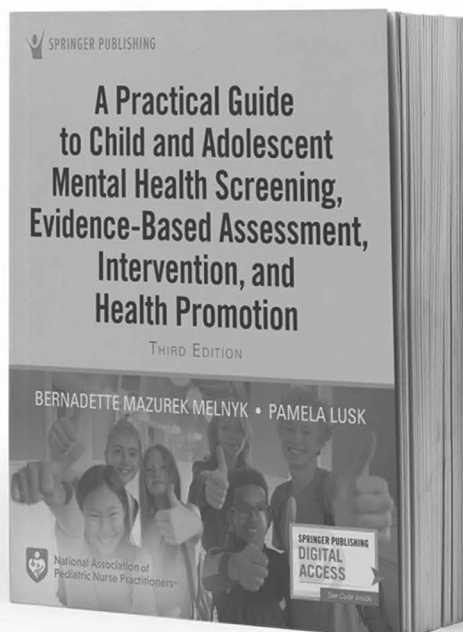
World Health Organization. (2020). The impact of COVID-19 on mental, neurological and substance use services: Results of a

rapid assessment. Retrieved from <https://www.who.int/publications/item/978924012455>

World Health Organization. (2021). Improving the mental and brain health of children and adolescents. Retrieved from <https://www.who.int/activities/improving-the-mental-and-brain-health-of-children-and-adolescents>

Zoom. (2021). Zoom video communications. Retrieved from <https://support.zoom.us/hc/en-us>

## Prevent. Screen. Diagnose. Manage.



Get the guidance you need with new research findings and the best evidence-based practices from expert Bernadette Mazurek Melnyk and NAPNAP!

Get your copy today at [springerpub.com/napnap](http://springerpub.com/napnap) or scan the QR code.



 **SPRINGER PUBLISHING**